



**ASTRON CORPORATION LIMITED**

**ARBN 154 924 553**

**Incorporated in Hong Kong, company number 1687414**

**Notice to the Australian Stock Exchange**

## **Production and Exploration Report**

**Quarter Ended 31 December 2020**

### **Donald Mineral Sands Project, Victoria**

#### **OVERVIEW**

Astron holds Retention Licences (RL) 2002 and 2003, Mining Licence (ML) 5532, as well as Exploration Licence 5186, in Victoria, Australia through its wholly-owned subsidiary Donald Mineral Sands Pty Ltd (DMS). In total, the licence areas encompass 507 square kilometres in western Victoria and includes the area of the proposed Donald Mineral Sands Project which comprises the Donald and Jackson mineral sands deposits. They contain a potential major source of supply of mineral sands zircon and titania products, with a significant rare earth elements content. The combined mineral resource for the Donald Mineral Sands Project is 5.7 billion tonnes (bt) at 3.2% HM (Refer ASX Release 7 April 2016)

Astron is investigating developing its large mineral sand resources in a staged and scalable manner, initially by the Donald Mineral Sands Deposit Stage 1 mining and concentrating of heavy mineral ore from ML 5532 (28 sq kms), followed by the Stage 2 mining and concentrating of the remaining area of RL 2002 (244 sq kms). The southern area of the resource, covered by RL 2003 (referred to as the Jackson Mineral Sands Deposit), is available for subsequent development.

The 2021 calendar year is expected to represent the culmination of a significant period of evaluation of the Donald deposit, with the aim of completing the feasibility study leading to a decision to develop the project. This will include consideration of necessary detailed evaluation works and associated funding activities.

#### **PRODUCTION**

As a project at an advanced evaluation stage, no commercial production activities were conducted during the quarter.

#### **DEVELOPMENT**

During the quarter, the evaluation of the Donald project was advanced within the following main work streams.

## **Mineral Resources and Ore Reserves**

Astron issued its most recent Donald project Ore Reserve Statement in 2012 and its most recent Mineral Resource Statement in 2016. Based on the 2012 Ore Reserve Statement (refer ASX Release 18 June 2012), RL 2002 (inclusive of ML 5532) contains 461 million tonnes (mt) of ore with an average heavy mineral (HM) grade of 5.9%. The 2016 Mineral Resource Statement (refer ASX Release 7 April 2016) recorded a total Mineral Resource for RL2002 and RL2003 of 5.7 bt of ore with an average 3.7% HM grade. The Mineral Resource attributable to the Donald Mineral Sands deposit area (RL 2002 including ML 5532) is 3.2 bt, with an average HM grade of 3.6%. The Measured component is 715 mt, with an average 4.2% HM grade. Based on the Mineral Resource Statement, the Donald project represents one of the largest potential new sources of mineral sands supply, with a significant insitu resource of zircon as well as the titania (titanium dioxide products) of ilmenite, rutile and leucoxene.

Associated with the progression of metallurgical test work, Astron plans to update its Ore Reserve Statement in the first quarter of 2021.

## **Pilot Scale Testing of DMS Project Ore Materials**

Astron has been undertaking pilot-scale concentrating of Donald ore into a heavy mineral concentrate (HMC), as announced on 8 July 2019, and the subsequent mineral separation or processing of this HMC into final products at consultants' test facilities. As noted, Mineral Technologies was commissioned to undertake the design, construction and operation of a pilot wet concentration plant to treat approximately 1,000 tonnes of ore, recovered from a test pit on RL2003, in order to produce a representative sample of heavy mineral concentrate (HMC) for further testing.

The pilot plant successfully produced 24 tonnes of HMC, in turn providing validation of the suitability of the wet concentrator plant process circuit, at continuous industrial scale. The process was able to achieve recoveries of in-size and in-SG (i.e. -250+20 $\mu$ , +4.05SG fraction) at 88.5% for TiO<sub>2</sub>, 94.3% for ZrO<sub>2</sub> and 93.8% for CeO<sub>2</sub> relative to WCP feed when targeting a 90% total heavy mineral (THM) grade.<sup>1</sup> During the same process, it was determined that increasing or reducing the HMC grade had limited impacts on the recovery of ZrO<sub>2</sub> and CeO<sub>2</sub> (although a marked decrease in low SG TiO<sub>2</sub> is anticipated). Mineral assemblages of HMC at 90% and 95% THM are shown in the table below.

Estimated Mineral Assemblages of HMC after WCP Process<sup>2</sup>

Mineral Assemblage	TiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	ZrO <sub>2</sub>	CeO <sub>2</sub>
	%	%	%	%	%
HMC @ 90% THM	33.3	10.2	29.8	17.7	0.71
HMC @ 95% THM	37.3	11.4	23.3	19.4	0.74

<sup>1</sup> Astron advises that these figures have been revised from those previously announced figures in its 15 May, 2020 announcement.

<sup>2</sup> Mineral Technologies Report **MS20/2054526/1**

The planned processing of the HMC material from the pilot plant, for metallurgical testing purposes, was intended to be undertaken in China under the supervision of a metallurgist consultant. Given COVID-19 restrictions, this course of action did not proceed. Instead, Astron has pursued alternative arrangements for HMC processing into final products in Australia. Separation trials of the Donald HMC have been undertaken at Mineral Technologies' facilities in Queensland, with Mineral Technologies and one other engineering and metallurgical firm retained to conduct these trials.

Australian Minmet Metallurgical Laboratories (AMML) was contracted to perform a scoping study on the separation of rare earth elements (REE) from the HMC sample, prior to the separation process for the valuable heavy minerals component. As part of metallurgical test work, rare-earths separation tests were completed during the quarter. A series of flotation tests were conducted using a previously identified reagent, the results of which provided confidence that Astron will be able to achieve REE recovery rates (measured by percentage of CeO<sub>2</sub> recovered) of over 90%. Further metallurgical examination of the rare earth product has confirmed that there exists a significant heavy rare-earth content within Donald's resource base.

During the quarter, work continued in relation to the separation of the titanium dioxide and zircon product streams from HMC, subsequent to REE recovery, using conventional separation methods. This has involved dry electro-static and electro-magnetic separation techniques, producing a zircon and higher titanium (HiTi) component, as well as an ilmenite product stream. Test work associated with the zircon indicates that the major part of the zircon will be a premium grade product, with an expected ZrO<sub>2</sub> content above 66%. The current focus of work is upon the production of a combined titania (titanium dioxide product ) with a TiO<sub>2</sub> content of 61%. This titania product is expected to be suitable for titanium slagging processes. Astron expects to be in a position to have more comprehensive test results on separation efficiencies and product attributes, during the first quarter of 2021. Nonetheless, through this recent test work initial product samples have been produced that are able to be provided to potential customers, as well as the company's own mineral test facilities in Yingkou, China for testing.

Based on the encouraging results from this separation test work, Astron is investigating project options for the mineral separation of Donald HMC into final products within Australia. The other option, still under consideration, is the export of HMC for processing in China.

### ***Regulatory Approvals***

Regulatory approvals for the first stage of the planned development of the Donald Mineral Sands deposit on ML 5332 are well advanced. An outstanding regulatory approval is a Work Plan, for which the company intends to submit a detailed proposal during 2021. During the December quarter, work continued on addressing the Environmental Effects Statement (EES) conditions for submission of the Work Plan, specifically as related to modelling of the air and noise parameters associated with the project. This will allow a more detailed interpretation of the operational impacts associated with activities associated with these parameters; how they compare to the modelling conducted in the EES phase of the project; and mitigation measures as part of development planning.

### ***Detailed Feasibility Study***

Based on extensive prior evaluative work, including metallurgical test work and modelling, the Detailed Feasibility Study (DFS) stage of the project, which includes a detailed engineering, project optimisation component, commenced after the end of the December quarter. The objective of this phase is to finalise the project scope and design, including identifying and investigating options to improve project economics and mitigate risk, in turn leading to detailed engineering and a comprehensive financial and risk analysis.

Study areas include:

- Identifying any key areas of uncertainty within the project;
- identifying further metallurgical test work to optimise concentrating and processing recoveries;
- option evaluation to define optimal project design concepts (including mineral separation within Australia); and
- engineering design parameters to complete an evaluation of existing design works.

Conceptual design criteria for key infrastructure, including power, water, civil and road works, will be progressed to a design stage suitable for the tendering and awarding of infrastructure agreements after the commencement of the detailed engineering phase. Further details on the DFS work stream will be provided in the March Quarter Production Report.

### ***Test Pit Rehabilitation and Monitoring – RL2003***

Continued monitoring of the test pit, excavated during 2018, and subsequently rehabilitated back to the original land form, continues to be undertaken, including soil testing and crop yield data analysis by an agronomist.

### ***Community Consultation***

Associated with the increase in work activity and advancement of the project on several fronts, DMS intends to establish a Community Reference Group during the first quarter of 2021, as a means of ensuring a continuing high level of community engagement and means to seek the views of local residents and other stakeholders. The submission of a Work Plan will be associated with a process of engaging with residents and stakeholders.

### ***Marketing and Sales Arrangements***

Astron has produced product samples from its recent metallurgical test work. It is planned that product samples will be provided to potential customers, as well as made available to the company's mineral test facilities in Yingkou, China for trialling and testing purposes.

## **Funding**

Astron continues to consider and evaluate funding options for the Donald Mineral Sands project. No specific actions were undertaken during the December quarter.

## **Impact of COVID-19**

Astron remains focused on the health and welfare of its workforce and has taken necessary measures in this regard. The impact of COVID-19 pandemic continues to have some adverse impact on Astron's business activities, although in relation to the Donald project, work has advanced, with remote working practices in place and with recent benefits gained from the some easing of interstate travel restrictions within Australia. Some aspects of planned engagement with potential customers and movement of personnel between China and Australia have been delayed due to suspension of international travel.

## **EXPENDITURE SUMMARY**

### **Total expenses incurred were:**

Production Activities	Dec Qtr 2020	YTD 2021 FY
	Nil	Nil
Development Activities	Dec Qtr 2020	YTD 2021 FY
	\$ 188,579	\$ 254,083

## **Niafarang Mineral Sands Project, Senegal**

### **OVERVIEW**

Astron Corporation owns a licence issued under Order Number 09042/MIM/TMG via its subsidiary Senegal Mineral Resources. (SMR)

The Niafarang project is located within an exploration licence zone covering an area of 397 square kilometres along a 75 kms stretch of the Casamance coast of Senegal, West Africa. The project is designed to access a high-grade coastal mineral sands deposits using simple dredge mining and concentrating methodologies. The ore is high-grade coarse-grained sands producing high quality ilmenite and zircon.

It is planned that the mining operation will involve surface mining with little or no overburden, utilising conventional mining equipment as well as spiral wet concentration to produce a heavy mineral concentrate. Astron has acquired all of the necessary mining equipment for the first stage of the project. This equipment is held in storage in Dakar. Final arrangements are being progressed for the temporary resettlement of a small localised population, to allow the commencement of mining activities.

Environmental and Mining licences were awarded in 2017. A small mining licence (SML) was initially awarded to Astron and transferred to its Senegalese based subsidiary. Extensive community and stakeholder engagement have occurred while community development initiatives are in place.

## PRODUCTION

As this project is still at a regulatory approval stage, there were no production activities during the quarter.

## DEVELOPMENT

There were limited development activities during the quarter. As announced on 8 June 2017, a mining licence has been issued. Subject to completion of outstanding negotiations with the Government of the Republic of Senegal, production is able to commence quickly, with a minimal capital expenditure requirement, although a timetable is not available for that occurrence at this stage.

## EXPENDITURE SUMMARY

### *Total expenses incurred:*

Production Activities	Dec Qtr 2020	YTD 2021 FY
	Nil	Nil
Development Activities	Dec Qtr 2020	YTD 2021 FY
	\$ 18,045	\$ 90,118

Note: the development activities expenditure includes procurement, design and consulting.

## Astron China

Astron Corporation, through its subsidiary Astron Titanium (Yingkou) Ltd, owns and operates a mineral sands processing plant in Yingkou, Liaoning, China.

## MINERAL SEPARATION PLANT (MSP)

As previously announced, Astron has now commissioned a titanium dioxide (TiO<sub>2</sub>) processing plant in Yingkou. During the December quarter, the plant produced 2,746 tonnes of rutile (a decrease of 53.3% from the immediately prior quarter of 5,892 tonnes). The decrease in production is the result of increased downtime associated with plant repair and maintenance activities, as well as a second wave of COVID-19 infections in China's north-east.

During the quarter, Astron sold 4,277 tonnes of rutile (an increase of 37.3% from the previous quarter total of 2,681 tonnes). Higher sales reflected favourable market conditions, including increased customer demand associated with the re-commencement of production by a number of downstream producers.

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This announcement is authorised for release to ASX by the Board of Directors of Astron

**About Astron**

Astron Corporation Limited (ATR: ASX) is an ASX listed mining and processing company, domiciled in Hong Kong, with extensive (30 years+) experience in mineral sands processing, technology and downstream product development, as well the marketing and sale of zircon and titania (titanium dioxide) products, most notably in China.

Astron has extensive mineral sands expertise. It conducts a mineral sands trading operation based in Shenyang, China and operates a zircon and titanium chemicals and metals research and development facility in Yingkou, China. The company's long involvement in conducting downstream mineral and materials processing operations has ensured a strong technical competency, backed by an extensive intellectual property patent base, in a range of technologies with an associated deep knowledge of mineral sands markets.

The company's prime focus is upon the development of the large, long-life and attractive zircon assemblage Donald Mineral Sands deposit in the Murray Basin, Victoria. Donald has the ability to represent a new major source of global supply in mineral sands. The Donald project represents a Tier One deposit in terms of resource scale and potential production longevity, value of mineral assemblage and expected competitive revenue:cash cost ratio. The rare earth element component of the deposit represents a potentially valuable additional revenue source.

Astron is also the owner of the Niafarang mineral sands project in Senegal, West Africa. Niafarang is a high-grade coastal mineral sands deposit, planned to be developed using simple dredge mining and processing methodology.

## **APPENDIX 1. MINERAL RESOURCE STATEMENT FOR ASTRON AND ITS SUBSIDIARIES**

### *Geology and Geological Interpretation*

The Donald and Jackson Mineral Sands deposits belong to the so-called “WIM-style” fine-grained mineral sands deposits discovered in the Wimmera area of the Murray Basin in the 1980s. They consist of large and broad lobate sheet-like heavy mineral accumulations deposited within the Late Miocene to Late Pliocene Loxton-Parilla Sands. These deposits are believed to represent accumulations that developed below the active wave base in a near shore environment, possibly representing the submarine equivalent of the strand style deposits. The WIM-style deposits are considerably larger in tonnage than strand-line deposits that are formed along the seaward face of shorelines.

### *Mineral Resource Estimate*

Following the 2015 in-fill drilling at the Donald and Jackson Mineral Sands deposits, Astron commissioned an independent consultant, AMC Consultants Pty Ltd, to update the Mineral Resource estimates in accordance with the requirements of the JORC 2012 Code. This update was finalised in April 2016.

The current Mineral Resource estimate totals 5.71 billion tonnes of sand at an average grade of 3.2% HM (at 1% HM cut-off) - with Measured, Indicated and Inferred categories classified as presented in Table 1 for the Donald and Jackson deposits. In addition to assaying the total HM content, major valuable heavy minerals (VHM) were assayed in more than 50% of all drill holes and the heavy mineral assemblage is presented in Table 2.

## Mineral Resource Estimate

Table 1: Heavy Mineral (HM) Sand – Mineral Resource Estimate

Area	Classification	Tonnes	HM	Slimes	Oversize
		(Mt)	(%)	(%)	(%)
RL2006	<i>Measured</i>	0	0.0	0.0	0.0
	<i>Indicated</i>	58	1.6	14.1	6.2
	<i>Inferred</i>	24	1.8	14.4	4.7
	Subtotal	82	1.6	14.2	5.8
RL2003	<i>Measured</i>	0	0.0	0.0	0.0
	<i>Indicated</i>	1,845	2.8	19.2	5.8
	<i>Inferred</i>	560	2.9	16.8	3.2
	Subtotal	2,405	2.9	18.6	5.2
Total Jackson Deposit (RL2003 & RL2006)	<i>Measured</i>	0	0.0	0.0	0.0
	<i>Indicated</i>	1,903	2.8	19.0	5.8
	<i>Inferred</i>	584	2.9	16.7	3.3
	Total	2,487	2.8	18.5	5.2
RL2002	<i>Measured</i>	343	3.9	19.8	8.1
	<i>Indicated</i>	833	3.3	16.2	13.5
	<i>Inferred</i>	1,595	3.4	15.7	6.0
	Subtotal	2,771	3.4	16.4	8.5
MIN5532	<i>Measured</i>	372	4.5	14.4	12.8
	<i>Indicated</i>	75	4.0	13.8	13.1
	<i>Inferred</i>	7	3.5	13.5	10.6
	Subtotal	454	4.4	14.2	12.8
Total Donald Deposit (RL2002 & MIN5532)	<i>Measured</i>	715	4.2	17.0	10.6
	<i>Indicated</i>	907	3.4	16.0	13.4
	<i>Inferred</i>	1,603	3.4	15.7	6.0
	Total	3,225	3.6	16.1	9.1
<b>TOTAL</b> Donald Project	<i>Measured</i>	715	4.3	18.1	11.1
	<i>Indicated</i>	2,811	3.0	17.9	8.2
	<i>Inferred</i>	2,187	3.3	16.4	5.5
	Total	5,712	3.2	16.9	7.3

### Note

1. The total tonnes may not equal the sum of the individual resources due to rounding.
2. The cut-off grade is 1% HM.
3. The figures are rounded to the nearest: 10M for tonnes, one decimal for HM, Slimes and Oversize.
4. For further details including JORC Code, 2012 Edition – Table 1 and cross sectional data, see previous announcements dated 7 April 2016, available at ASX's website at:

[www.asx.com.au/asxpdf/20160407/pdf/436cjqc3cf47.pdf](http://www.asx.com.au/asxpdf/20160407/pdf/436cjqc3cf47.pdf)

Table 2: HM Assemblage and Mineral Resource Estimate for available VHM data

Area	Classification	Tonnes (Mt)	HM (%)	Slimes (%)	Oversize (%)	Zircon (% HM)	Rutile+anatase (% HM)	Ilmenite (% HM)	Leucoxene (% HM)	Monazite (% HM)
RL2006	<i>Measured</i>	0	0.0	0.0	0.0	0	0	0	0	0
	<i>Indicated</i>	18	2.1	14.2	5.7	17	8	29	31	2
	<i>Inferred</i>	8	2.5	14.1	4.5	16	8	30	32	2
	Subtotal	26	2.2	14.2	5.3	17	8	29	31	2
RL2003	<i>Measured</i>	650	5.0	18.2	5.4	18	9	32	17	2
	<i>Indicated</i>	146	4.1	15.2	3.1	22	10	32	14	2
	<i>Inferred</i>	797	4.8	17.7	5.0	19	9	32	17	2
	Subtotal	797	4.8	17.7	5.0	19	9	32	17	2
Total Jackson Deposit (RL2003 & RL2006)	<i>Measured</i>	668	4.9	18.1	5.4	18	9	32	17	2
	<i>Indicated</i>	155	4.0	15.1	3.1	21	9	32	15	2
	<i>Inferred</i>	823	4.8	17.6	5.0	19	9	32	17	2
	Total	823	4.8	17.6	5.0	19	9	32	17	2
RL2002	<i>Measured</i>	185	5.5	19.1	7.3	21	9	31	19	2
	<i>Indicated</i>	454	4.2	15.9	13.2	17	7	33	19	2
	<i>Inferred</i>	647	4.9	15.2	5.8	18	9	33	17	2
	Subtotal	1,286	4.8	16.0	8.6	18	8	33	18	2
MIN5532	<i>Measured</i>	264	5.4	14.2	12.2	19	7	31	22	2
	<i>Indicated</i>	49	4.9	13.6	12.1	20	7	33	22	2
	<i>Inferred</i>	317	5.3	14.1	12.1	19	7	32	22	2
	Subtotal	317	5.3	14.1	12.1	19	7	32	22	2
Total Donald Deposit (RL2002 & MIN5532)	<i>Measured</i>	448	5.4	16.2	10.2	20	8	31	21	2
	<i>Indicated</i>	503	4.3	15.7	13.1	18	7	33	20	2
	<i>Inferred</i>	652	4.9	15.2	5.8	18	8	33	17	2
	Total	1,604	4.9	15.6	9.3	18	8	32	19	2
<b>TOTAL Donald Project</b>	<i>Measured</i>	448	5.4	16.2	10.2	20	8	31	21	2
	<i>Indicated</i>	1,171	4.6	17.1	8.7	18	8	32	18	2
	<i>Inferred</i>	807	4.7	15.2	5.3	19	9	33	17	2
	Total	2,427	4.8	16.3	7.9	19	8	32	18	2

Note

1. The total tonnes may not equal the sum of the individual resources due to rounding.
2. The cut-off grade is 1% HM.
3. The figures are rounded to the nearest: 10M for tonnes, one decimal for HM, Slimes and Oversize and whole numbers for zircon, ilmenite, rutile + anatase, leucoxene and monazite.
4. Zircon, ilmenite, rutile + anatase, leucoxene and monazite percentages are report as a percentage of the HM.
5. Rutile + anatase, leucoxene and monazite resource has been estimated using fewer samples than the other valuable heavy minerals. The accuracy and confidence in their estimate is therefore lower.
6. For further details including JORC Code, 2012 Edition – Table 1 and cross sectional data, see previous announcements dated 7 April 2016, available at ASX's website at [www.asx.com.au/asxpdf/20160407/pdf/436cjqc3cf47.pdf](http://www.asx.com.au/asxpdf/20160407/pdf/436cjqc3cf47.pdf)

## Ore Reserve Statement

It should be noted that the below Ore Reserve statement was calculated in 2012 (announced 18 June 2012). In 2016, Donald Mineral Sands engaged AMC Consultants to update their Mineral Resource (ASX announcement dated 7 April 2016).

Astron intend to update their Ore Reserve statement in the 2021 financial year utilising updated definitive design criteria with budgeted operational and capital expenditure applied to the 2016 Mineral Resource.

*Donald Mineral Sands Ore Reserve for RL2002 (formerly EL4433) and MIN5532 (which is wholly within RL2002).*

<b>Classification</b>	<b>Tonnes (M)</b>	<b>HM (%)</b>	<b>Slimes (%)</b>	<b>Zircon (%)</b>	<b>Rutile (%)</b>	<b>Ilmenite (%)</b>	<b>Leucoxene (%)</b>
<b>Within MIN5532</b>							
Proved	141	5.9	15.4	19.4	7.0	32.9	20.3
Probable	48	5.7	14.0	19.9	7.1	33.3	21.7
<b>Total within MIN5532</b>	<b>189</b>	<b>5.8</b>	<b>15.1</b>	<b>19.5</b>	<b>7.0</b>	<b>33.0</b>	<b>20.6</b>
<b>Within EL4433 outside of MIN5532</b>							
Proved	9	4.2	15.4	14.8	9.3	35.2	20.3
Probable	263	5.9	16.7	18.8	7.9	34.0	17.7
<b>Total Within EL4433 outside of MIN5532</b>	<b>272</b>	<b>5.9</b>	<b>16.7</b>	<b>18.7</b>	<b>8.0</b>	<b>34.0</b>	<b>17.8</b>
<b>Total within EL4433</b>							
Proved	150	5.8	15.4	19.2	7.1	33.0	20.3
Probable	311	5.9	16.3	19.0	7.8	33.9	18.3
<b>Total within EL4433</b>	<b>461</b>	<b>5.9</b>	<b>16.0</b>	<b>19.1</b>	<b>7.5</b>	<b>33.6</b>	<b>18.9</b>

### Note

1. The ore tonnes have been rounded to the nearest 1MT and grades have been rounded to one decimal place.
2. The Ore Reserve is based on Indicated and Measured Mineral Resource contained within mine designs above and economic cut-off.
3. The economic cut-off is defined as the value of the products less the cost of processing.
4. Mining recovery and dilution have been applied to the figures above.
5. The mining licence is wholly within the retention licence (MIN5532 is wholly within RL2002, formerly EL4433)
6. Rutile shown is Rutile + Anatase
7. For further details, see previous announcement dated 31 July 2013, available at ASX's website at <https://www.asx.com.au/asxpdf/20130731/pdf/42hd37m51m4501.pdf>

### Further notes:

The 18 June 2012 Ore Reserve Estimate was based on economic assumptions relevant at that date including product pricing and forecasts and excludes subsequent pricing and changes to the Project. The pricing in the 31 July 2013 ("DFS Announcement") about details regarding the DFS for the Donald Mineral Sands project is different to the pricing used in the 18 June 2012 Ore Reserve Estimate. The DFS Announcement also included improved economics by changing the HM processing location from Australia to Putian, Fujian province, China and allowing for additional valuable products to be processed and sold (as more fully described in the DFS Announcement). These additional products were not considered at the time of the 18 June 2012 Ore Reserve Estimate.

## COMPETENT PERSONS STATEMENT

The information is extracted from the reports entitled Donald Mineral Sands Project - Review of Uranium/Thorium Wash Process and Proved Ore Reserve Update created on 18 June 2012, Donald Mineral Sands Project - Completion of Definitive Feasibility Study created on 31 July 2013 and Donald Mineral Sands Project - Mineral Resource Update created on 7 April 2016 and are available to view on the website <https://www2.asx.com.au/> at the respective links ([Microsoft Word - UTh process and Proved ore reserve FINAL Rev 1 \(markitdigital.com\)](#)), <https://www.asx.com.au/asxpdf/20130731/pdf/42hd37m51m4501.pdf> and [www.asx.com.au/asxpdf/20160407/pdf/436cjqc3cf47.pdf](https://www.asx.com.au/asxpdf/20160407/pdf/436cjqc3cf47.pdf)). The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

## CAUTIONARY STATEMENT

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