

Astron Corporation Limited (ASX: ATR): Announced an updated MRE for Mining Licence MIN5532

BY ACE INVESTORS / 04 JANUARY 2023



Reading Time: 5 Mins

By Team Ace Investors

Stock Code	ASX: ATR
Shares O/S	133.17 million
Closing Price	AUD 0.610
Market Cap	85.23 million
52 W H/L	0.950/0.455
One Year Stock Performance	42.22%
Avg. Volume(TTM)	0.011 million
EPS(TTM)	-0.073
P/E	-
Annual Dividend Yield	0.00%
Franking	-
Last Dividend Ex-Date	-
Last Dividend Pay Date	-
DPS (AUD)	-
ROE (%)	-8.52%

(Source: ASX)

Company Overview

Astron Corporation Limited (ASX: ATR) is an ASX-listed company with over 35 years of experience in mineral sand processing technology and downstream product development, as well as the marketing and sales of zircon and titanium dioxide products. Astron's prime focus is on the development of its large, long-life, and attractive zircon assemblage, Donald Mineral Sands, and Rare Earth Project in regional Victoria. The Donald Project is a tier-1 rare earth and mineral sands project

located in regional Victoria, approximately 300 kilometers northwest of Melbourne. The Donald Project comprises the Donald deposit (MIN5532 and RL2002) and the Jackson deposit (RL2003). Given its resource size, the Donald Project has the potential to become a globally significant, long-life source of rare earth elements (including high-value neodymium, praseodymium, dysprosium, and terbium) as well as zirconium and titanium minerals. The Company recently updated the Mineral Resource within Mining Licence MIN5532 to 525Mt @ 4.0% total heavy minerals (HM), including a Measured Resource of 394Mt @ 4.2% HM reported above a 1% total HM cut-off grade. Due to the size of the resource, it is envisioned that the Donald Project will be developed in three phases. The initial development (Phase 1) is planned for MIN5532, the area where further drilling and geological delineation was undertaken during 2022. Astron is carrying out a Feasibility Study (FS) covering the development of Phase 1 of the Donald Project. The FS is expected to be completed around the end of the first quarter of 2023.

Investment Rationale

De-risked Phase1 of the Donald Project with the reduction in Phase1 Capex

During the Sep 22Q, Astron concluded a comprehensive review of its Donald Rare Earth & Mineral Sands Project (Donald Project) development plans and, as a result, developed parameters for a phased development of the project. During the quarter, the Company revised key project parameters, including (i) reduction in ore throughput to 7.5 million tonnes per annum (Mtpa) from 12.5 Mtpa; (ii) Production of two product streams: a rare earth element concentrate (REEC) and a valuable heavy mineral concentrate (HMC), instead of the on-site separation of the HMC to zircon and titania (66% TiO₂ content) final products; (iii) the elimination of an on-site Wet High-Intensity Magnetic System (WHIMS) plant and a dry mineral separation plant; and (iv) reduction of Phase 1 capital expenditure to reflect the reduced project scale and the elimination of some downstream processing steps, leading to reduced execution risk and optimized regulatory approval processes. Phase 1 of the project will be developed on the granted Mining Licence MIN 5532 and is based on mining and processing 7.5 Mtpa of ore to produce a rare earth element concentrate ('REEC'), containing monazite and xenotime and a heavy mineral concentrate ('HMC') containing zircon and titanium minerals. Based on the processing of 7.5 Mtpa of ore in Phase 1, the expected production of HMC and REEC will be in the ranges of 250 to 300 ktpa and 7-10 ktpa, respectively. Applying long-term price forecasts provided by TZMI for zirconium and titanium minerals and by Ruidow for rare earth elements, the average annual Phase 1 revenue over the 35-year life of Phase 1 operations is expected to be around US\$200 million in real terms. Capital expenditure for Phase 1, based on June 2022 costing, is expected to be approximately A\$350 million, and the total Phase 1 funding requirement is anticipated to be approximately A\$400 million.

Figure 1. Revised Simplified Flow Diagram

Simplified Process Flow Diagram



(Source: Company reports)

Astron raised a total of \$5.9 million to accelerate the Donald Project Feasibility Study.

On 18 November, the Company announced that it raised a total of \$5.9 million through a private placement and an SPP announced previously. On 17 October 2022, the Company raised \$5 million under a private placement of securities at \$0.54 per CDI and launched a Securities Purchase Plan (SPP) to raise a maximum of \$3 million at the same price per CDI. The funds raised will be applied to the finalization of the Mineral Resource Statement to incorporate the results of the 2022 exploration drilling program, completion of mine planning, engineering design for processing plant and infrastructure, advancement of regulatory approvals, continuing community engagement, and finalization of project economics in connection with the Donald Project Feasibility Study.

Announced an updated MRE for Mining Licence MIN5532 with a 25% increase in contained heavy minerals

Astron recently announced an updated MRE for Mining Licence MIN5532 (the site of the proposed Phase 1 development of the Donald Rare Earth and Mineral Sands Project). On 1 December 2022, the Company reported a 25% increase in contained heavy minerals within MIN5532 to 21Mt and a 60% increase in contained rare earth minerals to 511,400t, reflecting an 18% increase in the monazite resource and the addition of a 135,500t xenotime resource. The Company reported a Mineral Resource of 525Mt @ 4.0% total HM, including a Measured Resource of 394Mt @ 4.2% HM reported above a 1% total HM cut-off grade. The MRE is based on a 245 Reverse-Circulation Air Core (RCAC) drill hole program, which was completed in March 20221 and covered 97% of MIN5532. In 2022, Astron conducted a drilling program to assay the total HM and VHM content in the 20 to 250µm range to enable re-estimation of the Mineral Resource incorporating the 20 to 38µm fraction. The 20 to 38µm fraction of VHM was not included in the 2016 Mineral Resource estimate as it was assumed not to be recoverable and was not assayed in earlier samples. In addition to an increase in Mineral Resources due to widening the product particle size range, drilling and sampling performed in 2022 also delineated additional Mineral Resources above and below the previously defined orebody. The new resource model now contains estimations for VHM throughout the entire Loxton Sand HM domain within the Mining Licence area, which was not the case in previous Mineral Resource estimations.

- The Mineral Resource of 525Mt @ 4.0% total HM includes a Measured Resource of 394Mt @ 4.2% HM reported above a 1% total HM cut-off grade.
- A comparison of the 2022 MRE for MIN5532 with the 2016 MRE delivered a 66% increase in Total Mineral Resource tonnage to 525Mt and a 25% increase in Total in-situ heavy mineral (HM) resource to 21Mt including increased in-situ valuable mineral resources of (i) zircon increased by 5% to 3.4Mt; (ii) monazite increased by 18% to 376kt; (iii) maiden in-situ xenotime resource of 136kt.

Table 2: Comparison of 2016 and 2022 Mineral Resources within MIN5532 and the VHM domain reported above 1% total HM

2016 Mineral Resource within MIN5532 and VHM domain									
Classification	Tonnes (Mt)	Total HM %	Slimes %	OverSize %	% of total HM				
					Zirco	Rutile/Anatase	Ilmenite	Leucoxene	Monazite
Measured	264	5.4	14	12	18.7	7.0	31.3	22.3	1.8
Indicated	49	4.9	14	12	20.3	7.1	33.3	21.7	2.0
Inferred	5	4.2	14	11	22.0	7.2	35.8	19.5	2.7
Total	317	5.3	14	12	19.0	7.1	31.7	22.1	1.9

2022 Mineral Resource within MIN5532									
Classification	Tonnes (Mt)	Total HM %	Slimes %	OverSize %	% of total HM				
					Zircon	Rutile	Ilmenite	Leucoxene	Monazite
Measured	394	4.2	16	10	16.3	7.4	21.0	23.6	1.8
Indicated	110	3.5	24	11	14.8	5.9	19.2	18.2	1.7
Inferred	20	2.3	22	14	13.2	6.9	19.4	19.6	1.4
Total	525	4.0	18	10	16.0	7.1	20.6	22.5	1.8

% Difference in contained minerals									
Measured	49%	17%	64%	23%	2%	24%	-22%	24%	18%
Indicated	125%	59%	294%	103%	16%	33%	-8%	34%	37%
Inferred	300%	122%	560%	429%	34%	114%	20%	123%	17%
Total	66%	25%	106%	42%	5%	26%	-19%	27%	18%

Note: for comparison with previous resource estimate, the tonnages and grades have not been rounded.

(Source: Company reports)

During the Sep 22Q, Astron received positive indications from the Senegal government that local security concerns are easing in the Niafarang project area. This bodes well for the mining and exploration license renewals that are underway. Several major Feasibility Studies and project planning activities are underway and expected to be released in the first quarter of 2023. The Company is well funded with the recently raised \$5.9m equity capital to pursue a feasibility study.

ACE's Recommendation:

Astron's prime focus is on the development of its large, long-life, and attractive zircon assemblage, Donald Mineral Sands, and Rare Earth Project in regional Victoria. During the Sep 22Q, Astron concluded a comprehensive review of its Donald Rare Earth & Mineral Sands Project (Donald Project) development plans to de-risk the project with a reduction in Phase 1 CAPEX by eliminating an on-site WHIMS plant and some downstream processing steps. Astron recently announced an updated MRE for Mining Licence MIN5532. In Dec 2022, the Company announced a 25% increase in contained heavy minerals within MI5532 to 21Mt and a 60% increase in

contained rare earth minerals to 511,400t, reflecting an 18% increase in the monazite resource and the addition of a 135,500t xenotime resource. The Company reported a Mineral Resource of 525Mt @ 4.0% total HM, including a Measured Resource of 394Mt @ 4.2% HM reported above a 1% total HM cut-off grade. The Company is well funded with the recently raised \$5.9m equity capital to pursue a feasibility study. Several major Feasibility Studies and project planning activities are underway and expected to be released in the first quarter of 2023. We believe that the Feasibility Study in Q1 CY23 is the key near-term catalyst for growth. The stock has advanced +41% YTD 2023 to A\$0.610/share and offers more upside from here. So, we would like to recommend a **SPECULATIVE BUY** rating on the stock.

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