Quarterly report and activity statement, 3 months to 30 September 2021

Corporate

- Group available cash at quarter end was $2.92 million and is currently about $2.67 million
- In addition, the company successfully completed an SPP, raising a further $4 million
- ABx securities now total 223,590,814 ordinary shares and 38,034,000 unquoted options and a further 40,786,500 million options are pending issue following the successful SPP

Exploration – Rare Earth Element Discoveries Continue in Tasmania

- ABx's Rare Earth Elements (REE) Deep Leads discovery at its DL130 bauxite project in northern Tasmania was enlarged in both areal extent and grade of mineralisation
- The latest hole DL187 returned a grade of **3,036 ppm total rare earths oxide** (TREO), our highest REE grade to date from the Deep Leads discovery [1]
- Hole DL187 also represents an 870 metre southerly extension of the REE mineralisation
- Drilling step-out holes commenced in October and encountered thicker clay zones that can be the favourable host of REE mineralisation. Further REE assays are pending
- Prices and demand for the key REE elements, Nd and Pr, are rising strongly because of their widespread use in new technologies, including electric vehicles – see below

ALCORE Project (87% owned by ABx): achieves an innovative breakthrough

- Fabrication of components of the pilot plant has commenced, using designs provided by Alcore's international process engineers. Fabrication in Australia commenced with laser cutting in mid October
- Alcore's international process engineers have completed process flowsheet modelling for a commercial 10,000 t/y AlF_3 plant using dross as the feedstock
- Results increase confidence in the Alcore process and support Alcore's approach to process development
- Thermodynamic modelling identifies another, potentially more effective, process route for producing AlF_3 from dross – to be further investigated in Q4 2021
- Accelerating process development with appointment of Dr Xiao Liang as Senior Engineer
- Alcore process is new technology, proprietary to Alcore and will deliver significant economic and environmental benefits
- Production of AlF_3 is at a projected lower operating cost when using dross in the process – reduced from A$1,080/t AlF_3 to A$800/t AlF_3 [2]
- AlF_3 is an essential ingredient in aluminium smelters and Alcore's planned production in Bell Bay, Tasmania will provide security of supply and increased recycling of wastes for Australasian aluminium production, which is worth more than A$4.5 billion per year
- Alcore's engineering firms are to design and cost the first 10,000 tonne/year AlF_3 production module and subsequent modules up to a total of 60,000 tonnes/year AlF_3. At current cost scenarios, this could achieve an EBITDA of approximately A$50 million pa. Alcore can expand into other commodities including fluorine chemicals, advanced lithium-ion batteries and high purity alumina.

[1] Refer to ASX announcement dated 14 October 2021
[2] Refer to ASX announcement dated 12 April 2021

Market for Aluminium Fluoride

AlF_3 is a strategically important mineral that is an essential ingredient for aluminium smelting and is being investigated for advanced lithium-ion batteries. Australian aluminium smelters rely entirely on imported AlF_3, typically more than 70% from China, but this proportion has reduced by more than 60% in 2021, illustrating the supply risks (see Figure 1).

The commercialisation of Alcore's proprietary technology and development of Australia's first production plant will provide much-needed security of supply for Australasian aluminium smelters.

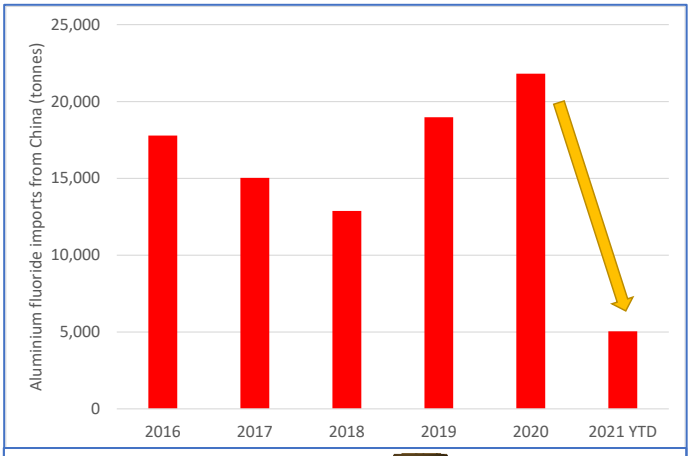

Figure 1
Imports of AlF_3 from China into Australia have contracted substantially in 2021

Source: BACI, CCS

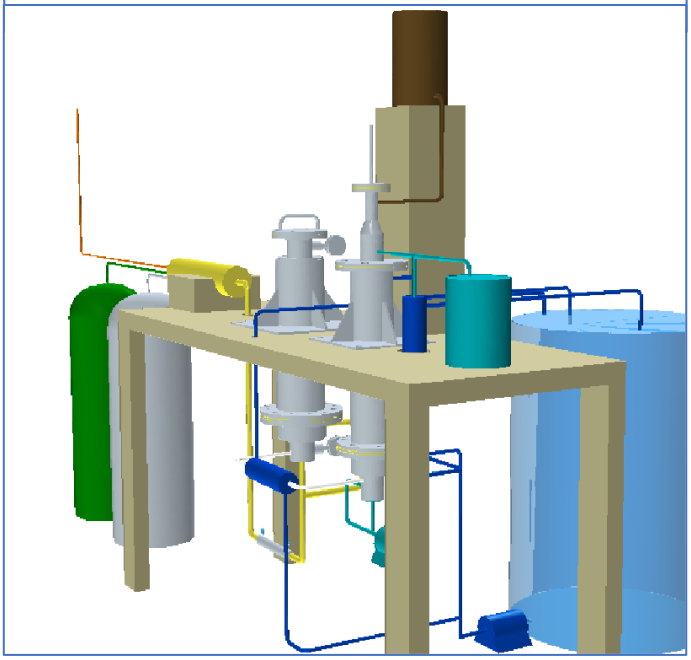

Figure 2
Engineering plan for a component of the Alcore pilot plant currently being fabricated

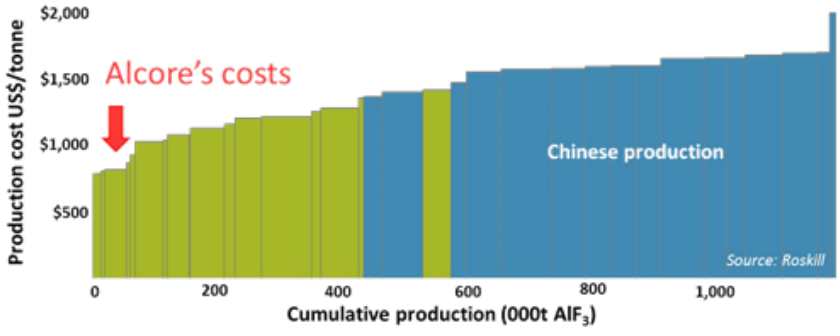

Figure 3

Alcore's forecast production costs are in the lowest quartile.

Raw materials are typically 75% of traditional cost.

Alcore is low-cost because of its lower-cost raw materials

Operations: Fingal Rail mine, Tasmania

- **Mining lease application** is being progressed for the large Fingal Rail deposit in northern Tasmania which can supply cement and fertiliser grade bauxite for many years
- **A bulk sample** of fertiliser-grade bauxite is being extracted for evaluation by a local fertiliser manufacturer that considers ABx bauxite to be an essential ingredient in their super phosphate
- **DL130 bauxite deposit** is being assessed as an alternative supplier of cement-grade bauxite because mining at DL130 may accelerate development of the Deep Leads REE discovery

Figure 4
Bulk-sampling of fertiliser-grade bauxite at ABx's Fingal Rail Project for assessment by the fertiliser manufacturer

This work will also allow ABx to apply and monitor its rehabilitation technology at this location

Exploration for Rare Earth Elements used for super-magnets

ABx's has discovered Rare Earth Elements (REE) mineralisation at its Deep Leads rare earth discovery that extends well beyond its DL130 bauxite deposit in northern Tasmania. The mineralisation is enriched in the strategically important super-magnet REE metals neodymium, praseodymium, terbium and dysprosium, which are needed in electric vehicles, wind turbines, smart phones and military electronics.

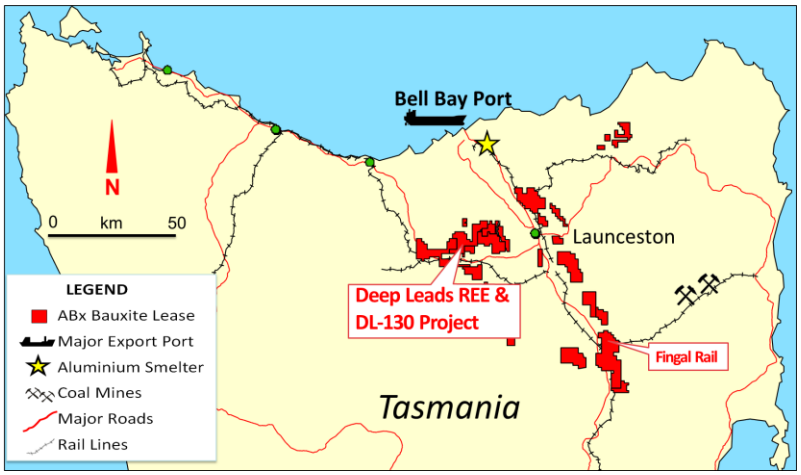

Figure 5
Location of ABx's two main project areas in northern Tasmania and main infrastructure

Recent hole DL187 returned the highest grade to date of 3,036 ppm total rare earths oxide (TREO) and extended the strike length of the REE mineralisation by 870 metres. The strike length of the Deep Leads REE now exceeds three kilometres (3km) and is open in several directions.

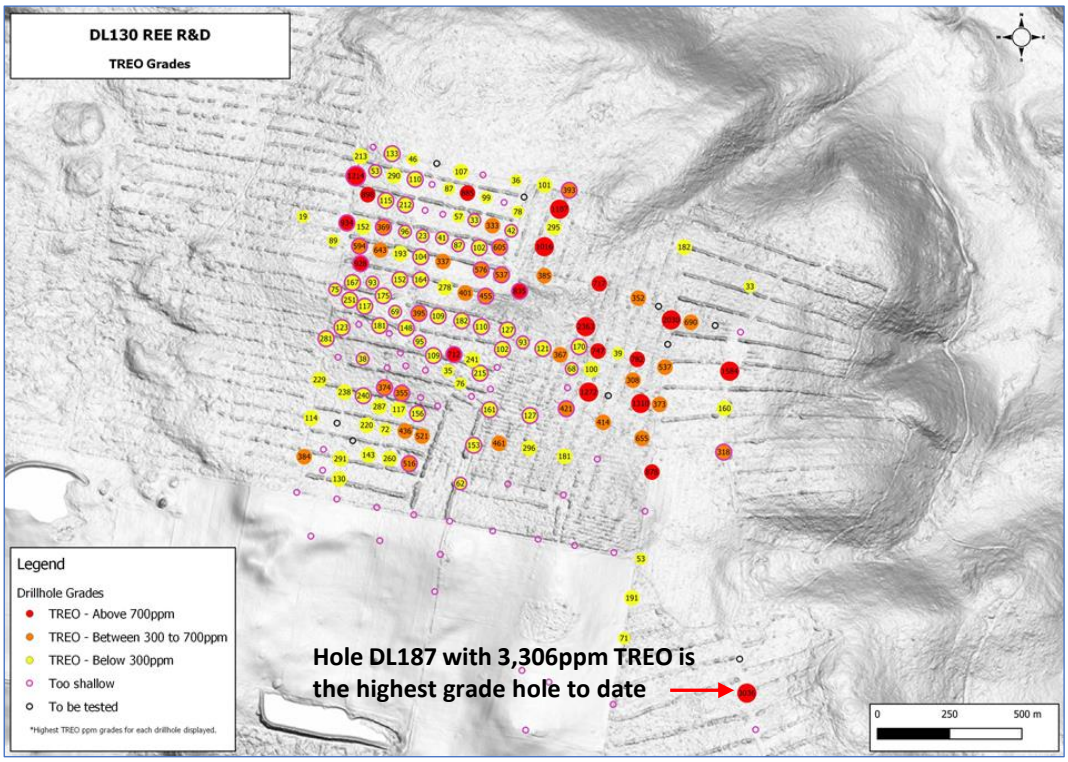

Figure 6
Total Rare Earth Element Oxides (ppm TREO) grades of drillholes at ABx's Deep Leads discovery

Drilling recommenced mid-October to test for major extensions of the Deep Leads REE deposit to the northwest, northeast and south. More assays are pending.

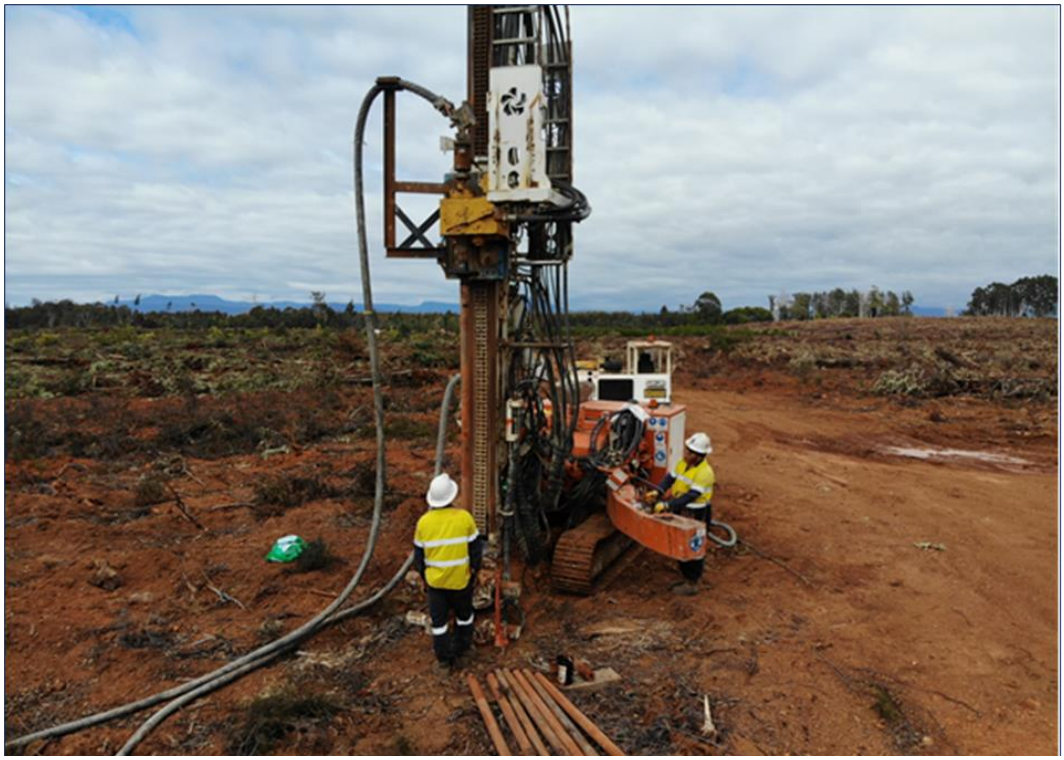

Figure 7
Drilling at ABx's Deep Leads REE discovery in a recently harvested hardwood plantation

ABx's soluble rare earths deposit differs from the more traditional hard rock deposits in many ways and is dominated by the four super-magnet type of REEs. ABx' results from Deep Leads REE discovery to date are consistent with the Ionic Adsorption Clay type of REE mineralisation (IAC) which are readily soluble and can be recovered into a bulk concentrate.

ABx REE Business Strategy

Traditional hard-rock rare earth mines and processing plants usually take many years and up to billions of dollars investment in technically difficult processing plants. For this reason, ABx has explored for these IAC water-soluble type of REE occurrence which can be developed rapidly and at low cost, to produce a concentrate of REE elements that can be sold to the existing processing plants so that they can expand production rapidly.

The fastest and environmentally best method to develop of this type of REE is outlined in Figure 8 below.

REE accumulations in northern Tasmania are relatively free of radioactive elements uranium and thorium which means that a simple bulk concentrate could be sold to any producer, in any country.

China was until recently the main producer from such "water soluble" IAC types of REE deposits, mainly from southern China. China no longer produces from IAC deposits and is sourcing IAC REEs from Myanmar.

This type of deposit is rare

ABx has been advised that it is one of only three public-listed companies world-wide that is focussed on these Ionic Adsorption Clay REE deposits.

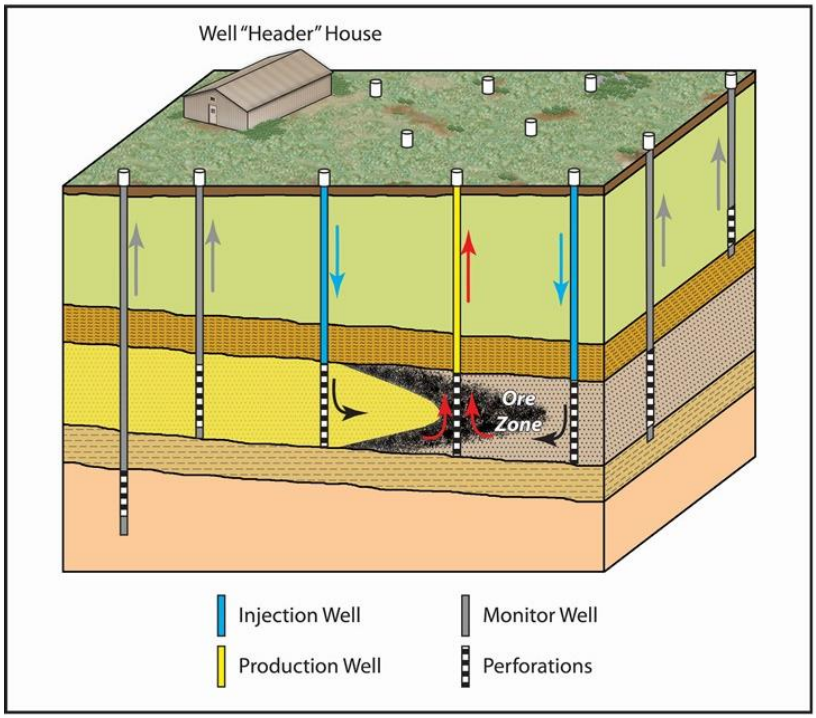

Figure 8
Summary of an in-situ leaching project

This production technology can only be conducted in suitable areas and after rigorous testing of the environmental technology

A grid of drillholes defines the location of the orebody.

Four holes around a central hole pump water into the ore layer and the central hole draws up the water

The other surrounding holes monitor water flow to ensure that the process is working properly

This production method has operated successfully in South Australia since 2001.

This announcement is authorised by the Board of Australian Bauxite Limited.

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Qualifying statements

General: The information in this report that relate to Exploration Information and Mineral Resources are based on information compiled by Jacob Rebek and Ian Levy who are members of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Rebek and Mr Levy are qualified geologists and Mr Levy is a director of Australian Bauxite Limited.

Mainland: The information relating to Mineral Resources on the Mainland was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. Mr Rebek and Mr Levy have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Reserves. Mr Rebek and Mr Levy have consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

Tasmania: The information relating to Exploration Information and Mineral Resources in Tasmania has been prepared or updated under the JORC Code 2012. Mr Rebek and Mr Levy have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and **Ore Reserves.** Mr Rebek and Mr Levy have consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

Disclaimer Regarding Forward Looking Statements

This report contains various forward-looking statements. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are inherently subject to uncertainties in that they may be affected by a variety of known and unknown risks, variables and factors which could cause actual values or results, performance or achievements to differ materially from the expectations described in such forward-looking statements.

ABx does not give any assurance that the anticipated results, performance or achievements expressed or implied in those forward-looking statements will be achieved.

Patent

Refined Ore Industries Ltd (ROIL) was the owner of the CORE process technology via ROIL's intellectual property company, Berkeley Process Technologies Pty. Ltd which issued a global exclusive licence for the aluminium-related portion of the CORE process technology to ABx in November 2017 and ABx has issued a global exclusive sub-licence to ALCORE when ALCORE was incorporated on 1 July 2018.

After a company restructure and expansion of the patent definition to cover isolation and extraction of mineral compounds, metals, metalloids, alloys and elements from waste streams, mineral ores, recyclable commodities, industrial by-products and mixed substances, the holding company is now named Core Refining Limited (CRL) and the intellectual property company is Core Intelligence Australia Pty Ltd (CIAL) which holds the Patent Application No. 2019904311 and the global exclusive licences to ABx and ALCORE continue in force.

CRL's CORE process technology involves the refining of a wide range of ore types using a combination of fluorine acids and related thermal energy process steps. The technology that is licensed to ABx and ALCORE by CRL is part of CRL's broader Core technology.

Table 1: Tenement information required under LR 5.3.3

Tenement No.	Location
New South Wales	
EL 6997	Inverell
EL 7357	Taralga
EL 8600	Penrose Quarry
Queensland	
MLA 100277	Sunrise ML application
EPM27787	Binjour EPM granted
ML 80126	Toondoon ML
Tasmania	
EL 7/2010	Conara
EL 9/2010	Deloraine
EL 18/2014	Prosser's Road

Notes

A new QLD EPM and the Sunrise Bauxite Project mining lease were applied for on 1 Jan'21. The EPM was approved in July.

All tenements are in good standing, 100% owned and not subject to any third-party royalties nor are they encumbered in any way.

Information required under Listing Rule 5.31:- Exploration expenditure reported during the quarter related to the REE program development ($265,000), research conducted by Alcore with respect to its reported advancements ($235,000).

Information required under Listing Rule 5.31:- No mining production was conducted during the quarter.

Information required under Listing Rules 6.1 and 6.2:- Nil cash payments were made to related parties and their associates during the quarter.

Appendix 5B

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

Name of entity	
Australian Bauxite Limited	
ABN	**Quarter ended ("current quarter")**
14 139 494 885	30 September 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	(265)	(556)
	(b) development	(235)	(676)
	(c) production	-	(13)
	(d) staff costs	(66)	(116)
	(e) administration and corporate costs	(34)	(418)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	1
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	153
1.8	Other (provide details if material)	-	-
1.9	**Net cash from / (used in) operating activities**	**(600)**	**(1,625)**

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

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 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**	**(2)**	**(2)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	100	3,250
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	(19)	(226)
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 (Net proceed from issuing of equity securities – controlled entity)	17	624
3.10	**Net cash from / (used in) financing activities**	**98**	**3,648**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	3,425	900
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(600)	(1,625)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(2)	(2)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	98	3,648

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 months) $A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period**	**2,921**	**2,921**

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	36	32
5.2	Call deposits	2,855	3,363
5.3	Bank overdrafts	-	-
5.4	Other (Held in trust)	30	30
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**2,921**	**3,425**

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

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.

7.	**Financing facilities** *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	-	-
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)	(600)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(600)
8.4	Cash and cash equivalents at quarter end (item 4.6)	2,921
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	2,921
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?

Answer: 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?

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: .....26 October 2021.....

Authorised by: .....Ian Levy, Managing Director and CEO.....
(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.