



Progression of the Donald Mineral Sands Project

Astron Corporation Limited (ASX:ATR)

Corporate Presentation - December 2021

Disclaimer

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COMPETENT PERSONS STATEMENT

The information in this document that relates to Exploration Results and Mineral Resources for the Donald Project is based on information first reported in previous ASX announcements by the Company, as listed in this notice. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the original announcements continuing to apply and have not materially changed. The information in this notice that relates to the estimation of the Ore Reserves is based on information compiled by Mr Pier Federici, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists. Mr Federici is a full-time employee of AMC Consultants Pty Ltd and is independent of Donald Mineral Sands Pty Ltd (DMS) (being the Company's wholly owned subsidiary) and the Company, the owner of the Donald Project Mineral Resources. Mr Federici has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'.

The information in this document that relates to the estimation of the Mineral Resources is based on information compiled by Mr Rod Webster, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists. Mr Webster is a full-time employee of AMC Consultants Pty Ltd and is independent of the Company and DMS, the owner of the Donald Project Mineral Resources. Mr Webster has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. The Company confirms that the form and context in which the Competent Persons' findings are presented have not materially modified from the relevant original market announcement.

The information in this document that relates to the metallurgical performance and outcomes of testwork is based on information compiled by Mr Ross McClelland, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr McClelland is the principal metallurgist and director of Metmac Services Pty Ltd. Mr McClelland has been involved with the metallurgical development of the Wimmera-style mineral sands resources for more than 30 years. He has provided metallurgical consultation services to DMS for more than 7 years. He qualifies as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been prematurely modified from the relevant original market announcement.

Astron Corporation – Company Snapshot

Focus on creating and delivery of shareholder value

Extensive experience in mineral sands downstream & marketing sectors

Astron's (ASX:ATR) prime focus is on the delivery of shareholder value through the development of the Donald Mineral Sands and Rare Earth Project in Victoria.

Donald - large, long-life, globally significant new supply of heavy minerals & rare earths

Donald project – at advanced evaluation & approvals stage

ASX Code ASX:ATR

Shares/CDIs on Issue 122.48M

Share Price¹ A\$ 0.30

Market Capitalisation¹ A\$ 36.8 M

Net Assets² A\$ 92.4 M

Material, high-value rare earth component ~30% of revenue

Favourable market demand/supply conditions

Products Zircon, Rare Earths, Titania

Project Location Wimmera Region, Victoria, Australia

1. Share price and Market capitalisation as at 6 December 2021
 2. See pg. 31 for further description

Flyover of Donald Project Test-Pit

Astron Corporation

VALUE PROPOSITION

- Creation of shareholder value through delivery of a globally significant Tier 1 mineral sands project
- Scale and longevity, premium zircon and rare earth production – represents a major value opportunity
 - Ore Reserve underpins expected production life of over 40 years with exploration upside
 - One of the largest undeveloped zircon reserves globally (~5 years of global consumption)
 - High value minerals (zircon and rare earths) account for ~80% of revenue, making Donald a strategic and independent source of these critical minerals
- Favourable supply/demand market conditions
- Progress on project milestones, over next 1–2 years, provides Astron valuation uplift potential (vis a vis current market capitalisation ~A\$37 million)

1. Indicative Revenue Splits based on average product volumes for first four years of mining operations announced on 14 May 2021, pg. 2 of *Clarification regarding Donald Minerals Sands Project - Mineral Separation Metallurgical Testwork*, and recent C.I.F. market pricing of premium zircon of US\$1650, zircon 60 of US\$990, titania of US\$300, rare earth con. of US\$6,000.

Revenue %¹

Mineral Sands Applications

Zr
~50%



Ceramics, kitchen and sanitaryware



Casting and foundry applications

Ti
~20%



Paint and pigment production



Aerospace and industrials

R.E.
~30%



Wind turbines



Electric vehicles and batteries

Extensive Experience & History in the Mineral Sands Sector

Board of Directors



George Lloyd
Chairman

30 years resource industry and corporate business development and finance experience, including with RGC Limited, as well as serving as a senior executive and director of a number of listed and unlisted companies with interests in industrial minerals, base and precious metals, as well as energy sector.



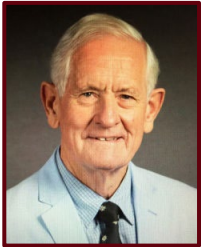
Tiger Brown
Managing Director

Commenced working with Astron in 2018, holding various business development planning and executive roles in China and Australia. Director of Astron from December 2019.



Kang Rong
Executive Director

Joined Astron in 1995 and has been a key contributor to the establishment of Astron's downstream processing and global marketing and sales activities, with a deep knowledge of the mineral sands' product market and its key participants. Board member since 2012.



Gerard King
N.E. Director

Former partner of Lavan & Walsh, which became Phillips Fox Perth. Experienced in commercial contracting, mining law and corporate and ASX compliance. A former member of the Australian Mining & Petroleum Lawyers Association Served as a non-executive director for several companies. Mr. King will step into the position of Non-executive Director following the AGM



Dr Mark Elliott
N.E. Director

Twenty-seven years experience in corporate roles, both as Chairman and Managing Director on several ASX-listed and private companies. Involved in identifying and securing resource projects, capital raisings, marketing and completing commercial agreements, feasibility studies, mine development and execution.



>35 years

Extensive operating history in various aspects of the mineral sands industry

Expertise

In downstream processing of mineral sands into final products

Track Record of R&D

Development of processes for production of zirconia & zirconium chemical products

Market Experience

History of trading & marketing activities spanning China, Asia, Europe & North America

Astron's technical capabilities and mineral sands market experience underpins the development of the Donald Mineral Sands & Rare Earth Project.

Profile – Key Technical Expertise

Core project team in place- supported by leading industry consultants.

Astron's Donald Project Team

Sean Chelius – Project Director

Dip. Project Management, Grad Dip. Engineering, Project Management Professional (PMP), QA/QC accreditation
Over 30 years' international experience in project management & engineering roles in Australia, South Africa, Zimbabwe, Papua New Guinea and Fiji, including being the programme manager and Olympic Dam, BHP, the Project Director at Ausenco, Senior Project Manager for Worley Parsons, General Manager of Project & Studies at Newcrest.

Tim Chase – Head of Global Operations

Technical and Business Management Qualifications, GAICD
Over 25 years' of experience in the mining industry, including extensive experience in mineral sands in project design and planning, project management and execution and operations. Involved in design and commissioning of mineral sands projects in the Murray Basin as the Senior Production Co-ordinator, Gingko and Snapper mineral sands deposits, for BeMax Resources and mine manager at Cristal Global.

Dr. John Yeates – Senior Environmental & Approvals Manager

BSc, MSc, PhD, 40 years' experience in government, consulting & private sector in environmental assessment, management and audit roles, including working for the Western Australian Government as research scientist & Principal Policy Adviser, Dept of Premier & Cabinet, Operations Manager, Principal Environmental Scientist, AGC Woodward Clyde, Vice President, regional management roles with CH2M Hill, Business Manager, Landcorp., Vice President Corporate Social Responsibility, Ivernia Magellan, Corporate Affairs Manager, Independence Group (formerly Jabiru Metals)

Peter Coppin, Senior Geologist

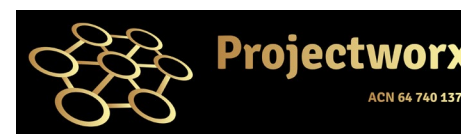
BSc, Grad Cert in Groundwater Hydrology
20 years' experience in geological and senior geologist roles across resources sectors, including in Gold for Austar Gold, Millennium Minerals, Crocodile Gold/New market Gold, GBS Gold, in Mineral sands for Iluka Resources, and in Base metals and other minerals for BHP Billiton and Western Mining Corporation.

Jessica Adler, Financial Accountant & Community Liaison

BCom, CPA,
Deep community, statutory body and Shire Council experience, including being the Independent Member for Skillinvest Limited, Ararat Rural City Council, West Wimmera Shire Council, the chair of the Audit Advisory Committee, Buloke Shire Council, the Deputy Chair of Wimmera CMA.

Technical Team

Owners Representative / PMO



Geology & Mining Engineering



Process Engineering & Plant Design



Rare Earth Studies



Environmental & Regulations



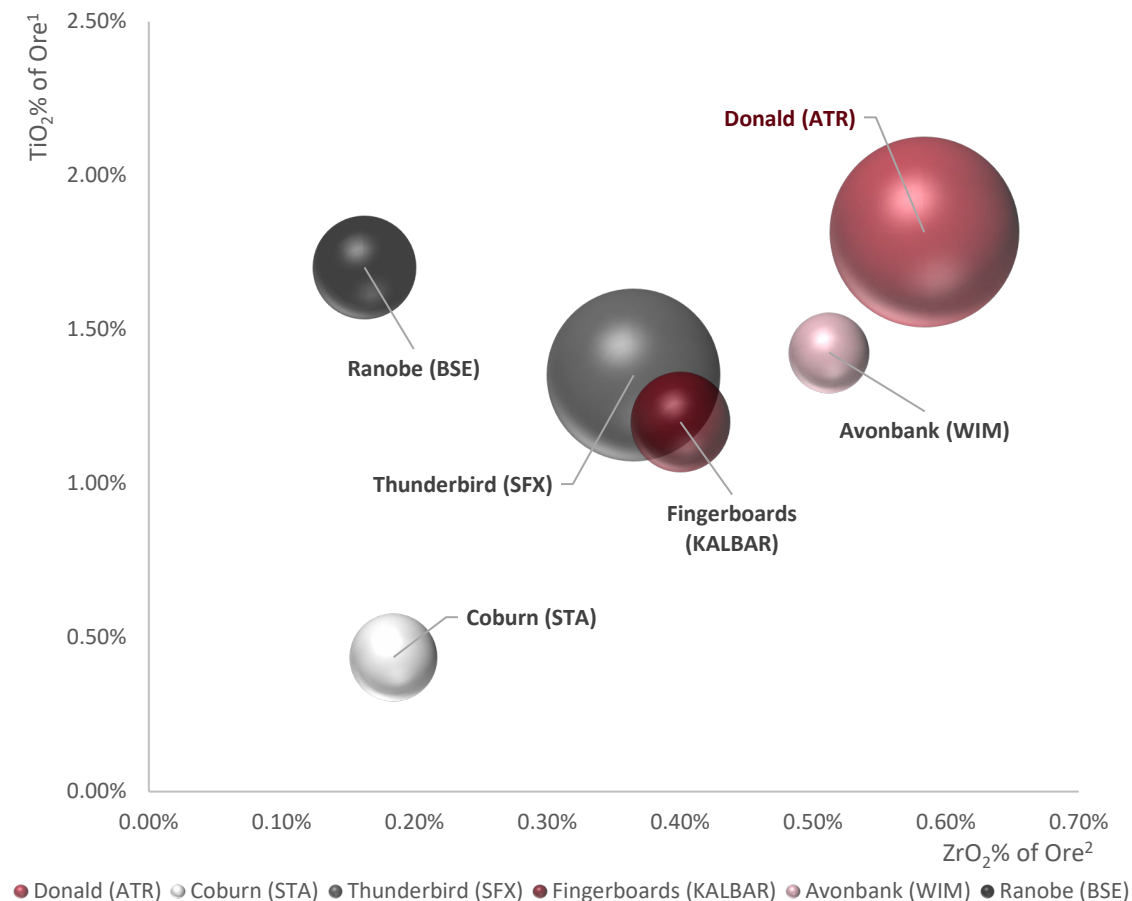
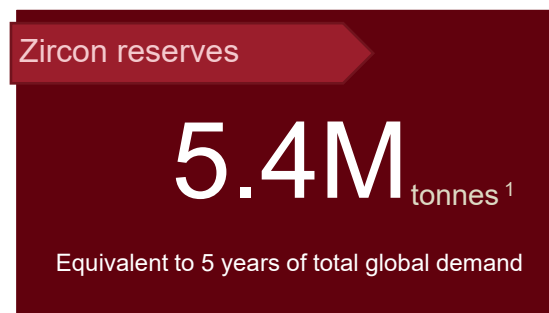
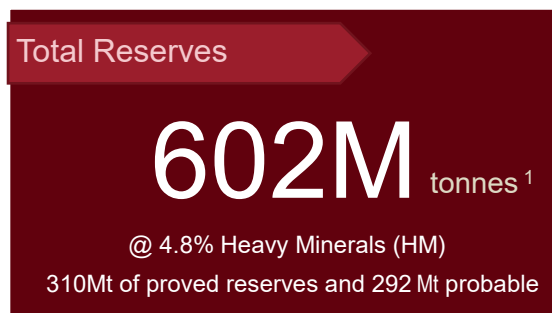
Tailings Management



Donald Project – Global Tier 1 Resource

Premium Zircon & Rare Earth Mineral Rich Assemblage

The Donald Project – with zircon reserves equivalent to 5 years of global demand – has the potential to be a pivotal source of global zircon supply both short and long-term, with an expected mine life of 40 year+.



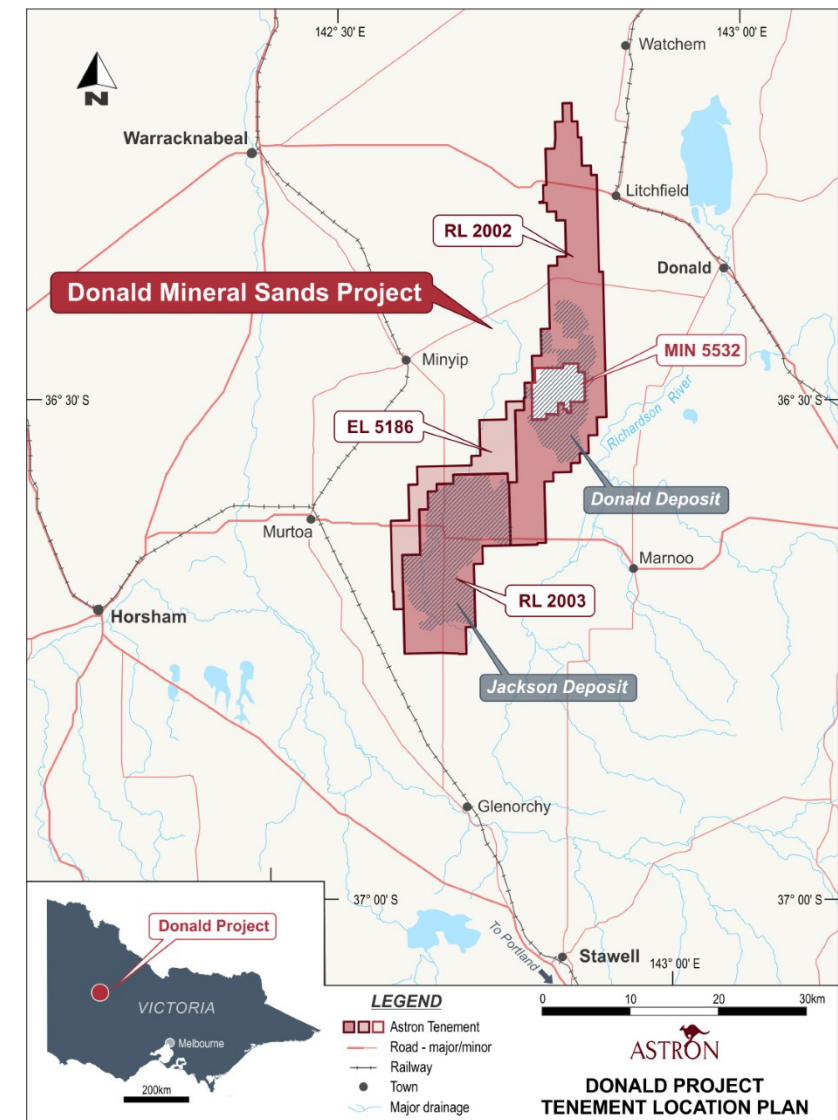
1. Selected prospective developing mineral sands projects with available mineral resource data, based on publicly available information. Metallurgical assemblages are converted from optical assemblages. ZrO₂% is calculated as a percentage of overall ore. TiO₂% converted using ilmenite TiO₂% of 55%, Leucocene TiO₂% of 72.5%, and Hi-Ti/Rut TiO₂% of 90%. Bubble size denotes overall size of zircon-equivalent resource.
2. Astron Corporation's Mineral Resource Information derived from ASX announcement, 7 April 2016, *Donald Mineral Sands Project – Mineral Resource Update*,

1. See Astron Corporation's ASX announcement on 18 Feb, 2021, *Donald Project Ore Reserves Update*

Key Project Features

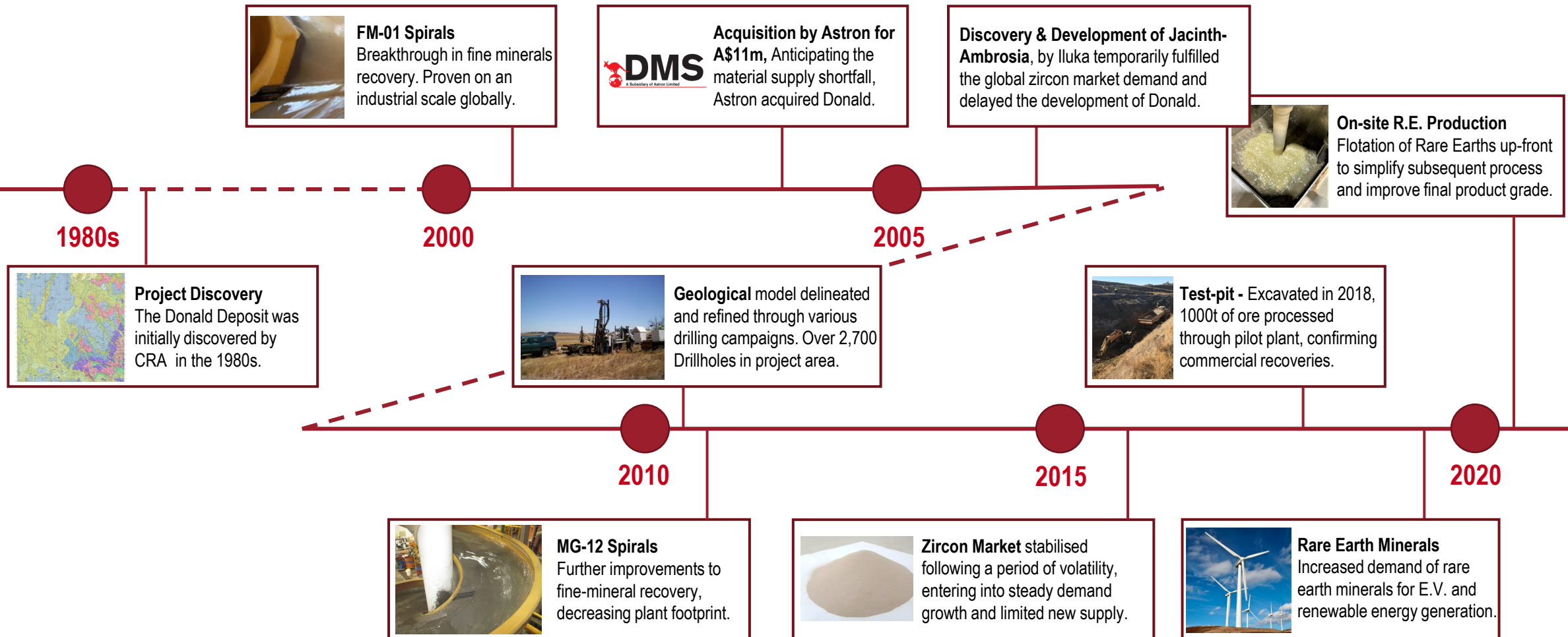
Project features include:

1. Location: ~300 kms north-west of Melbourne on mainly freehold, arable land used for cropping and grazing. Donald comprises a total licenced area of 506 km²
2. The first 15 years of stage 1 production on granted mining licence MIN 5532
3. Close to existing infrastructure, power & export facilities
4. Secured water rights sufficient for project requirements (Stage 1 & Stage 2)
5. Cultural heritage approvals in place
6. Advanced regulatory approvals (including E.E.S)
7. Strong local community support
8. No Native Title



Donald Project Timeline

Market Evolution and Technological Breakthroughs Cement Project Viability

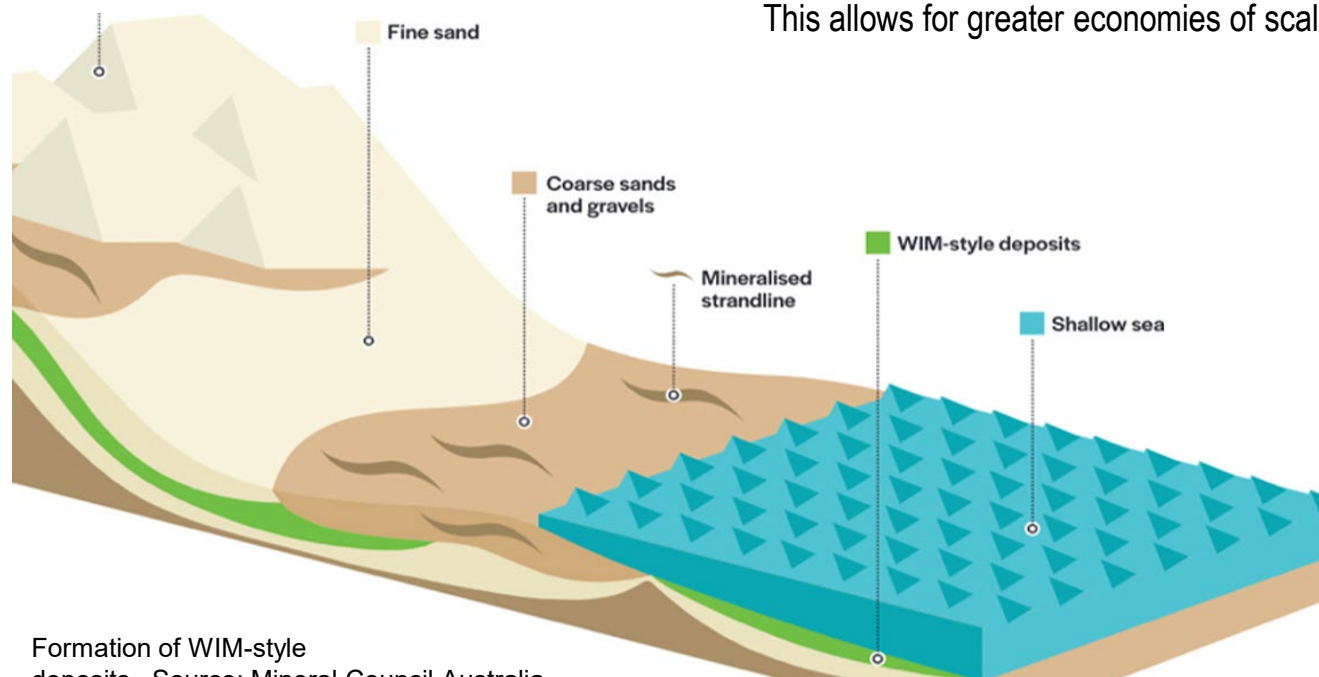


Large, Long-life Ore Reserve and Resource Base

Donald Project Geology

The Donald and Jackson deposits are fine-grained WIM-style heavy mineral sand accumulations. The Donald Project will likely be the first commercial development of such deposits, amenable to a staged, long-life mining operation.

WIM-style deposits are typically flat, shallow & extensive. They usually contain greater tonnages and are more consistent in VHM characteristics compared to coarse grained strandline deposits. This allows for greater economies of scale.



Formation of WIM-style deposits, Source: Mineral Council Australia

Summary of Ore Reserves (Proved and Probable)^{1,3}

Donald Deposit	Tonnes (mt)	Slimes (%)	Override (%)	HM (%)
ML5532	194	14.1	12.0	5.3
RL2002	408	16.9	11.9	4.5
Total	602	16.0	11.9	4.8

Assemblage% of HM

	Ilmenite	Leuc.	Rutile	Zircon	Monazite
ML5532	31.6	22.0	7.0	19.0	1.9
RL2002	31.8	19.0	8.4	18.8	1.7
Total	31.7	20.1	7.9	18.8	1.7

Summary of VHM Mineral Resources (Measured, Indicated & Inferred)^{2,3}

Donald Deposit Only	Tonnes (mt)	Slimes (%)	Override (%)	HM (%)
ML5532	317	14.2	12.2	5.3
RL2002	1,286	16.0	8.6	4.8
Total	1,604	15.6	9.3	4.9

Assemblage% of HM

	Ilmenite	Leuc.	Rutile	Zircon	Monazite
ML5532	32	22	7	19	2
RL2002	33	18	8	18	2
Total	32	19	8	18	2

Notes

1. See Astron's announcement 18 February 2021, *Donald Project Ore Reserves Update*
2. See Astron's announcement 7 April 2016, *Donald Project Mineral Sands Project – Mineral Resource Update*
3. For Full Mineral Resources and Ore Reserves Table, See Appendix pg. 29 and 30

Production Profile & Key Products

Two Stage Development Approach

Astron plans to deliver the Donald project over two stages:

Stage 1 - Approximately 120ktpa of zircon products, (of which ~80% is expected to be of premium specification)
>200ktpa of titania product, ~16ktpa of rare earth concentrates¹

Stage 2 - Planned to double production volumes. Anticipated start 5 years after initial production subject to regulatory approval and market conditions. Funded through internally generated cash-flow.

Rare Earth Elements (~30% of Project Revenue)

- Total rare earth reserves of 491,000t
- Rare Earth Mixed Concentrate has attractive characteristics: TREO > 60%
- NdPr, DyTb rich assemblage
- Over 90% monazite and xenotime in concentrate

For full breakdown – refer to pg. 13

1. See Astron’s announcement on 14 May 2021, *Clarification regarding Donald Minerals Sands Project - Mineral Separation Metallurgical Testwork*

Premium Zircon	ZrO ₂ > 66%	Fine-grained, Low impurities, high brightness/ whiteness ²
Zircon 60	ZrO ₂ ~ 60%	Chemical & other applications; value-add opportunities
Titania	TiO ₂ ~ 65%	Suitable for slag plants as chlorinator feedstock
Rare Earth Concentrate	NdPr ~ 22% ³	Attractive RE Assemblage; high value component

2. Brightness / whiteness is a favourable characteristic for the ceramics market which represents ~50% of the overall zircon market

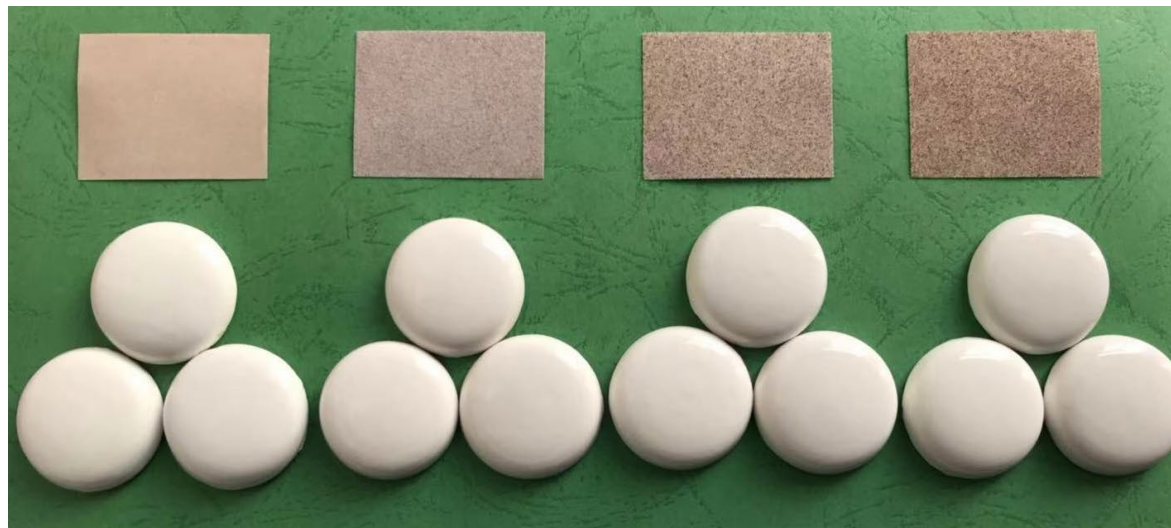
3. High value components of Nd, Pr represent 17% & 5% of the rare earth elements in the rare-earth concentrate ‘basket’ respectively.

Premium Zircon – Superior Attributes

Donald premium zircon has been independently confirmed by Foshan Ceramics Institute (leading Chinese ceramics institute) to be suitable for the premium ceramics market. Astron has extensive and long-term engagement with Zircon customers in China, Europe, North America and other markets with Donald premium zircon product samples being made available to potential customers for assessment prior to commercial off-take agreements.

Premium Zircon Product CIE Whiteness Test Results¹

Product testing conducted on Donald premium zircon, expected to represent over 80% of the zircon production stream, at Astron’s research facility in Yingkou, China. The results confirmed that Donald premium zircon rates favourably with industry zircons.



Donald Project

Competitor 1

Competitor 2

Competitor 3

1. For further information refer Astron ASX announcement, 12 May 2021, *Updated Donald Project Premium Zircon Test Results*.
2. Competitor premium zircon products are selected from available products in China.

Product	L - Brightness	A – Red-Green Scale	B Yellow-Blue Scale
Donald Premium Zircon	94.84	0.12	3.86
Competitor Zircon 1	94.39	1.02	4.08
Competitor Zircon 2	93.57	0.86	3.82
Competitor Zircon 3	94.32	0.23	4.22

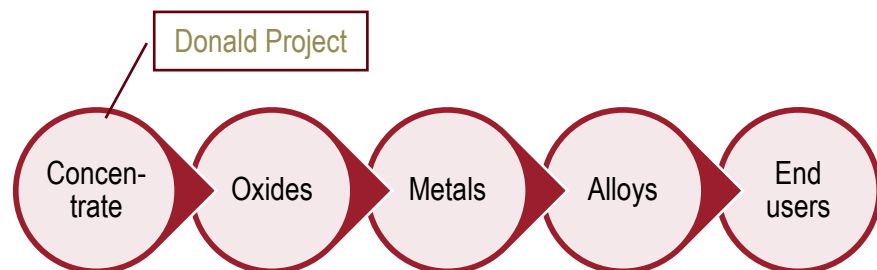
Note

1. Results are measured on the CIE whiteness scale, L represents ‘brightness’, A represents ‘red-to-green’ scale, B represents ‘yellow-to-blue’ scale.
2. The CIE system is used to characterise colour by a luminance parameter and two colour co-ordinates.
3. Results were produced using a calibrated ‘brightness tester’ and standard deviation error can be expected

High Value Rare Earth Concentrate Product Stream

Strategically positioned at the head of the value chain, Astron is in active discussions with prospective processing partners for off-take agreements. By producing a rare earth concentrate on-shore, Astron can adapt to the growth of global rare earth metals and permanent magnet markets.

Rare Earth Value Chain



Valuable Heavy Rare Earth Component

- Donald's R.E. product is expected to be highly attractive with its rare earth assemblage given the significant proportion of valuable heavy rare earth elements of Dysprosium and Terbium.
- Dysprosium and Terbium are used in E.Vs and Hybrid vehicles to increase the temperature for which the permanent magnet can operate.

Astron is actively investigating transport options regarding the rare earth mineral concentrate and plans to provide detailed updates subsequent to materialization of offtake discussions. It is anticipated that the Rare Earth Concentrate will be transported as a Class 7 product.

Typical Donald Project Rare Earth Product¹

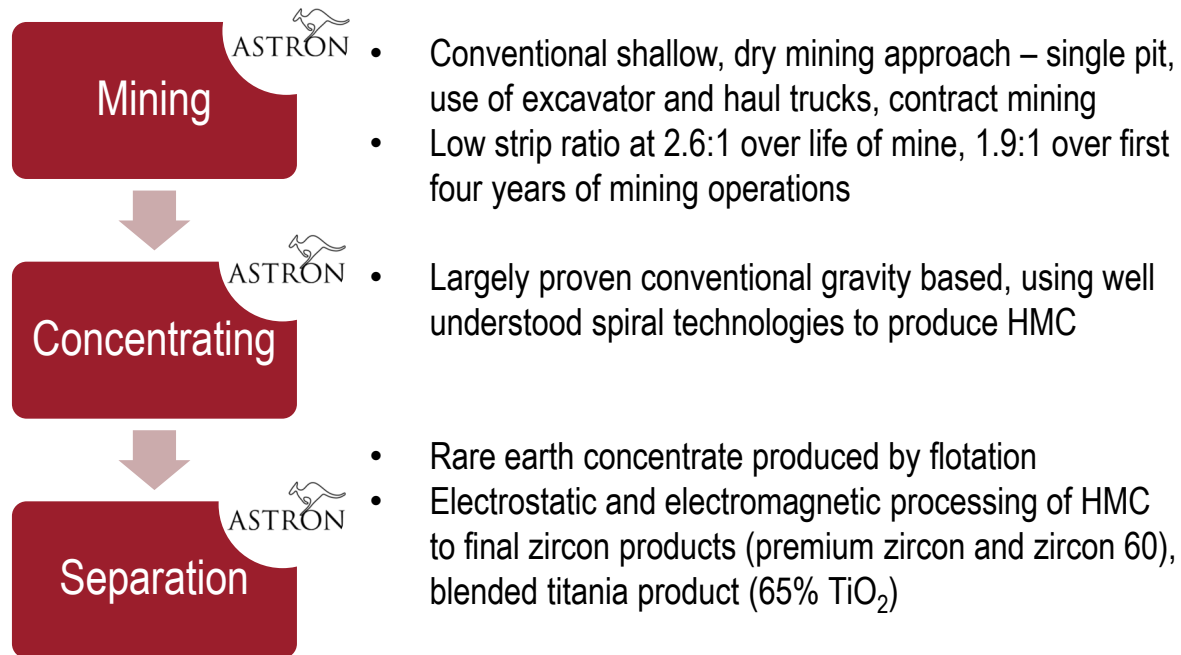
Company		Astron		
Mineral type		Monazite +Xenotime		
Location		Australia		
	Rare Earth Oxide	REO price ² (US\$/kg)	% of total	Basket Value
Light REO	Lanthanum	1.3	19.1%	0.3
	Cerium	1.4	40.0%	0.6
	Praseodymium	126.9	4.6%	5.9
	Neodymium	124.6	16.4%	20.4
	Samarium	2.5	3.1%	0.1
Heavy REO	Europium	30.0	0.1%	0.0
	Gadolinium	56.2	2.3%	1.3
	Terbium	1869.2	0.3%	6.4
	Dysprosium	465.4	1.8%	8.2
	Holmium	183.1	0.4%	0.6
	Erbium	48.5	1.0%	0.5
	Thulium	-	0.1%	0.0
	Ytterbium	20.8	0.8%	0.2
Oth.	Lutetium	830.8	0.1%	0.0
	Yttrium	8.8	10.0%	0.9
Basket Price US\$/kg				45.3
TREO%				>60%

1. Typical product specifications developed from the lab-scale test works as announced on 14 May 2021, *Clarify Donald Mineral Separation Metallurgical Test Work*.
2. REO based upon Shanghai Metals Market pricing as of 16 Nov 2021.

Project Design

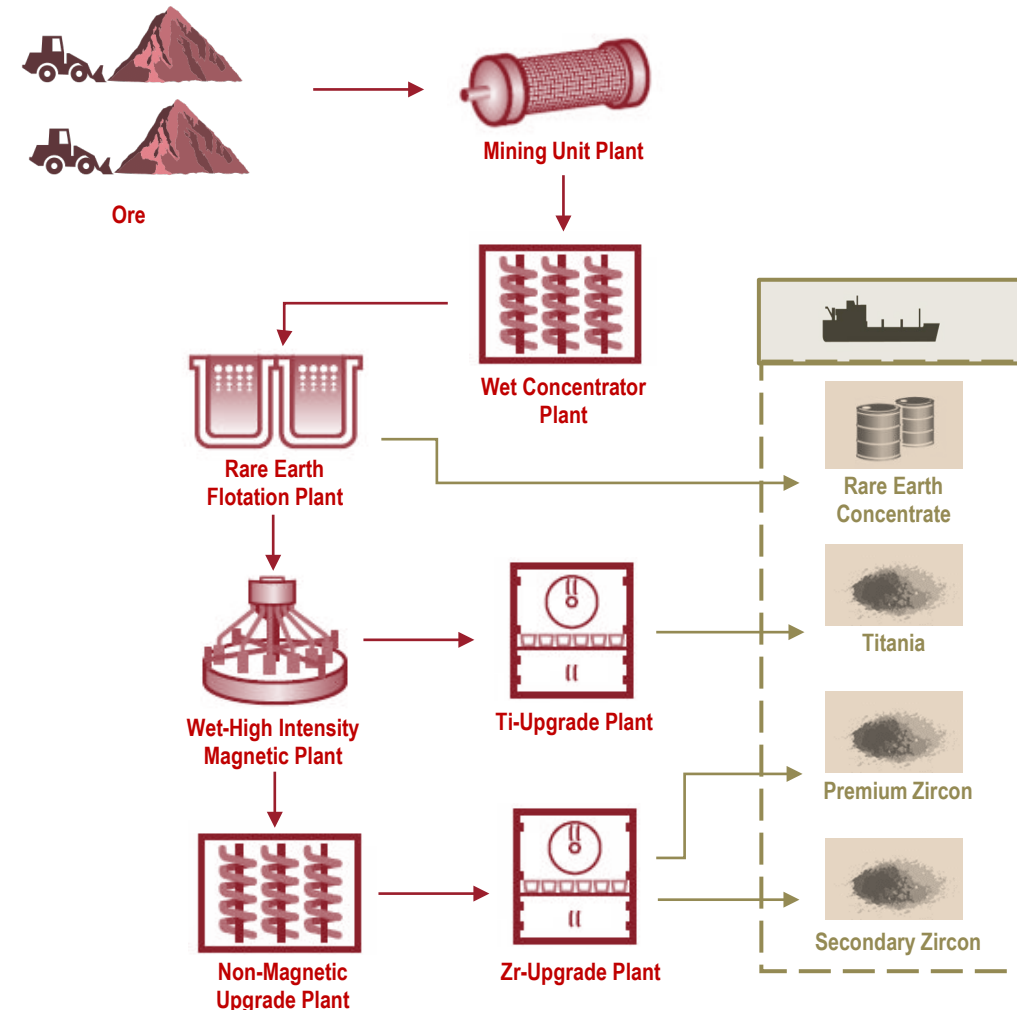
Integrated mining and processing operation

The Donald Project's operating model encompasses the mining of heavy mineral (HM) ore, gravity concentrating to heavy mineral concentrate (HMC), and processing to final products of zircon, titania, and rare earth mixed concentrate (REMC).



An integrated mineral sands operation in Australia spread over two stages designed to facilitate: a high degree of control and certainty over product attributes (product recoveries and specifications); spread risk and phase capital expenditure and product market entry.

Simplified Process Flow Diagram



Advanced Stage of Regulatory Approvals & Permits

Approval Requirement ¹	Completed	Date	Expiry
Environmental Effects Statement	✓	2008	N/A
Environmental protection & bio-diversity conversation approval	✓	Mar-09	2034
Cultural Heritage Management Plan	✓	Jan-14	Life of mine
Water Rights ²	✓	Jan-12	Jan-41
Radiation Licence ³	✓	Dec-20	Dec-23
Work Plan	Pending	Pending	Life of mine

Notes

1. On-going environmental consultation with state regulators are planned.
2. Water Rights include a 6.975 gigalitre water entitlement purchased from Grampians Wimmera Mallee Water in 2012 for **A\$17m**, it is sufficient for both stage 1 and stage 2. Astron retains the option to renew its water rights following the conclusion of current agreement.
3. Radiation Licence and Export Permits were first issued in 2014 and 2016 respectively, each have been renewed periodically. The company's export permit will need to be updated to align with updated final products specifications following the completion of the Feasibility Study and off-takes.
4. Astron Corporation through its subsidiary Donald Mineral Sands Pty Ltd has accumulated land-holdings over the project's history.

Astron's Land Holdings

(In Donald Project Area)

On MIN5532

831.3 Ha

Off MIN5532

620.5 Ha

Total land holdings

1,451.8 Ha

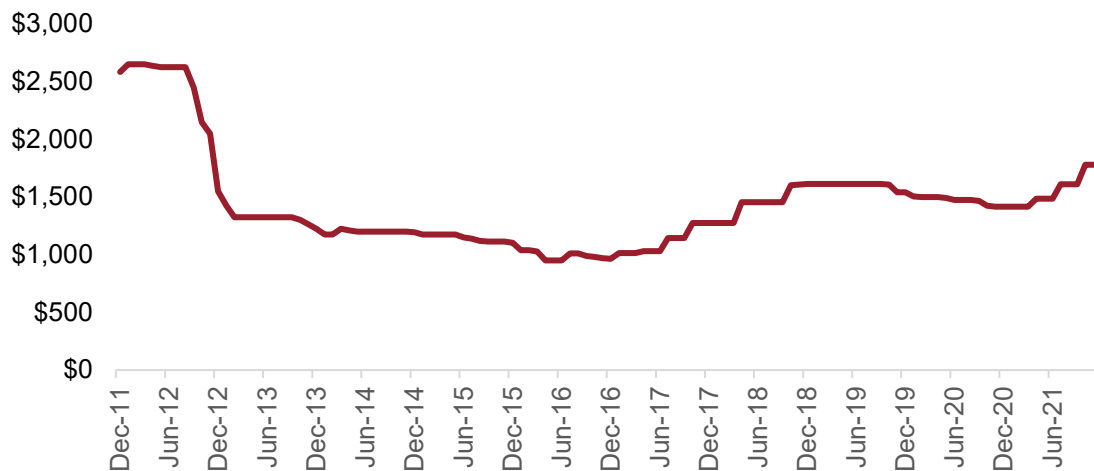
Favourable Long – Term Zircon Market Dynamics – Major Supply Risks Emerging

Stable demand with limited new supply at a time when existing supply sources are maturing

- Supply deficit forecasted from late 2021 onwards, compounded by the uncertainties and suspension of operations surrounding Richards Bay
- Ore Reserve depletion and jurisdictional challenges is expected to lead to a medium-term shortfall that is supply not demand driven.
- 40% of existing supply is expected to leave the market over the next 5 years

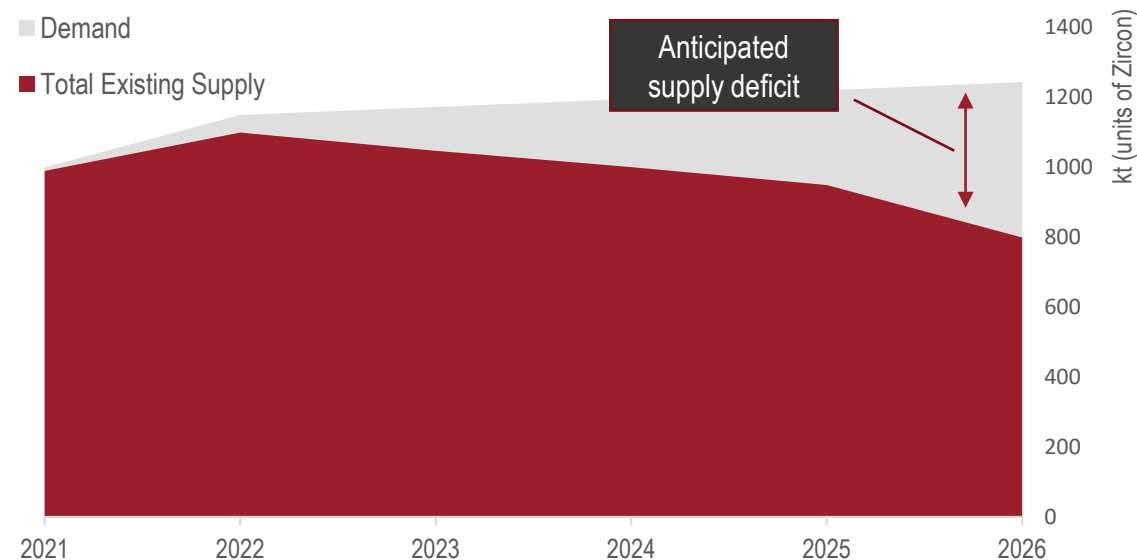
Donald is expected to commence production when market conditions are favourable – **existing supplies maturing** and limited identified material new sources of supply. Donald is one of the few large, well-delineated and advanced new sources of supply at a time when traditional production sources (Australia and South Africa) are mature or operationally challenged.

Premium Zircon Price 10 Yr (US\$)



Note: Historic pricing graph is based on Astron commissioned RuiDow report and publicly available data from ruidow.com. The price trend shown is reflective of premium zircon prices as defined by zircon products with ZrO₂ > 66%, C.I.F. to China.

Global Zircon Outlook¹



1. Compiled internally by Astron Corporation, based upon publicly available information, and various market studies, including Ruidow report Aug 2021 commissioned by Astron.

Rehabilitation & Environmental Management

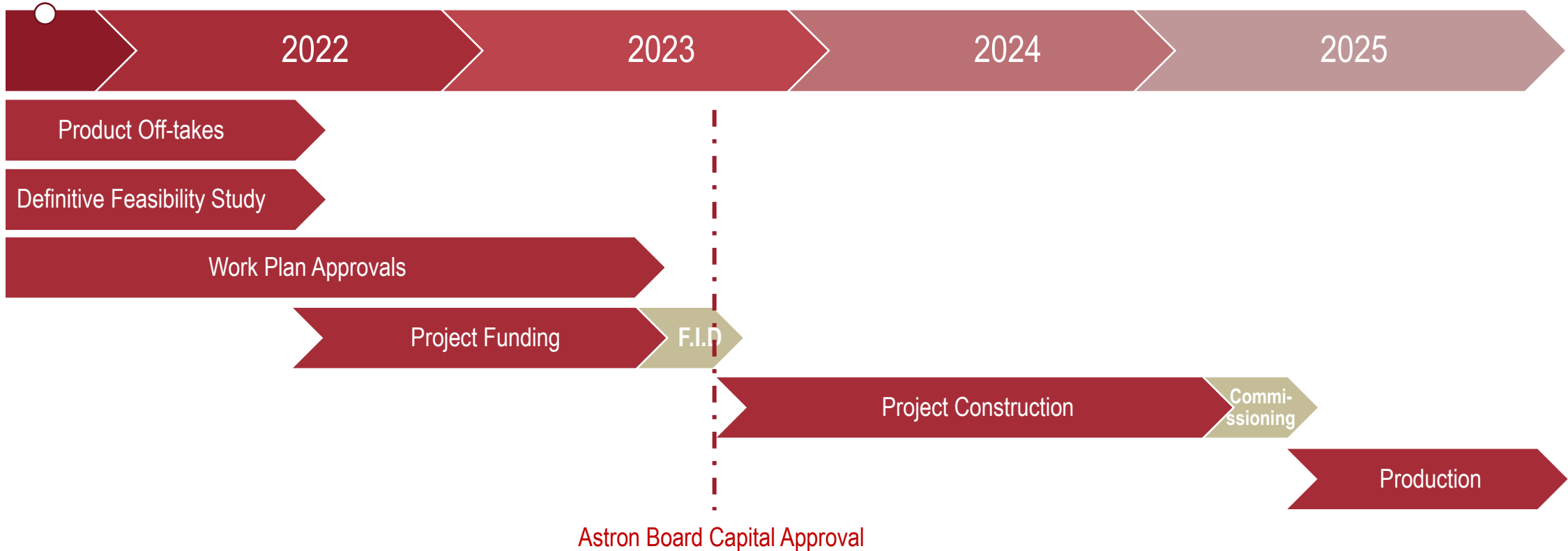
Minimise environmental impact through sustainable mining & rehabilitation

- Mining operations will be conducted on mixed use pastoral land, mainly cleared
- Steps will be taken to ensure minimal impact on native vegetation, flora and fauna through mine-planning
- The nature of the planned mining (shallow, open pit), enables progressive rehabilitation back to original landform
- Rehabilitation of agricultural land will be monitored for yield characteristics, soil absorption, nutrient uptake and other factors
- Test pit excavation in 2019 rehabilitated to its original landform (see images)
- Regulatory and Environmental Manager appointed
- CO2 emissions reduction plan as part of mine planning
- Recycling of process water; no site run-off



Project Delivery Timeline¹

Clear stages of project delivery, value realisation



1. Detailed timelines subject to the completion of the Definitive Feasibility Study, expected by mid calendar year 2022

Value Drivers Leading to the Completion of Feasibility Study

Completion of Metallurgical Pilot Testing

- Produce additional product samples
- Finalise circuit design and confirm product recoveries

Negotiate Offtake Arrangements

- Provide sample products to key parties
- Negotiate M.O.U.s, products off-takes

Establish Experienced Project Team

- Key appointments made, with further appointments to support current team capabilities

Update Ore Reserves

- Include +20 to -38 microns fraction and valuable Xenotime component
- Truck and Shovel Mining Method
- On-site mineral separation

Completion of the Feasibility Study

- Feasibility Study level engineering complete, providing certainty surrounding definitive project economics

On-going Regulatory and Community Consultation

- Establishment of Community Reference Group

Further information

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Managing Director

Tel: +61 3 5385 7088

Email: tiger.brown@astronlimited.com



Donald Project wet concentrating pilot plant

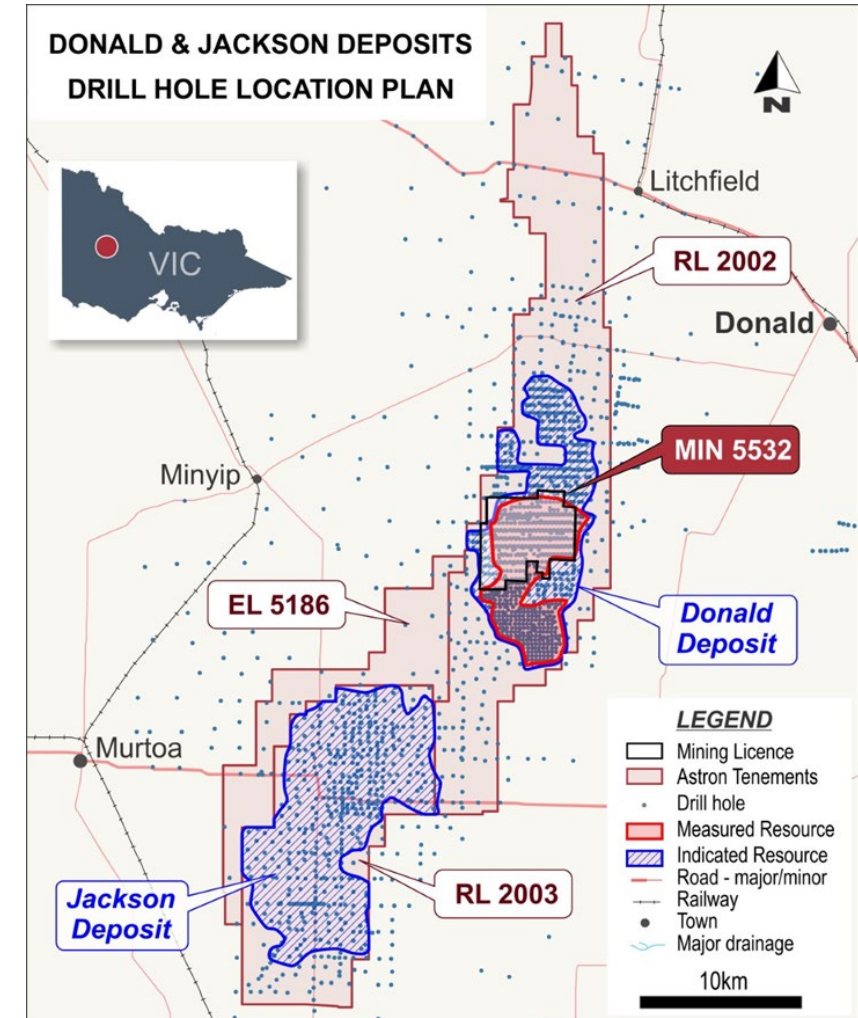
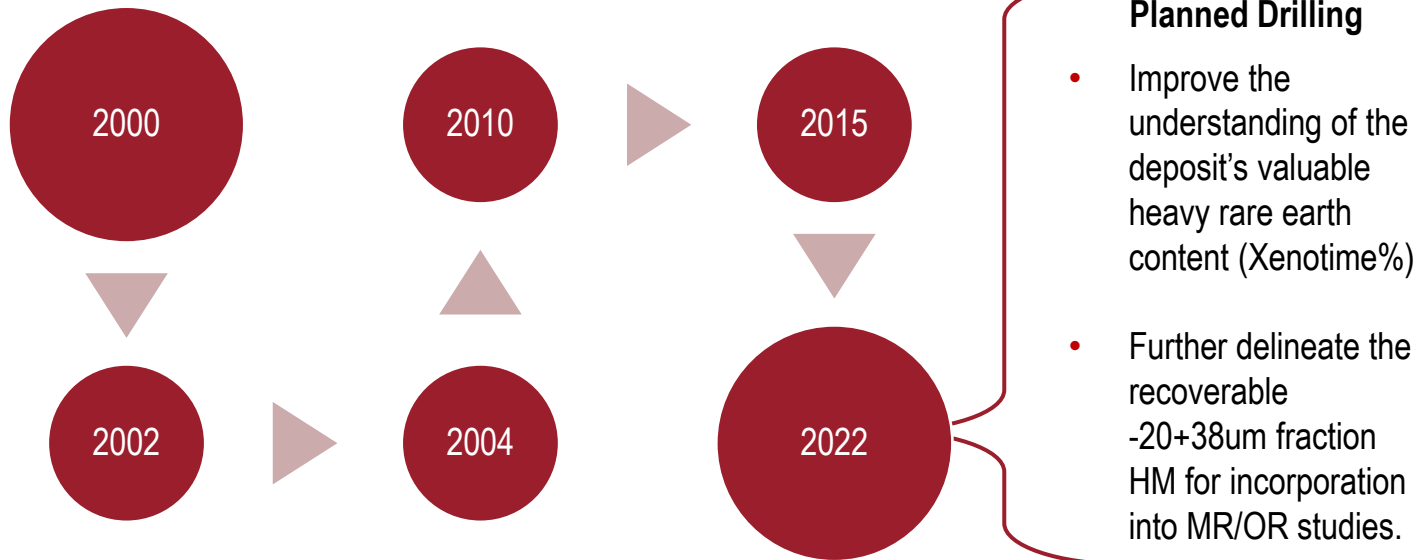
Appendix

Appendix I. Donald Project – Extensive Evaluation and De-risking

Discovered by CRA in the 1970s, the Donald tenement area and geology has been extensively evaluated. The project area has had a total of 2,789 drill holes over several drilling campaigns.

The mining leases consists of 387 drill holes spaced from 125mE by 200mN to 250mE by 450mN. An Ore Reserve Statement was issued on 18 February 2021 based on the 2016 Mineral Resource estimate, both of which were prepared by AMC consultants.

Drilling Campaigns



Appendix II. Metallurgical Test Work

Astron's extensive test-work confirms commercial product recoveries

Extensive metallurgical test work, utilising a range of industry specialist consulting firms, involving bench scale and pilot scale test work, has provided confidence in the commercial scale recovery of fine minerals to both HMC and final product. Metallurgical test work, including pilot plant operation, carried out by Mineral Technologies – a global expert in mineral sands.

Test work provides confidence that the planned hybrid process, using mainly conventional separation techniques as well as adapting well-understood technologies, achieves attractive product assemblages at high (commercial) recoveries.

Recoveries of in-size and in-SG Valuable Heavy Minerals (VHM) ¹	ZrO ₂ ¹	CeO ₂ ¹	TiO ₂ ¹
Feed Preparation Plant Recoveries ²	96.9%	97.9%	98.1%
Wet Concentrator Plant Recoveries to HMC ²	93.8%	94.3%	88.5%
Mineral Separation Plant Recoveries to final products ³	90.8%	94.6%	<i>n.a</i> ³

1. In-size and in-SG heavy minerals (VHM) refers to the -250+20µm, +2.96SG fraction, the recovery of ZrO₂ is used as a tracker for zircon recovery, CeO₂ is used as a tracker for Rare Earth recovery, and TiO₂ is used as a tracker for titanium recovery
2. For further information refer Astron ASX announcement, 15 May 2020, *Completion of Wet Concentrator Piloting Works and Quarterly Activities Report*, p 2 of 29 January 2021.
3. For further information refer Astron ASX announcement, 14 May 2021, *Donald Mineral Separation Metallurgical Test Work*. Astron continues to investigate the final TiO₂ recoveries to final product through its pilot scale test work.



DMS Drilling Programme 2010



Pilot Plant in operation - 2019



Test pit - 2018



Pilot Plant trommel - 2019



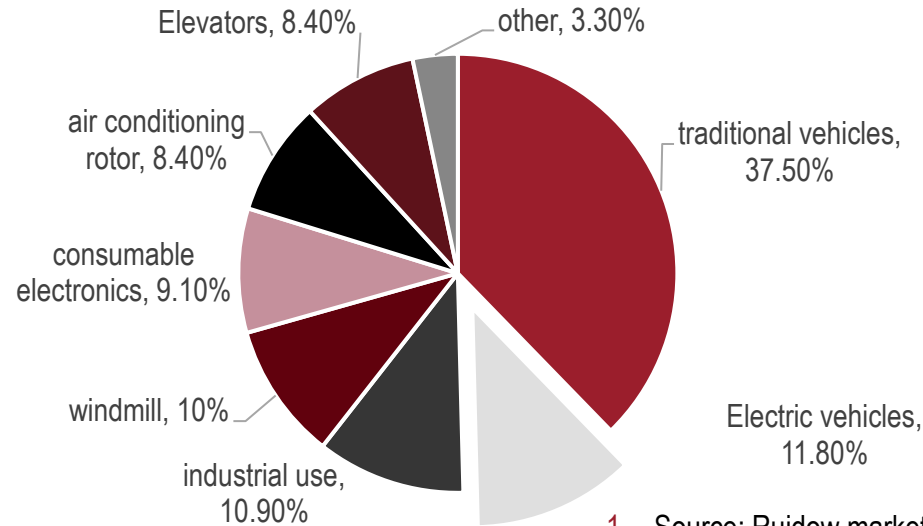
Pilot Plant table - 2019



HMC over spirals, rougher, mid, scavenger spirals respectively - 2019

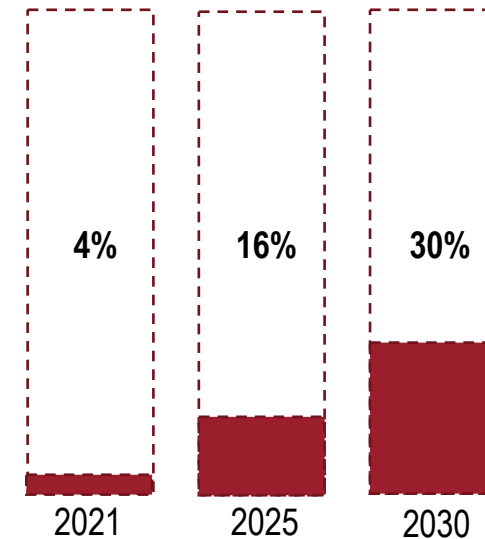
Appendix III. Critical Mineral Opportunities – R.E. Demand Growth

Rare Earth Permanent Magnet End-Users in 2020¹



1. Source: Ruidow market report, Aug, 2021

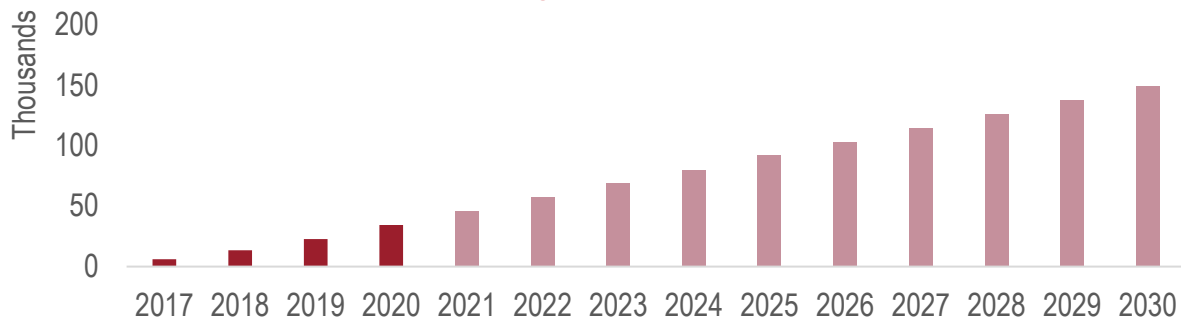
Electrical Vehicle as a % of Market Share to 2030²



2. Source: BNEF 2021

1. EVs need approx. 1kg of rare earths for their motor magnets; although this form 0.05% of the vehicle cost, it is critical to the running of the vehicle.
2. Bloomberg New Energy Finance estimates EVs account for 4 per cent of the market in 2021, 16 per cent by 2025 and 30 per cent by 2030.
3. Hybrid and electric cars will increasingly drive demand for rare earths metals - facilitating exponential demand growth.

Forecasted required Monazite Import Volumes into China to support China Domestic Rare Earth Permanent Magnet Demand¹

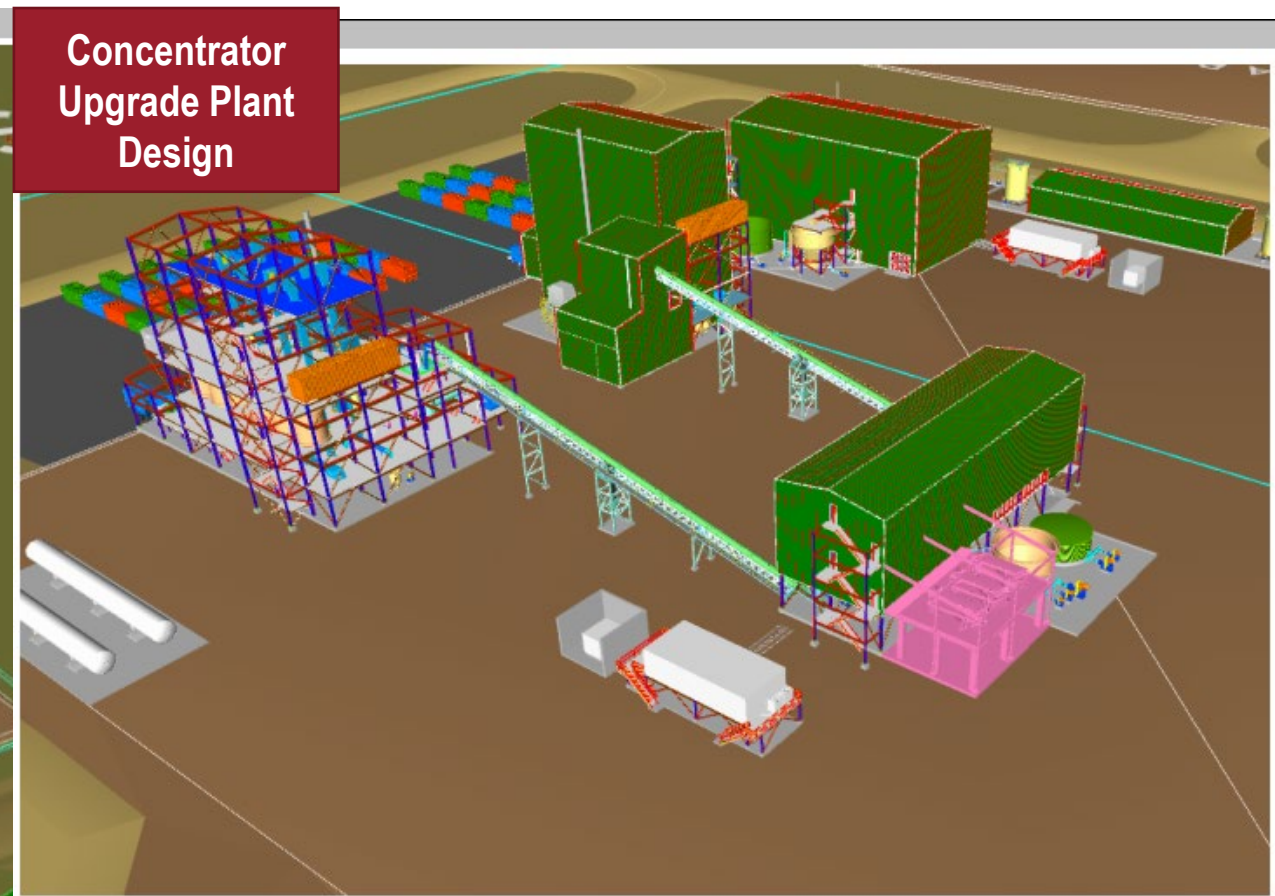


With Mines from Myanmar expected to start to decline in production starting in 2021, and MP Limited commissioning their own R.E. production lines, Monazite imported into China is anticipated to increase by 400% from 2020 levels by 2030 to complement growing demand for Rare Earth Permanent Magnets.

The increased demand from China is anticipated to **compound** the effects of the securitisation of western governments of independent production sources on raw material pricing.

Appendix IV. Engineering Update - Plant 3D Diagrams

Astron has reached 70% design review milestone for plant and equipment feasibility level design update*

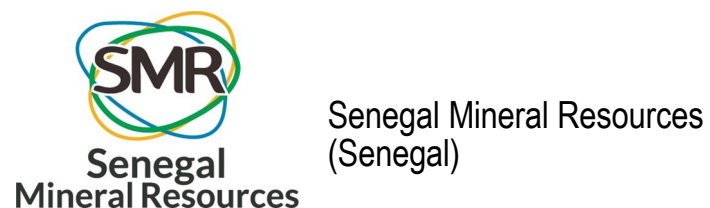
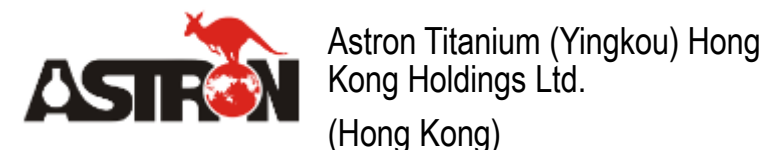
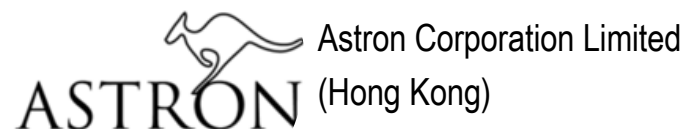


*As of week commencing Nov 22 2021



Appendix V. Astron Corporation Simplified Organisation Chart

(As of 6 Dec 2021)

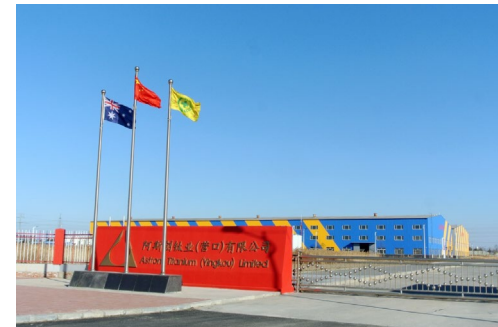
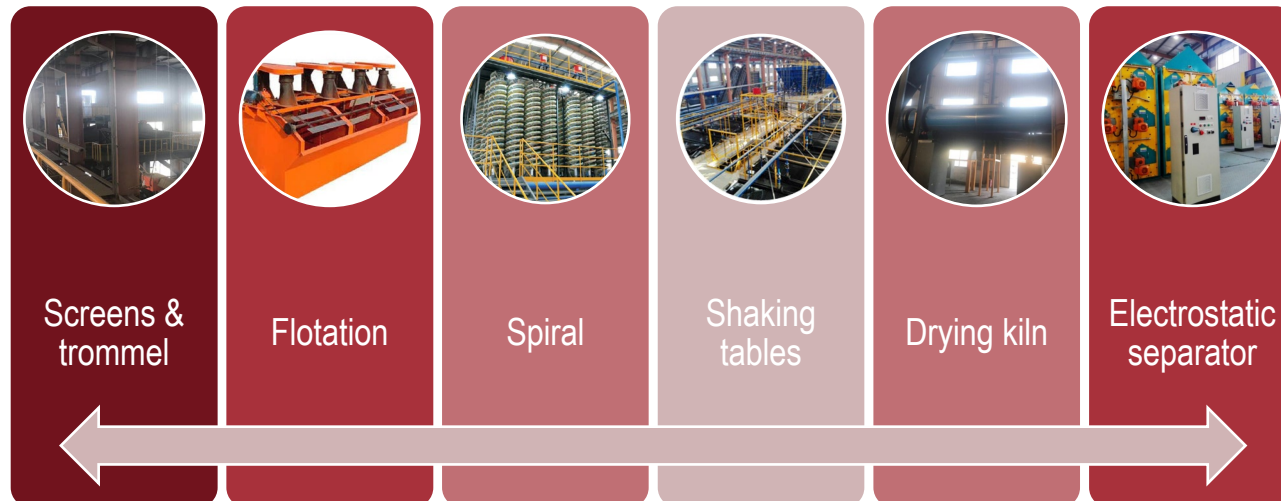


Appendix VI. Astron's China Operations

Astron Titanium has nearly four decades of operational experience in China, including:

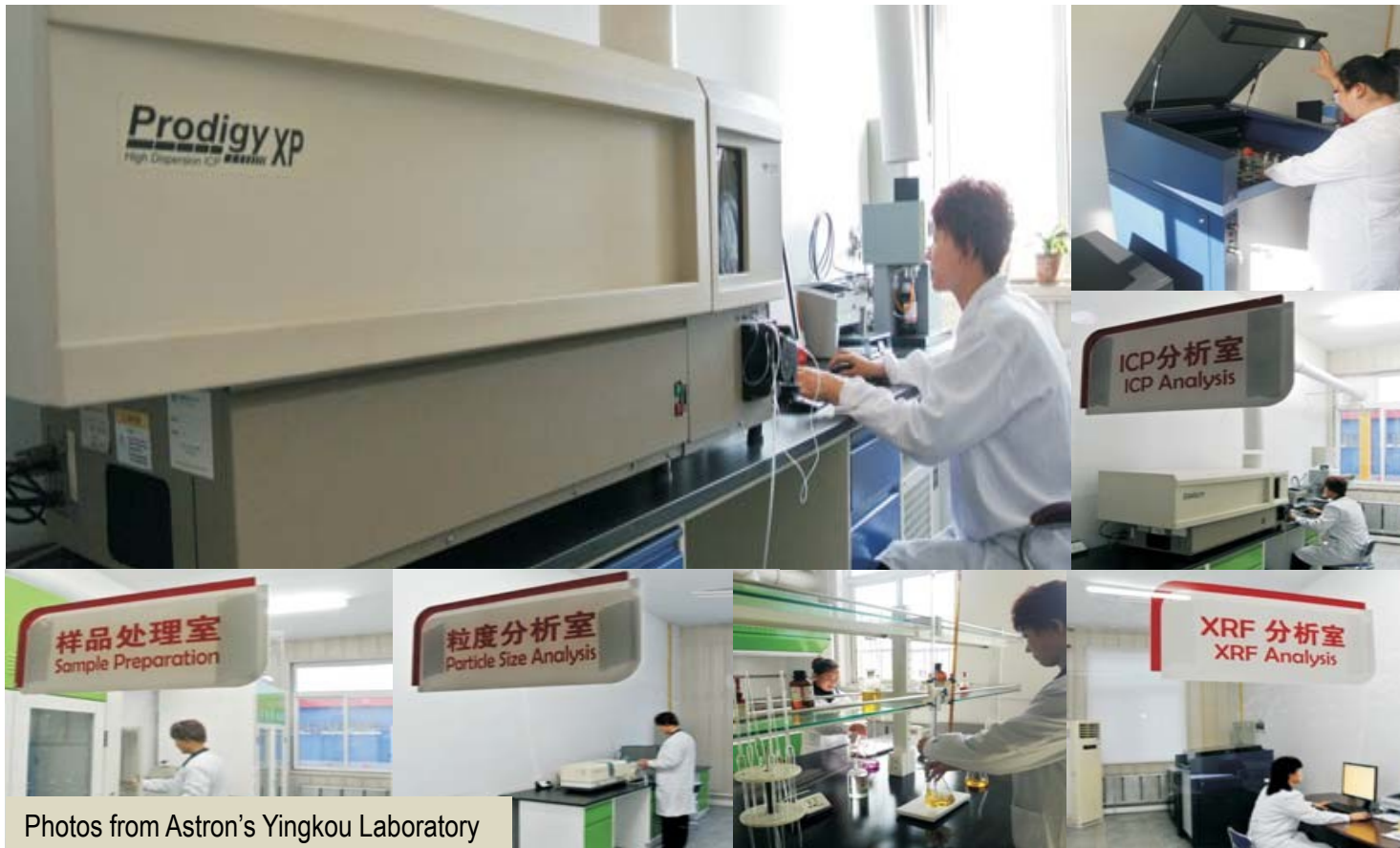
- Close connections with a range of mineral sands customers, within China and internationally
- Capability to produce nuclear grade zirconia (hafnium-free zirconia)
- One of the largest rutile mineral separation facilities in China, commissioned late 2019.
- Mineral separation plant with a design capacity of 300 ktpa of feedstock
- Phase 1 capacity of 150 ktpa of feedstock, production of ~50 ktpa of rutile

Separation Plant Flow-Sheet



Appendix VII. Research and Development Capabilities

Astron has a history of specialty research and development in the mineral sands industry and various downstream product application industries dating back to the 1990s. At various points in its history, Astron has been on the cutting edge of development and innovation for the Titanium and Zirconium related fields. Today, Astron operates a specialty R&D lab at its Yingkou Mineral Separation Plant, continuing its focus to deliver high-quality products for its customers past, current and future.



Photos from Astron's Yingkou Laboratory

Astron's Patents:

- **Nuclear zirconium sponge technology**

Astron has succeeded in producing nuclear-grade zirconia containing hafnium less than 50ppm by TBP-HCL-HNO₃ extraction method. A facility of 200tpa highly-pure zirconia has been established, with independent lab equipped with ICP, XRF and others.

- **Impurity removal from zircon**

Astron has spent nearly ten years and succeeded in removing U/Th/Fe/Ti from zircon. This can greatly improve the quality of zircon. Lower impurity content makes for a better glaze colour. The technology produces a Uranium by-product which can be a source of low cost and high content Uranium to nuclear industry.

- **Micro-agglomeration technology**

Astron has the technology to micro-agglomerate fine rutile and ilmenite materials to improve product suitability for downstream producers.

Appendix VIII. Donald Project – Ore Reserves Statement

Based on the supporting mine planning completed, pit inventories to support an Ore Reserve Estimate, in accordance with JORC 2012 are shown in Table 1.1. Ore has been classified as Proven Ore Reserve, based on Measured Mineral Resource and Probable Ore Reserve, based on Indicated Mineral Resource. The results of the Ore Reserve estimate reflect the Competent Person's view of the deposit.

The JORC Code 2012 Table 1, Section 4 to support the Ore Reserve Estimate is included in Appendix B of the Donald Project Ore Reserve Statement released **18 February 2021**. The Ore Reserve estimates have been compiled in accordance with the guidelines defined in the 2012 JORC Code.

For ASX announcement see: https://astronlimited.com.au/wp-content/uploads/2021/03/PU_18_02_21_Donald-project-Ore-Reserves-Statement-update.pdf

Note that the Mineral Resources are reported inclusive of the Ore Reserve.

Table 1.1 Donald Mineral Sands Ore Reserve for RL 2002 at February 2021

Classification	Tonnes (mt)	Slimes (%)	Oversize (%)	HM (%)	Ilmenite (%HM)	Leucoxene (%HM)	Rutile (%HM)	Zircon (%HM)	Monazite (%HM)
Within ML5532									
Proved	170	14.2	11.9	5.3	31.4	22.1	7.1	18.8	1.9
Probable	24	13.4	12.5	4.9	33.2	21.3	6.7	20.2	2.0
Total	194	14.1	12.0	5.3	31.6	22.0	7.0	19.0	1.9
Within RL2002 Outside of ML5532									
Proved	140	19.1	7.1	5.6	31.0	18.4	9.6	21.2	1.8
Probable	268	15.8	14.4	4.0	32.3	19.5	7.5	17.0	1.6
Total	408	16.9	11.9	4.5	31.8	19.0	8.4	18.8	1.8
Total within Donald Deposit (RL2002)									
Proved	310	16.4	9.8	5.4	31.2	20.4	8.2	19.9	1.8
Probable	292	15.6	14.2	4.1	32.4	19.7	7.4	17.3	1.6
Total	602	16.0	11.9	4.8	31.7	20.1	7.9	18.8	1.7

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 with mine designs above an economic cut-off. The economic cut-off is defined as the value of the products less the cost of processing
3. Mining recovery and dilution have been applied to the figures above.

Appendix IX. Donald Project - Mineral Resource Statement

Table 1.2 Mineral Resource at a 1% Cut-off

Classification	Tonnes (mt)	HM (%)	Slimes (%)	Oversize (%)
Within ML5532				
Measured	372	4.5	14.4	12.8
Indicated	75	4.0	13.8	13.1
Inferred	7	3.5	13.5	10.6
Subtotal	454	4.4	14.2	12.8
With RL2002 Outside of ML5532				
Measured	343	3.9	19.8	8.1
Indicated	833	3.3	16.2	13.5
Inferred	1,595	3.3	15.7	6.0
Subtotal	2,771	3.4	16.4	8.5
Total within Donald Deposit (RL2002)				
Measured	715	4.2	17.0	10.6
Indicated	907	3.4	16.0	13.4
Inferred	1,603	3.4	15.7	6.0
Subtotal	3,225	3.6	16.1	9.1
Total within Jackson Deposit (RL2003)				
Measured	0	0.0	0.0	0.0
Indicated	1,903	2.8	19.0	5.8
Inferred	584	2.9	16.7	3.3
Subtotal	2,497	2.9	18.5	5.2
Total Donald Project				
Measured	715	4.3	18.1	11.1
Indicated	2,811	3.0	17.9	8.2
Inferred	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/436cjqc93cf47.pdf

Table 1.3 Mineral Resource where VHM Data is Available at a Cutoff of 1% HM

Classification	Tonnes (mt)	Slimes (%)	Oversize (%)	HM (%)	Ilmenite (%HM)	Leucoxene (%HM)	Rutile (%HM)	Zircon (%HM)	Monazite (%HM)
Within ML5532									
Measured	264	14.2	12.2	5.4	31	22	7	19	2
Indicated	49	13.6	12.1	4.9	33	22	7	20	2
Inferred	5	13.5	10.2	4.2	36	20	7	22	3
Total	317	14.1	12.1	5.3	32	22	7	19	2
Within RL2002 Outside of ML5532									
Measured	185	19.1	7.3	5.5	31	19	9	21	2
Indicated	454	15.9	13.2	4.2	33	19	7	17	2
Inferred	647	15.2	5.8	4.9	33	17	9	18	2
Total	1,286	16.0	8.6	4.8	33	18	8	18	2
Total within Donald Deposit (RL2002)									
Measured	448	16.2	10.2	5.4	31	21	8	20	2
Indicated	503	15.7	13.1	4.3	33	20	7	18	2
Inferred	652	15.2	5.8	4.9	33	17	8	18	2
Total	1,604	15.6	9.3	4.9	32	19	8	18	2
Total within Jackson Deposit (RL2003)									
Measured									
Indicated	668	18.1	5.4	4.9	32	17	9	18	2
Inferred	155	15.1	3.1	4.0	32	15	9	21	2
Total	823	17.6	5.0	4.8	32	17	9	19	2
Total Donald Project									
Measured	448	16.2	10.2	5.4	31	21	8	20	2
Indicated	1,171	17.1	8.7	4.6	32	18	8	18	2
Inferred	807	15.2	5.3	4.7	33	17	9	19	2
Total	2,427	16.3	7.0	4.8	32	18	8	19	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: 1mt 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.

Appendix X. Astron Corporation Balance Sheet¹

ASTRON LIMITED	Pro-Forma (Unaudited)	
CONSOLIDATED BALANCE SHEET		30/09/2021
ASSETS		
Current Assets		
Cash and Cash equivalent	646,523	
Term deposits greater than 90-days	46,112	
Trade and other receivables	14,846,150	
Inventories	2,153,339	
Available-for-sale financial assets	15,032	
Total current assets	17,707,156	
Non-current assets		
Property, plant and equipment	26,367,068	
Intangible assets	69,481,940	
Water Rights	11,389,379	
Land use rights	3,013,727	
Trade and other receivables	-	
Total non-current assets	110,252,114	
TOTAL ASSETS	127,959,270	
LIABILITIES		
Current liabilities		
Trade and other payables		9,094,033
Short term borrowings		15,811,752
Provisions		118,002
Total current liabilities		25,023,787
Non-current liabilities		
Deferred tax liabilities		8,908,841
Long-term provisions		788,653
Total non-current liabilities		9,697,494
TOTAL LIABILITIES		34,721,281
NET ASSETS		93,237,989

1. Pro-Forma Unaudited Balance Sheet

Astron Corporation also holds a contingent asset by way of an ICSID Judgement Award against the State of Gambia for an amount Circa ~A\$30m.