

## ASX Announcement

# Quarterly Activities Report and Appendix 5B

30 June 2019

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## Highlights

- Fully underwritten entitlement offer raises \$23.2 million
- New funding facilitates accelerated development of the Nolans Project and strengthens Arafura's objective of being Australia's next fully integrated Neodymium-Praseodymium (NdPr) producer
- Strategic sub-underwriter Talaxis emerges with substantial holding of over 5% on completion of the entitlement offer
- Potential for Arafura and Talaxis to work together on rare earth supply chain and project funding alternatives
- Planning for execution readiness activities advances including signing of Memorandum of Understanding to secure accommodation village for the Nolans Project
- Nolans campaign mining study delivers opportunity to save 18% of mining costs over the first six years of production
- Arafura commences program with stakeholders for development of local community engagement and employment strategy
- European customer engagement program undertaken incorporating meetings with bankers
- NdPr prices rise strongly in May as trade war tensions escalate between China and the United States
- Drilling at Bonya Joint Venture produces encouraging tungsten and copper intercepts
- Cash position \$5.4 million at 30 June 2019, further strengthened by \$23.2 million entitlement offer completed in July

## Underwritten Entitlement Offer

Arafura Resources Limited (ASX: ARU) (“Arafura”, “the Company”) is pleased to present its quarterly activities report for the period ended 30 June 2019.

In June the Company announced the launch of a 7 for 20 entitlement offer at \$0.085 per share to raise \$23.2 million (before costs). The entitlement offer was fully underwritten by Patersons Securities, while Talaxis Limited (Talaxis), a wholly owned subsidiary of commodities trader Noble Group Holdings Limited (Noble Group), agreed to sub-underwrite \$7.2 million providing significant strategic support to the entitlement offer. The entitlement offer closed on 12 July 2019 and raised approximately \$8.1 million from eligible shareholders. Shortfall shares were issued to sub-underwriters amounting to a further \$15.1 million. On issue of all shares under the fully underwritten entitlement offer, Talaxis has emerged as a substantial holder with 5.23% of total issued capital (*refer to ASX announcement dated 22 July 2019*).

The Company notes ECE Nolans Investment Company Pty Ltd was unable to participate in the entitlement offer due to a number of administrative approvals required to be completed within the offer period. The Company also received relatively limited applications from JP Morgan Nominees Australia Pty Ltd as there are significant administrative challenges for the underlying beneficial owners to participate in the entitlement offer. Notwithstanding that these two entities accounted for approximately 32% of issued capital prior to the offer, the Company received applications for approximately 35% of shares available under the entitlement offer. The Company thanks shareholders for their significant support and participation in the entitlement offer.

Arafura welcomes Talaxis as a shareholder and believes there is the potential for significant synergies to be created from this strategic alliance. Talaxis invests and participates in the development of projects in the technology metals sector, with a special focus on rare earths. Talaxis is a wholly owned subsidiary of Noble Group Holdings Limited (Noble Group). Noble Group is Asia’s leading independent energy products and industrial raw materials supply chain manager. Talaxis leverages the Noble Group resources through access to logistics and supply chain management and can also assist with the design and structure of financing solutions.

Through its investment in Arafura, Talaxis is looking to align itself with existing shareholders and is seeking to play a significant part in bringing product from Nolans to various destination markets throughout the world. Talaxis’ marketing services are client-oriented “white-label” solutions that will enable Arafura to maintain its brand name and to optimise its product distribution. Arafura will work over the coming months to refine the basis in which it will seek to partner with Talaxis for the provision of product, project and capital related services for the Nolans Project.

The new funding will be used to accelerate development of the Nolans Project and strengthens Arafura’s strategic objective of being Australia’s next fully integrated neodymium-praseodymium (NdPr) producer. Arafura will use the funds raised to:

- progress further development of the Nolans Project including project execution readiness to allow award of key design and project management contracts, commencement of front-end

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engineering and design, completion of early contractor involvement phase, and the delivery and tender of long lead procurement items and early works construction contracts;

- undertake a drilling and metallurgical variability program aimed at potentially increasing the project's mine life; and
- for ongoing working capital.

## Nolans NdPr Project

### Execution Readiness

Following the commencement of the fully underwritten \$23.2 million entitlement offer, the Company has accelerated the planning and implementation of execution readiness activities. Wave International Pty Ltd (Wave), which provided the Company with engineering support for the Definitive Feasibility Study (DFS), has been appointed to assist with project delivery services for the execution readiness phase. Execution readiness activities include the following:

- Finalisation of tendering and contracting strategies and identification of potential contractors;
- Preparation of major contract scopes of work (for process plant, non-process infrastructure and integrated project management team) ready for tendering of early contractor engagement;
- Development of control budget and schedules based on the DFS;
- Development of project specifications and standard documents; and
- Development of project policies and plans including execution, HSEC, local and Indigenous procurement, Indigenous engagement and change management.

These execution readiness activities will culminate in awarding the contracts for the early contractor involvement (ECI) phase of the project.

### Accommodation Village

The Company has executed a Memorandum of Understanding (MOU) to secure the supply of a second-hand accommodation village for the project with NT Link Pty Ltd (NT Link). Utilising results of the DFS, NT Link provided a quotation for the provision of accommodation rooms and associated facilities for a construction camp of 650 people, with an ongoing operational camp of 300 persons, and has agreed to generally hold its prices and rates throughout the option period.

The Company has the option to award the tender for the construction camp to NT Link between now and February 2020.

If exercised, the option will ensure the availability of high-quality second-hand accommodation village facilities for Nolans, which are currently in use at other projects across the Northern Territory and other parts of Australia.

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The use of a second-hand facility offers significant cost savings over new facilities as well as allowing for an accelerated mobilisation of the village to site following completion of preliminary site works.

NT Link is a transportable building company providing end to end services throughout Northern and Remote Australia. Specialising in providing high quality temporary and permanent transport building solutions, NT Link's services include design, manufacturing, transport and installation.

Operating since 1983 and family owned, NT Link is a Northern Territory-based company, currently employing a full-time team of over 65 experienced professionals in Darwin and Alice Springs. NT Link has an excellent record on Indigenous employment and training and meets the Company's objectives regarding engagement with its Indigenous stakeholders and procurement of local content for the project.

### DFS Follow Up Activities

Following the completion of the DFS (*refer to ASX announcement dated 7 February 2019*) work has continued on a number of minor workstreams to address opportunities identified in the DFS. The workstreams completed in the quarter included:

- Investigation of potential savings through campaign mining operations; and
- Optimisation of the process plant layout.

### Campaign Mining

In the mining schedule developed for the DFS, during the first six years of processing the average mining rate (total movement) is approximately 3.2 Mtpa. This low mining rate results in poor anticipated utilisation of mining equipment and mismatches in the operating rates of various items of equipment. In addition, the mining costs presented in the DFS include a significant portion of fixed costs related to equipment, supervisory and owners team costs.

Mining Plus was engaged, following its work on the DFS, to investigate the impact on mining costs over the first six years of production from moving to a campaign style of mining which reduces fixed costs of operation which are then partially offset against the cost of de-mobilisation and re-mobilisation of mining equipment and personnel.

The analysis completed suggests that a potential saving of approximately A\$33M may be realised over the first six years of production (seven years of mining, including pre-production mining) by adopting a campaign mining strategy. This represents a potential saving of approximately 18% of total mining costs (reducing from approximately A\$176M as set out in the DFS to approximately A\$143M) over the first six years and is a reduction in overall anticipated operating costs over this period of approximately US\$1 per kg of NdPr.

The material assumptions on which this potential cost saving is based are as follows:

- Mining in two campaigns, the first of approximately 10 months followed by a 12-month non-mining period, and the second of approximately 27 months followed by a 24-month non-mining period. Following this period mining rates are anticipated to increase, and mining will be carried out continuously;

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- The overall average mining rate (total movement) remaining the same (that is, approximately 3.2 Mtpa based on the Company's Mineral Resources and Ore Reserves);
- High level estimate of the mobilisation and de-mobilisation costs associated with each of the mining periods;
- Estimate of contract mine management costs based on consultant rates; and
- All other assumptions for mining unit rates as per the DFS.

The Mining Plus Campaign Mining Study<sup>1</sup> confirms that the potential cost savings are estimated at an accuracy of  $\pm 25\%$ , consistent with a pre-feasibility study. The detailed mine design, scheduling and mining contractor tendering will therefore be carried out, following production commitment, based on a campaign mining approach.

### Layout Optimisation

Following the completion of the DFS, Hatch was engaged to revisit the process plant layout and address a few minor issues that were identified. These matters included optimising the layout with respect to health and safety as well as operability, maintainability and constructability. In addition, various changes were made with the view to facilitating any future expansions as well as minimising up-front infrastructure to minimise capital cost.

The updated layout and documented reviews of the DFS layout will be used as the basis of the commencement of front-end engineering.

### Mining Licence

The four Mineral Lease (ML) applications for the Nolans Project remain in place over the mine, the process plant, the tailings and residue storage area, and the accommodation village. These applications will progress to grant when Arafura provides an executed Native Title agreement. There are three Native Title determinations over the project area: one group over the mine, another over the process plant and the eastern part of the project's borefield, and a further group over the western extent of the borefield.

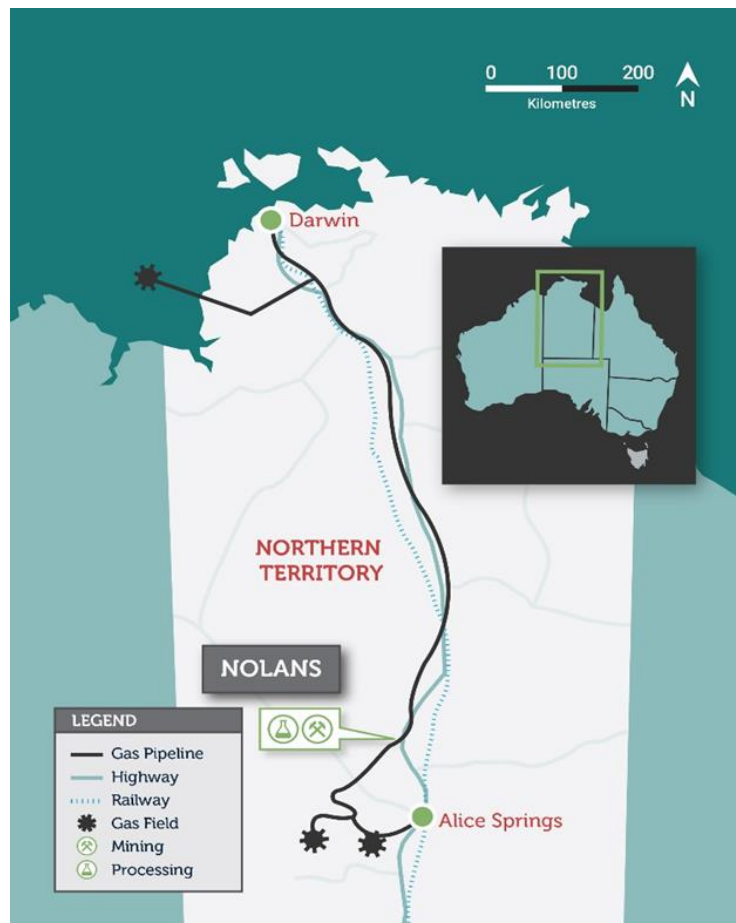
The Company continues to engage with the Central Land Council (CLC) which is negotiating on behalf of the project site's Native Title holders. These discussions have centred on finalising negotiation protocols and the parties have progressed these activities while the CLC and its advisors have reviewed the results of the Nolans DFS.

The Northern Territory Government is expected to be in a position to grant the MLs for the project shortly after the execution of the Native Title agreement.

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<sup>1</sup> The Mining Plus Campaign Mining Study is based on lower-level technical and economic assessments and is insufficient to provide certainty that the conclusions reached will be realised. Further, the Company cautions that there is no certainty that the forecast financial information contained in the Mining Plus Campaign Mining Study will be realised.

Figure 1: Nolans Project Location



## Environment

Environmental monitoring work is ongoing on the project site to ensure a comprehensive baseline data set is available for use in the future and to ensure compliance with the environmental approval conditions of the Northern Territory and Australian governments. During the quarter a further round of groundwater data was collected from monitoring bore data loggers to add to the existing dataset. Additionally, initial vegetation surveys were completed in parts of the borefield to inform on the possible occurrence of groundwater dependence ecosystems.

The water extraction license application for the project's water supply is being updated. This has been initiated as work completed on the project since the original application was lodged has resulted in an increase in annual water supply demand. In addition to this change, the Northern Territory Government has amended the Northern Territory *Water Act* which has resulted in modifications to the application process and the supporting information required. The reworked application is being done to meet these new legislative requirements. It is expected the final application will be lodged during the next quarter.

Key environmental and project development approvals were secured for the Nolans Project in May 2018 (refer to ASX announcement 14 May 2018). Arafura is preparing the project's Mining

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Management Plan (MMP) which details how the project will be managed during construction and the early part of operations to ensure compliance with approval and operational conditions. The MMP is expected to be lodged with the Northern Territory Department of Primary Industry and Resources in early 2020 for their review and authorisation. It will address a range of aspects such as:

- General Environmental Management;
- Groundwater & Surface Water Management;
- Biodiversity Management;
- Cultural & Heritage Management;
- Air & Dust Management;
- Fire Management;
- Erosion & Sediment Control;
- Hazardous Substance Management Plan;
- Emergency Response Management Plan;
- Traffic Management Plan;
- Weed Management Plan;
- Waste Management Plan;
- Radiation Management Plan; and
- Mine Closure Plan.

The approval of this MMP, along with the grant of the project's MLs, are prerequisites to the Company commencing any ground disturbing construction activities on the project site.

### Project Development Timeline

The completion of the DFS in February 2019 was a significant project milestone. However, production of final designs and detailed engineering to enable construction to commence as early as possible post project commitment represents a substantial body of work. Pre-execution readiness activities have continued through 2019 to enable efficient transition from feasibility to front-end engineering and design (FEED), and procurement and construction. On receipt of funds from the \$23.2 million capital raising the Company is looking to bring forward project commitment and FEED with the aim of facilitating commencement of procurement and early works construction activities shortly after production commitment and availability of project funding.

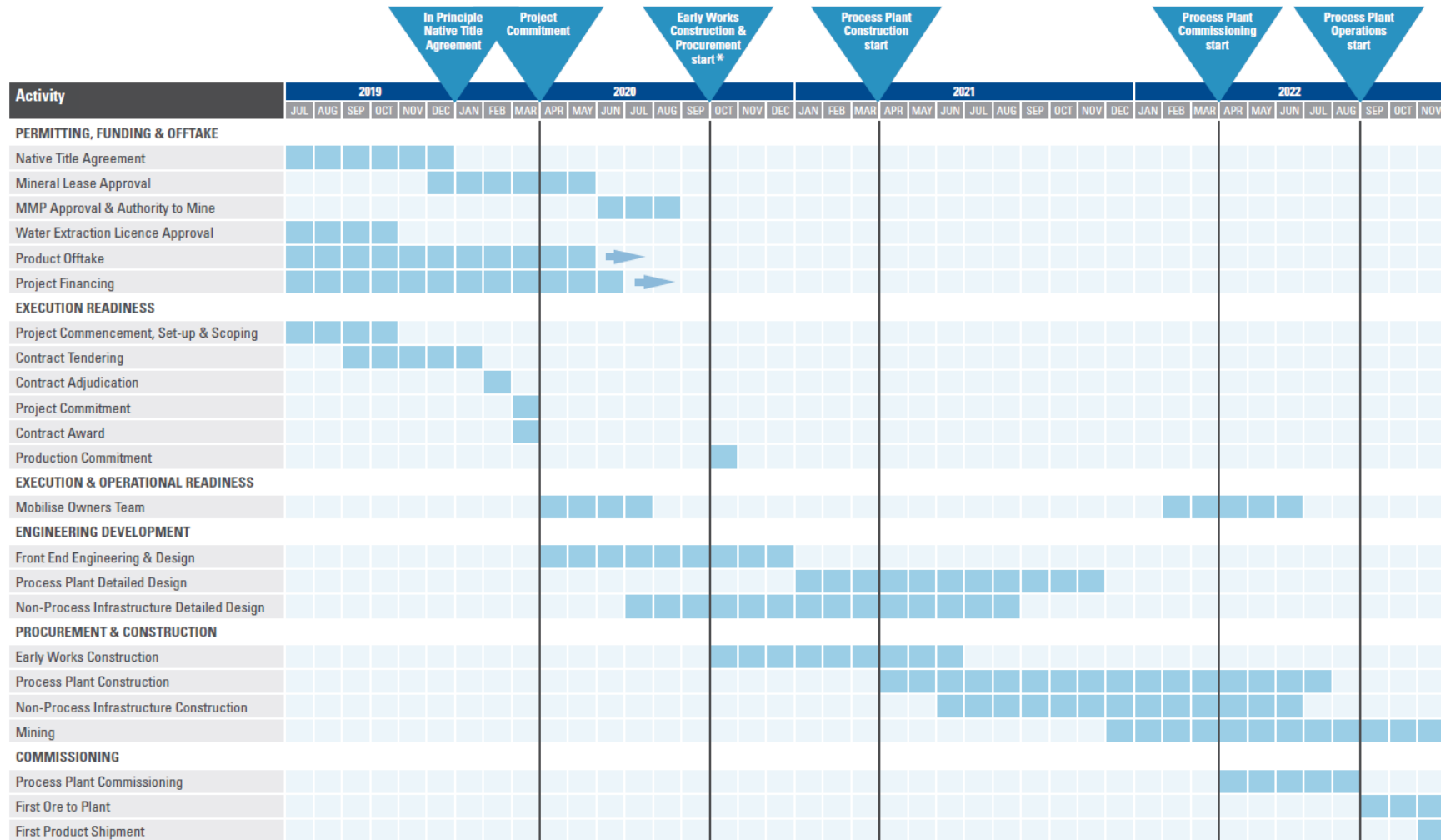
Subject to project funding the current indicative schedule for the Nolans Project to production is shown in **Error! Not a valid bookmark self-reference.** This schedule targets first product shipment from Nolans in the December quarter 2022, subject to a number of factors, including project funding being obtained, product offtake being secured, completion of construction of required mining infrastructure, permitting, and other related activities being completed successfully.



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Table 1: Indicative Project Timeline

Estimate of times for Project and Production are indicative only and are subject to change



\*Early Works Construction & Procurement to the items that follow are subject to:  
 - Product Offtake being secured  
 - Sufficient Project Funding secured  
 - Permitting and other related activities being completed  
 - Each previous activity being completed successfully  
 Delays to commencing Early Works Construction will also impact the timing of Plant Construction and Commissioning.



## Community

A workshop was held in Alice Springs in early April to seek input from stakeholders into the Company's local community engagement and employment strategy for the Nolans Project. Thirty-three participants attended from 24 organisations, representing government, non-government, community and industry bodies.

During the workshop a range of matters were discussed, and a strategy framework developed to ensure the Nolans Project delivers on the important issue of employment and engagement with local stakeholders. The unanimous sentiment from workshop participants was that the workshop was an outstanding success which brought together first-time stakeholders and Arafura to openly discuss, listen and resolve a pathway to maximise local participation in the project.

**Figure 2: Alice Springs - Developing a Local Employment and Engagement Strategy**



### Local Engagement

Engagement continues with the Alice Springs community and recently Arafura participated in the Regional Economic Development Committee (REDC) forum to discuss opportunities and impediments to development in the Northern Territory and particularly in Central Australia. The forum was well attended by local business and local Northern Territory Government agency heads. Arafura continues to receive significant support from the local community and at this forum, the REDC Chair publicly

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praised Arafura's ongoing efforts to inform and engage with all sectors of the local community and the opportunities that the development of the Nolans Project will present for the local community.

The Alice Springs Show was held during 5-6 July and Arafura participated for the fourth year running by providing a display booth focused on the Nolans Project and rare earth applications. Local interest in the project has grown with its continued development. Arafura is appreciative of the strong level of support it receives from the local community.

## NdPr Oxide and Other Products

### Marketing & Offtake

Arafura is primarily focused on advancing negotiations towards binding offtake agreements for its NdPr oxide product which is a key raw material feedstock for the Neodymium Iron Boron (NdFeB) magnet alloy market. The Company's NdPr oxide marketing strategy is underpinned by targeting customers in the high growth NdFeB permanent magnet supply chain for electric vehicles (EV), clean energy and factory automation. The potential for NdPr supply imbalance will be more pronounced for supply chain stakeholders not aligned with the *Made in China 2025* strategy. Marketing efforts are focused on customers incentivised to reduce their Chinese NdPr supply risk. Target customers include:

- Japan – NdFeB magnet manufacturers and trading houses for eventual use in the Japanese automotive sector and in factory automation;
- Europe and South Korea – Automotive, OEMs, wind turbine and consumer electronics makers diversifying NdPr supply risk and seeking product traceability; and
- China – Tier one NdFeB magnet manufacturers that have significant export sales to Europe, Japan and the USA.

Several meetings and engagements during the period were focused on key counterparties in Europe. The emerging interest in EVs from governments, consumers and manufactures in the European automotive sector has many groups along the supply chain assessing their long-term procurement needs for NdFeB magnet alloy requirements for EV traction motors. The expected competition for raw materials created through China's ambitious EV objectives and the US-China trade war has placed greater emphasis on security of supply in Europe and beyond.

Whilst completing customer visits in Europe, the Company also attended the Global Rare Earth Industry Association (GloREIA) conference. REIA is a European Union (EU) sponsored organisation funded by European Institute of Innovation and Technology (EIT) Raw Materials. The objective of EIT Raw Materials is sustainable competitiveness for minerals, metals and materials along the value chain. The objective of REIA is to develop strategies for a more synergistic supply chain and reduce fragmentation for rare earths for use in European manufacturing. The Company delivered a presentation at the GloREIA conference under the topic of diversity and sustainable supply.









In addition to meetings with potential customers, the Company also participated in an Austrade hosted Critical Minerals Business Delegation to the UK, Belgium, France and Germany. The delegation met with UK and EU representatives focused on critical minerals policy, industry organisations focused on

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strategic metals value chains, and individual industrial groups and representatives from original equipment manufacturers (OEMs) and industrial groups focused on procurement for EV materials.

Table 2 below shows an overview of Arafura's rare earths product distribution plan and the status of its offtake negotiations.

**Table 2: Rare Earths Product Distribution Plan**

Customer / Target Region	Amount (tonnes p.a.)	Offtake Status	Proportion of Revenue <sup>1</sup>
<b>NdPr Oxide – targeting contracts with NdFeB magnet companies &amp;/or end users</b>			
JingCi Material Science Co. 	900	MoU	96%
China 	3,457	In progress	
Japan 			
South Korea 			
Europe 			
<b>SEG-HRE Carbonate – targeting contracts with rare earth processors</b>			
China 	606 (TREO equivalent)	In progress	1%
Japan 			
<b>Cerium Hydroxide – targeting contracts with rare earth processors</b>			
Baotou Xinyuan Rare Earth Hi-tech 	8,383 (TREO equivalent)	MoU	3%

*From rare earth products only*

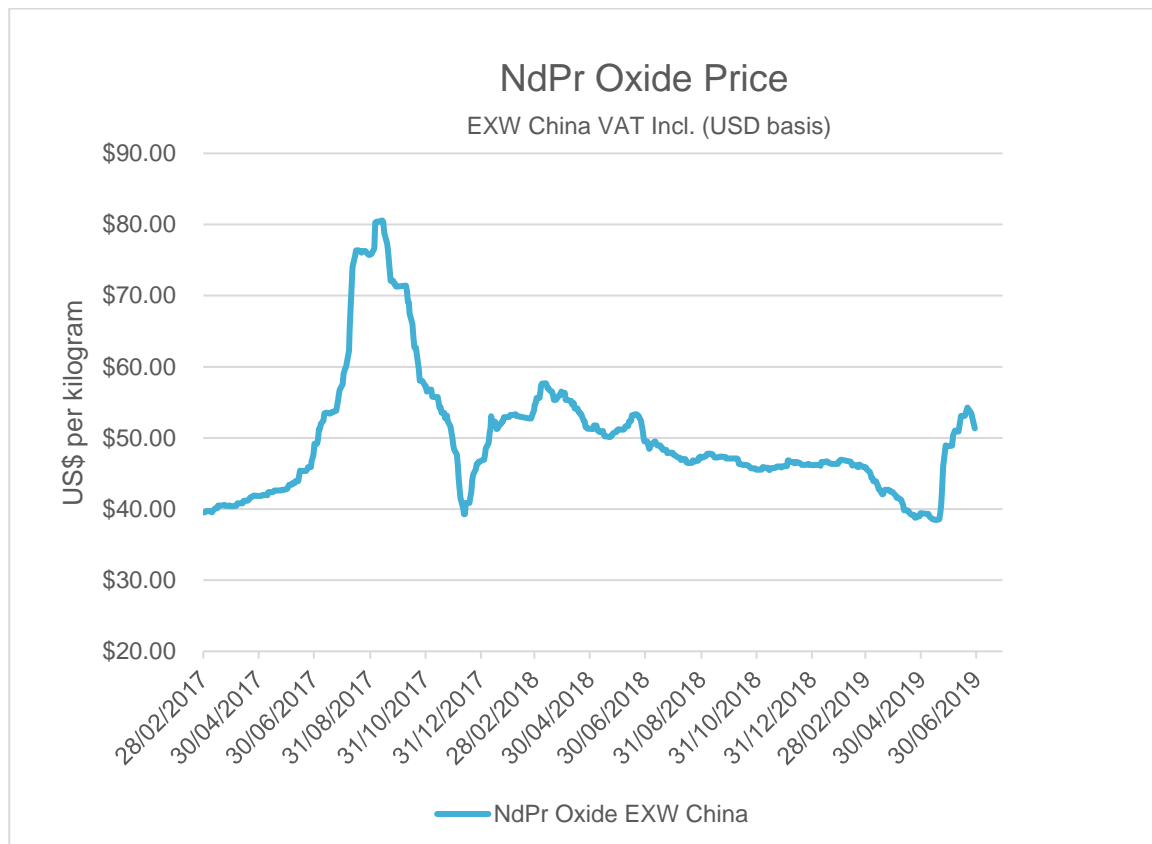
### NdPr Market

An initial decline in NdPr oxide prices during April was in part due to changes to the Chinese VAT imposed on rare earths decreasing from 16% to 13% and softer trade. Rare earth prices rebounded strongly during May and the NdPr oxide price recovered by 27% over the previous month.

Rare earth prices have increased on reports that China is considering banning the export of rare earths to the USA as trade tensions continue between the two nations. China, the world's largest producer and exporter of rare earths, exported 55,000 tonnes of rare earths in 2018 according to the Association of China Rare Earth Industry (ACREI). The USA is one of the largest importers of rare earths which are critical for the North American supply chain, US defense applications, and industrial applications including EV motors and wind turbines.

China's president Xi Jinping toured JL MAG Rare-Earth Co Ltd's magnet factory in Jiangxi province where he discussed the China-USA trade war with the local media. The visit had an immediate impact on the Chinese rare earths market and highlighted any global supply cut-off would be devastating to the rest of the world's high-tech industry. The fundamental drivers for NdPr demand for use in NdFeB permanent magnets remain positive.

Figure 3: NdPr Oxide Price



Source: Asian Metal

### NdPr Substitution

In 2018, 93% of new EVs were powered by NdFeB traction motors (permanent magnet motors - PMMs). These are more power dense than any other type of electric motor giving more power per unit of mass and volume and offering greater efficiency than alternatives when compared over all driving conditions. The main alternative to PMMs in EVs are induction motors. Induction motors contain no permanent magnets and are cheaper. However, whereas PMM's componentry is exposed to the rare earth mineral market, induction motors come at the cost of reduced efficiency. So, what is the magnitude of each risk in terms of cost per average sized motor?

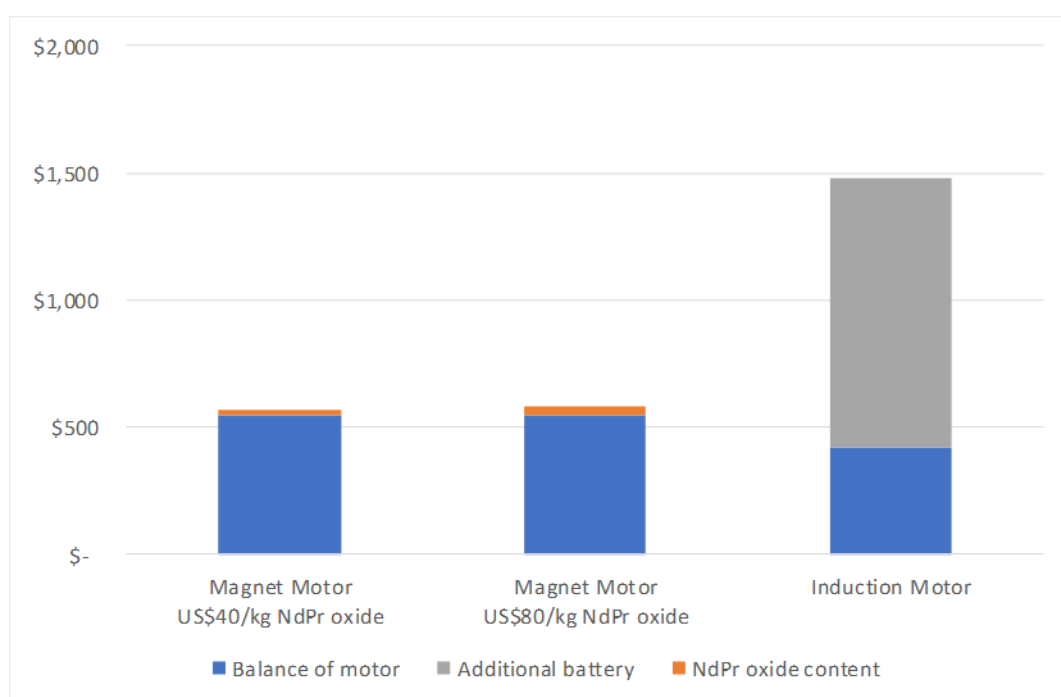
The global sales-weighted average PMM was 71 kW and contained 1.35 kilograms of NdFeB magnets in 2017, 32% of which was NdPr oxide. At an NdPr oxide market price of US\$40/kg this represents US\$17.20 in value. With the motor costing in the vicinity of US\$600, the NdPr component represents approximately 3% of value. Figure 4 shows this scenario and the effect of a doubling in NdPr oxide market price.

The alternative induction motor is cheaper but is also less efficient, meaning that a larger battery would be required to match the mileage achievable by a similar sized PMM. For a modest sized battery pack of 40 kWh, this would equate to an additional 6 kWh in capacity. With battery pack costs averaging US\$176/kWh in 2018, this adds an additional US\$1,056 to each induction powered vehicle.

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This analysis, which is captured below in Figure 4, shows that the key economic driver for an EV is the cost of the battery. The cost benefit of smaller battery packs afforded by PMMs far outweighs any exposure to fluctuations in NdPr oxide price. It is Arafura's view based on its market engagement that some EV procurement analysis and NdPr market forecasts has not fully accounted for the loss of energy efficiency and flow on effect to other components in assessing NdPr substitution. Arafura's experience is that EV industry participants are now putting significant resources into supply chain mapping with greater emphasis being placed on energy efficiency.

**Figure 4: Average Electric Passenger Vehicle Motor Costs**



### Reduction of Rare Earths in NdFeB Magnets?

Fears over the risk of China restricting rare earth exports has increased the focus on rare earth substitution in NdFeB magnets. A recent Bloomberg article referenced comments by Toshiyuki Inouchi of Tokyo-based Hitachi Metals Ltd, who noted that following the 2010 restriction of rare earth exports Hitachi successfully invested in R&D efforts to significantly reduce the use of the heavy rare earth dysprosium (Dy). The addition of Dy to NdFeB enables the magnet to operate efficiently at higher temperatures. Hitachi has reduced the volume of Dy in NdFeB by half and produces magnets with significantly reduced or no Dy for specific applications.

In Arafura's experience the reduction in Dy is sometimes incorrectly referred to as the removal of rare earths from magnets. Hitachi has been developing its magnet materials business unit procuring NdPr from non-China sources and reducing its reliance on China-sourced Dy. Inouchi further noted that Hitachi magnet production will need to expand by 10% to 15% on an annual basis, led by growth in the automotive sector.

## Project Funding

Potential capital sources for project funding include equity, debt, joint venture and project sell-down to a strategic investor. Pivotal to project funding will be the advancement of offtake agreements. Engagement with potential funding partners is linked with long term strategic offtake into the NdFeB supply chain along with the procurement of high value specialist equipment. These activities are ongoing and running in parallel with offtake discussions for NdPr oxide. During the quarter and concurrently with offtake activities in Europe, the Company held meetings with several European investment banks.

## Exploration

### Bonya Joint Venture (Tungsten; Base and Precious Metals; Vanadium)

EL 29701 (Bonya Project) is located 280 kilometres north-east of Alice Springs. Arafura holds a 60% joint venture (JV) interest in the Bonya Project and Thor Mining Plc (Thor) (AIM,ASX: THR) holds 40% with Thor acting as the project manager. The project is located adjacent to Thor's Molyhil Tungsten-Molybdenum (W-Mo) development project (Figure 5: [EL32167 Jervois Vanadium](#)). Thor completed an updated feasibility study on Molyhil in 2018.

### Bonya Tungsten

In April Arafura and Thor completed first-pass exploration at Bonya which included costeaning and shallow reverse circulation (RC) drilling. The focus of the program was 2,184 metres of RC drilling at the Jericho, Samarkand, Tashkent and White Violet tungsten prospects, producing encouraging tungsten and copper intercepts at White Violet and Samarkand. In June, Arafura and Thor reported laboratory assays from the program (*refer to ASX announcements 24 and 26 June 2019*). The best results were:

#### White Violet

- 27m @ 0.29% WO<sub>3</sub> from 35m including 16m at 0.31% Cu from 43m and 7m @ 0.2% WO<sub>3</sub> from 67m; hole 19RC020;
- **12m @ 0.67% WO<sub>3</sub> from 46m; 25m @ 0.39% WO<sub>3</sub> from 63m** and; 5m @ 0.1%WO<sub>3</sub> from 96m; hole 19RC021; and
- **29m @ 0.70% WO<sub>3</sub> from 81m;** including **13m at 1.13% WO<sub>3</sub>** from 91m; hole 19RC022.

#### Samarkand

- 13m @ 0.48% WO<sub>3</sub> from 19m; hole 19RC026;
- 8m @ 0.45% WO<sub>3</sub> from 38m; hole 19RC028;
- 5m @ 0.36% Cu from 9m including 2m @ 0.23% WO<sub>3</sub>; hole 19RC029; and
- **12m @ 0.77% Cu** from 22m; **7m @ 1.23% Cu** from 37m; **9m @ 0.74% WO<sub>3</sub>** from 64 m including 2m @ 0.2% Cu from 69m; hole 19RC030.



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Planning is underway for a follow-up exploration program targeting an estimation of Mineral Resources at White Violet and Samarkand.

### Jervois Vanadium

During the quarter Arafura and Thor completed a strategic review to assess development options for the Jervois Vanadium Project, held in a JV between Arafura (60%) and Thor (40%). To facilitate future development of this opportunity the eastern portion of EL29701 was assigned a new EL number (EL 32167) (see Figure 5).

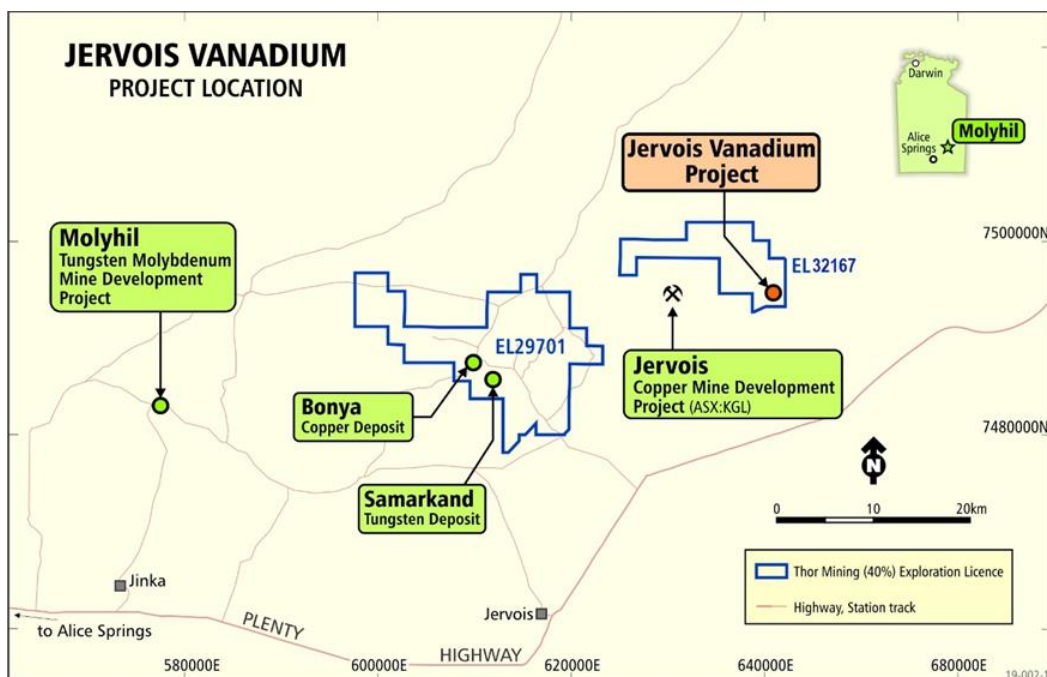
Planned subsequent steps for the project include the following:

- Resource drilling at the Casper, RD, and Coco magnetite-hosted vanadium prospects;
- Drill testing of additional airborne magnetic targets; and
- Follow up of historic gold and platinum group element drill intersections.

Subject to successful outcomes from these activities, next steps would include detailed metallurgical testwork and other technical activities, plus environmental and social impact studies aimed at progressing feasibility and mine development permitting.

The JV plans to actively seek third party project investment in the Jervois Vanadium Project, with all potential options canvassed, to take this exciting project opportunity forward.

**Figure 5: EL32167 Jervois Vanadium**





## Corporate

### Cash Position

Arafura had \$5.4 million in cash reserves at 30 June 2019. When combined with \$23.2 million from the recently completed entitlement offer, this places the Company in a strong position to accelerate the development of its 100%-owned and Australian-domiciled Nolans Project.

For the quarter ended 30 June 2019 average monthly cash expenditure from operating activities was \$0.8 million compared with \$1.4 million for the March 2019 quarter and \$1.0m forecast in the Appendix 5B for the period ended 31 March 2019.

### Nolans Project Mineral Resources and Ore Reserves

The information in this report that relates to Mineral Resources was released in an ASX announcement dated 7 June 2017 (Detailed Resource Assessment Completed) and was completed in accordance with the guidelines of the JORC Code (2012). The information in this report that relates to Ore Reserves was released in an ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study) and was completed in accordance with the guidelines of the JORC Code (2012).

Arafura confirms that it is not aware of any new information or data that materially affects the information included in these original market announcements and that all material assumptions and technical parameters underpinning the estimates in the original market announcements continue to apply and have not materially changed. Arafura confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original market announcements.

#### Mineral Resources

RESOURCES	TONNES (m)	RARE EARTHS TREO %	PHOSPHATE P <sub>2</sub> O <sub>5</sub> %	NdPr Enrichment %
Measured	4.9	3.2	13	26.1
Indicated	30	2.7	12	26.4
Inferred	21	2.3	10	26.5
<b>TOTAL</b>	<b>56</b>	<b>2.6</b>	<b>11</b>	<b>26.4</b>

As announced on 7 June 2017. 1.0% TREO cut-off grade. Numbers may not compute exactly due to rounding. "NdPr enrichment" is the proportion of TREO comprising Nd<sub>2</sub>O<sub>3</sub> and Pr<sub>6</sub>O<sub>11</sub>.

#### Ore Reserves

RESERVES	TONNES (m)	RARE EARTHS TREO %	PHOSPHATE P <sub>2</sub> O <sub>5</sub> %	NdPr Enrichment %
Proved	4.3	3.1	13	26.1
Probable	14.9	2.9	13	26.5
<b>TOTAL</b>	<b>19.2</b>	<b>3.0</b>	<b>13</b>	<b>26.4</b>

As announced on 7 February 2019. Numbers may not compute exactly due to rounding. "NdPr enrichment" is the proportion of TREO comprising Nd<sub>2</sub>O<sub>3</sub> and Pr<sub>6</sub>O<sub>11</sub>.

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### Bonya Competent Persons Statement

The information in this report that relates to Bonya exploration results is based on information compiled by Richard Bradey, who holds a BSc in Applied Geology and an MSc in Natural Resource Management and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Bradey is an employee of Thor Mining PLC. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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' (JORC Code 2012). Mr Bradey consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

### Forward Looking Statements

This announcement includes forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "will", "progress", "anticipate", "intend", "expect", "may", "seek", "towards", "enable" and similar words or expressions containing same.

The forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this announcement and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. Given these uncertainties, no one should place undue reliance on any forward looking statements attributable to the Company, or any of its affiliates or persons acting on its behalf. The Company does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Neither the Company nor any other person, gives any representation, warranty, assurance, nor will guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. To the maximum extent permitted by law, the Company and each of its advisors, affiliates, related bodies corporate, directors, officers, partners, employees and agents disclaim any responsibility for the accuracy or completeness of any forward-looking statements whether as a result of new information, future events or results or otherwise.

### Compliance Statement – Mineral Resources

The Mineral Resources estimates referred to in this announcement (and which were used in the Mining Plus Study) are contained in Arafura's ASX announcement dated 7 June 2019 (Detailed Resource Assessment Completed) available to view at [www.asx.com.au](http://www.asx.com.au), and were completed in accordance with the guidelines of the JORC Code (2012). Arafura confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resources estimates in the relevant announcement continue to apply and have not materially changed. Arafura confirms that the form and content in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

## Quarterly Activities Report and Appendix 5B

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### **Compliance Statement - Ore Reserves**

The Ore Reserves estimates referred to in this announcement (and which were used in the Mining Plus Study) are contained in Arafura's ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study) available to view at [www.asx.com.au](http://www.asx.com.au), and were completed in accordance with the guidelines of the JORC Code (2012). Arafura confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Ore Reserves estimates in the relevant announcement continue to apply and have not materially changed. Arafura confirms that the form and content in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

### **Compliance Statement – Production targets and forecast financial information**

The information in this presentation that relates to production targets and forecast financial information derived from a production target (other than such forecast financial information as a result of the Mining Plus Study) is extracted from an ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study) available to view at [www.asx.com.au](http://www.asx.com.au). Arafura confirms that all material assumptions underpinning the production target and forecast financial information derived from production targets set out in the announcement released on 7 February 2019 continue to apply and have not materially changed.

## 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

Arafura Resources Ltd

#### ABN

22 080 933 455

#### Quarter ended ("current quarter")

30 June 2019

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(1,559)	(11,579)
(b) development	-	-
(c) production	-	-
(d) staff costs	(379)	(1,589)
(e) administration and corporate costs	(493)	(2,091)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	19	134
1.5 Interest and other costs of finance paid	(2)	(6)
1.6 Income taxes paid	-	-
1.7 R&D refund - Non Capitalised Portion	-	446
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(2,414)</b>	<b>(14,685)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	(4)
(b) tenements (see item 10)	(24)	(24)
(c) investments	-	-
(d) other non-current assets	-	-
2.2 Proceeds from the disposal of:		
(a) property, plant and equipment	21	21

## Quarterly Activities Report and Appendix 5B

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
(b)	security deposits on tenements (see item 10)	-	-
(c)	investments	-	-
(d)	other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (R&D Refund – Capitalised Portion)	-	1,662
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(3)</b>	<b>1,655</b>
<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	3,000	11,347
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(201)	(868)
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)	75	75
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>2,874</b>	<b>10,554</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	4,941	7,874
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,414)	(14,685)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(3)	1,655
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,874	10,554
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>5,398</b>	<b>5,398</b>

## Quarterly Activities Report and Appendix 5B

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	1,398	1,941
5.2 Call deposits	4,000	3,000
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>5,398</b>	<b>4,941</b>

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	(193)
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 transactions included in items 6.1 and 6.2	

Salaries, fees and superannuation of Directors of the Company.

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	

N/A.

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	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.		

N/A

**Quarterly Activities Report and Appendix 5B**

<b>9.</b>	<b>Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1	Exploration and evaluation	2,437
9.2	Development	-
9.3	Production	-
9.4	Staff costs	400
9.5	Administration and corporate costs	600
9.6	Other (provide details if material)	-
<b>9.7</b>	<b>Total estimated cash outflows</b>	<b>3,437</b>

<b>10.</b>	<b>Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	See Appendix A below.			

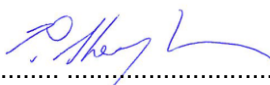


## Quarterly Activities Report and Appendix 5B

### 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.

Sign here:


  
.....  
(Company secretary)

Date: 30 July 2019.

Print name: Peter Sherrington

### Notes

1. 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.

### Appendix A – Mining Tenements Held as at 30 June 2019

Tenement reference	Project	Holder	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter	Notes
ML 26659	Nolans, NT	Arafura Rare Earths Pty Ltd	Mineral Lease	100%	100%	Application Lodged
ML 30702				100%	100%	Application Lodged
ML 30703				100%	100%	Application Lodged
ML 30704				100%	100%	Application Lodged
EL 28473 EL 28498 EL 29509 EL 31224 EL 31284 EL 31957	Aileron–Reynolds, NT	Arafura Resources Ltd	Exploration Licence	100% 100% 100% 100% 100% 100%	100% 100% 100% 100% 100% 100%	
EL 29701	Bonya JV, NT	Arafura Resources Ltd	Exploration Licence	60%	60%	Thor Mining Plc 40%, Arafura Resources Limited 60%
EL 32167	Jervois Vanadium, NT	Arafura Resources Ltd	Exploration Licence	-	60%	Thor Mining Plc 40%, Arafura Resources Limited 60%  EL 32167 created from division of EL 29701