

# Positioned for the Future

## Donald – a major mineral sands production source

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## Mineral Resources and Ore Reserves Estimates

As a company with securities listed on the Australian Securities Exchange (ASX), Astron is subject to Australian disclosure requirements and standards, including the requirements of the ASX. Investors should note that it is a

requirement of the ASX listing rules that the reporting of ore reserves and mineral resources in Australia comply with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (“JORC Code”) and that the Ore Reserve and Mineral Resource estimates underpinning the production targets in this presentation have been prepared by a Competent Person in accordance with the JORC Code 2012.

Information that relates to Mineral Resources estimates has been previously announced to ASX on 18 June 2012 and 2 October 2020. Astron 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 estimates continue to apply and have not materially changed. Astron confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements.

## Production outlook

Production outlook and the basis thereof are noted within the relevant disclosure. The outlook included in this presentation is indicative only and should not be construed as guidance. The information is subject to changes in market and operating conditions, political risk, and any significant unplanned issues.

# Astron Corporation

Astron Corporation (ASX:ATR) is an established and experienced participant in the global mineral sands sector. Our major focus is bringing the major Donald mineral sands resource, Victoria, into commercial production

Established  
market presence

Long operating  
history

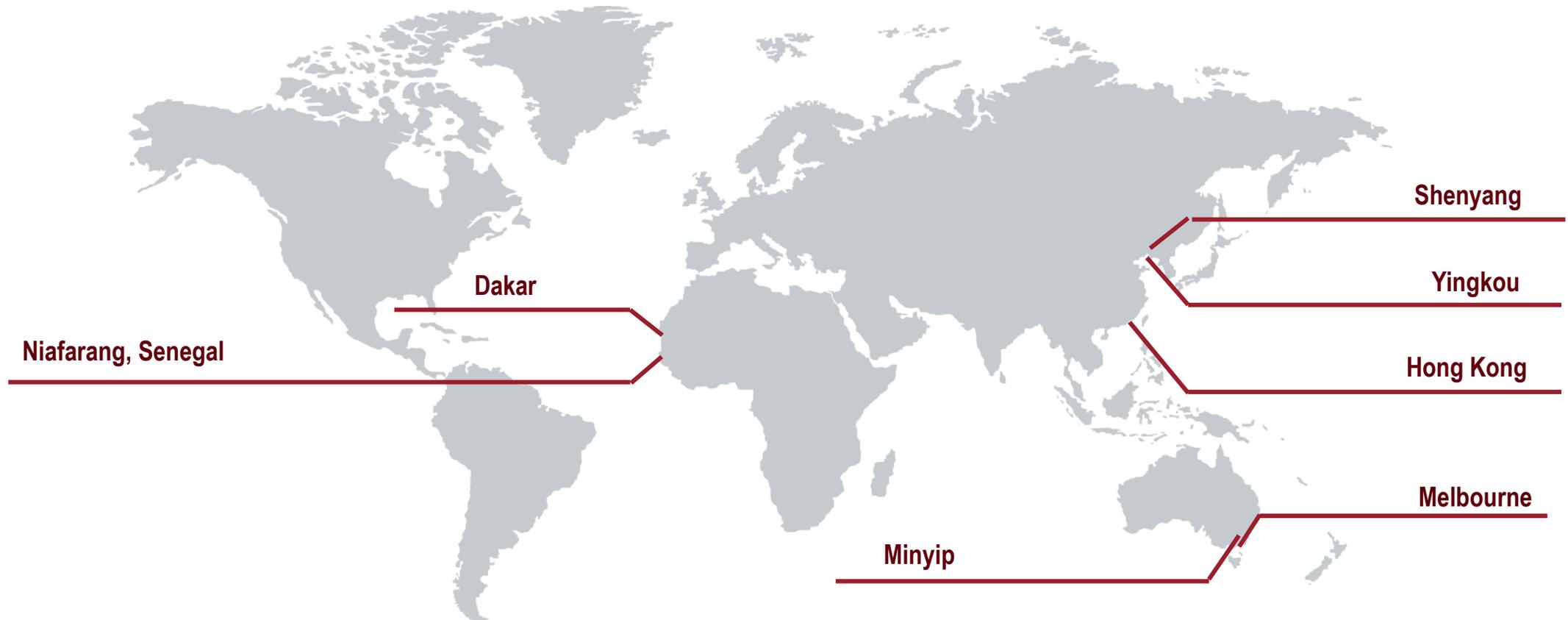
Donald deposit  
Major resource  
base

Advanced licences  
and approvals

Robust market  
demand for  
products

Focus: delivery of  
shareholder value

# Astron's International Presence



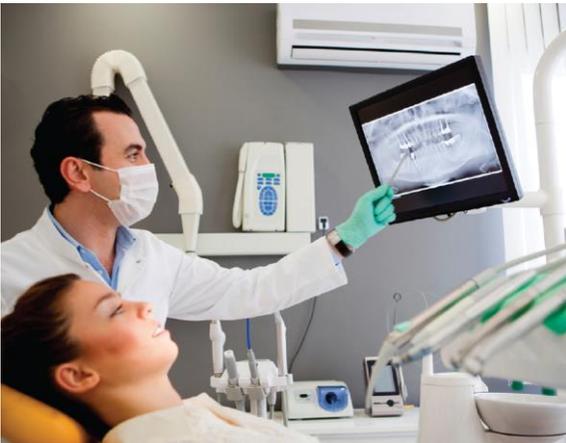
# Astron's Mineral Sands Marketing & Technical Expertise



Solar panels, construction and commercial



Ceramics, kitchen and sanitaryware



Healthcare and medical applications



Aircraft and industrial applications

## 30+ years foundation and experience

Established connections and relationships with a wide range of mineral sands customers

Strong technical base (R&D, patents) in advanced materials manufacturing and processing

Depth of experience in titanium and zircon markets sets Astron apart:

historically, the largest manufacturer of fused zirconia and zirconium carbonate in the world

first company to introduce titanium slag into the market in China for sulphate pigment production

successful in removing U/Th/Fe/Ti from zircon, improving zircon quality/appeal in premium applications\*

Astron's technical capabilities, depth of IP and market presence represent key underpinnings for Donald mineral sands project

\*Refer to Astron's market announcement 18<sup>th</sup> June 2012

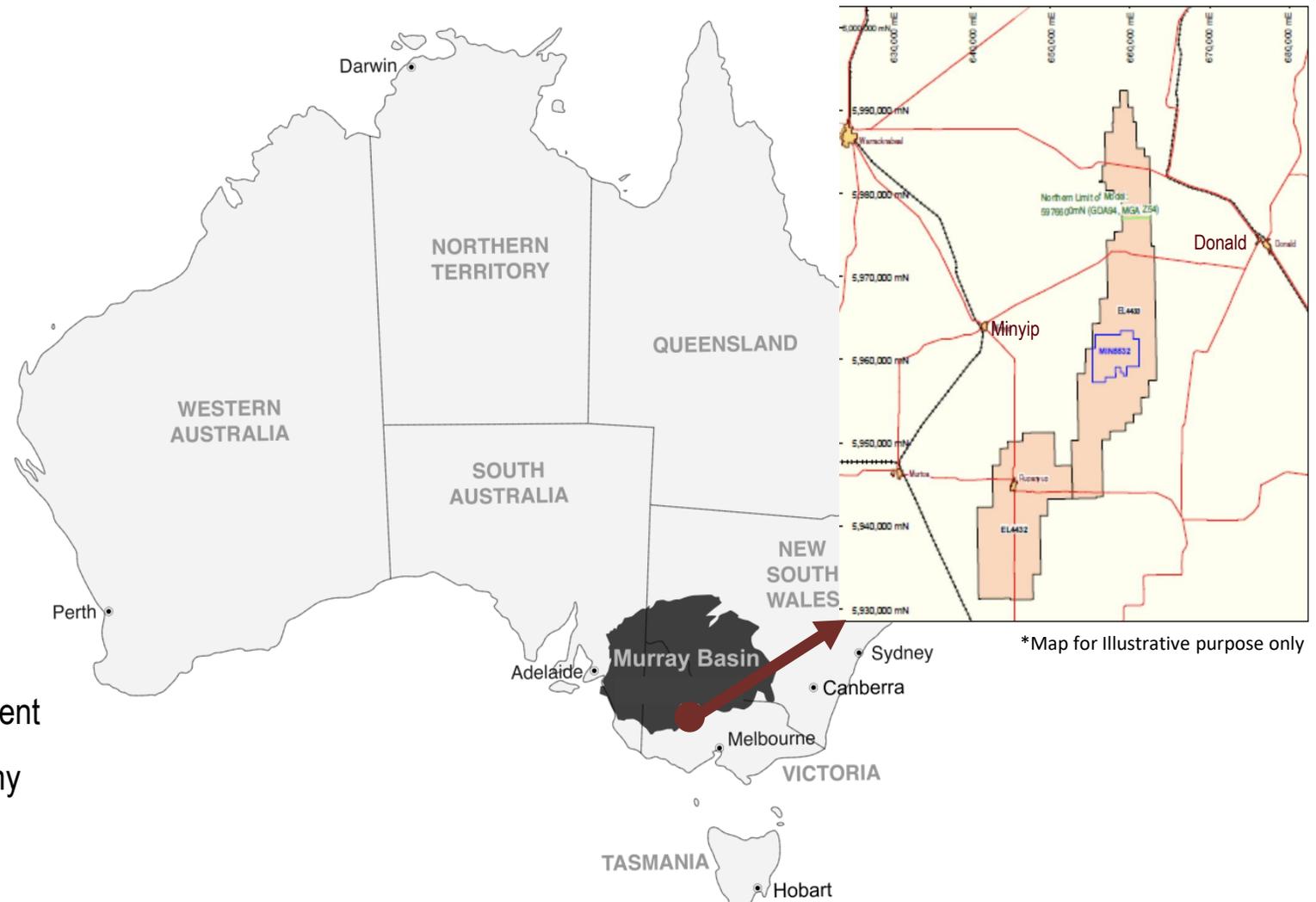
# Donald Mineral Sands Project

## Murray Basin, Victoria

Located 300kms from Melbourne, 70kms from regional centre of Horsham

### Key characteristics

- Large, long-life, consistent ore body
  - Total licensed area of 50,636ha
  - Mining License (ML) area of 2,784ha
- Mostly cleared land used mainly for dry-land cropping production
- Astron has existing freehold-land in area
- Close to infrastructure
- Access to Port of Portland (used for mineral sands product exports)
- Extensive community & stakeholder engagement
- Major contributor to local and regional economy

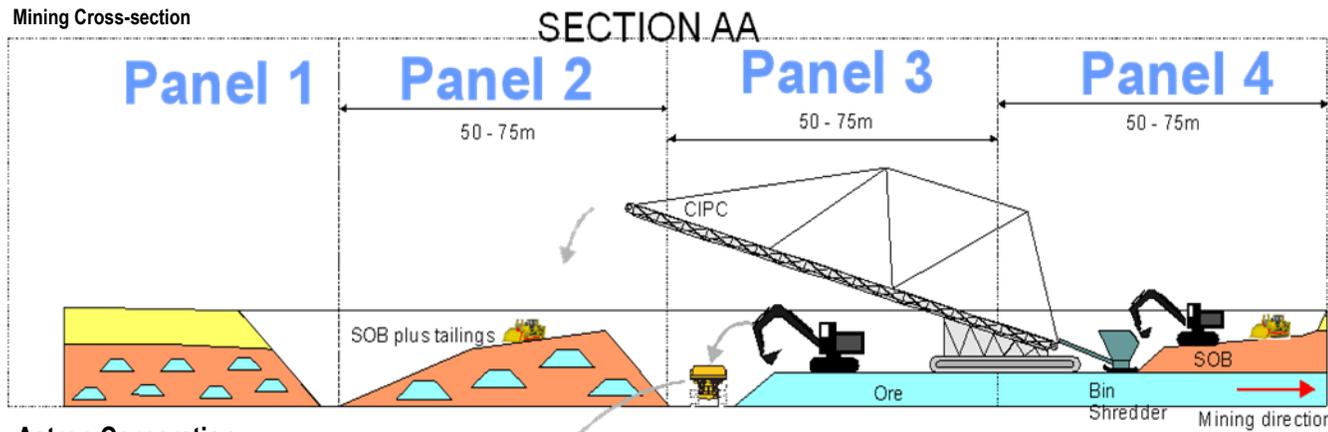


# Donald Mineral Sands Project

## Major New Source of Global Supply

The Donald project represents a **generational** opportunity with well delineated resources:

- Major, high value source of key mineral sands products – zircon, ilmenite, rutile/leucosene, rare earth element commercialisation opportunities
- Well delineated, extensively drilled resource – large areal extent and consistency
- 5.7 Bt Mineral Resource; 2,426mt where VHM available
  - in situ zircon (19.2% assemblage) of ~22 million tonnes
  - equates to ~18 years of global consumption
- Subject to extensive evaluation and test work, including 2 test pits
- Associated metallurgical test work for commercial recovery of fine mineral



Astron Corporation  
ASX:ATR

### Mineral resource at 1% HM Cut-off

Report	Classification	Tonnes (MT)	% HM
AMC resource estimate for MIN5532 DMS deposits	Measured	372	4.5
	Indicated	75	4
	Inferred	7	3.5
	<b>Total</b>	<b>454</b>	<b>4.4</b>
AMC resource estimate for RL2002 DMS deposits	Measured	343	3.9
	Indicated	833	3.3
	Inferred	1,595	3.4
	<b>Total</b>	<b>2,771</b>	<b>3.4</b>
AMC resource estimate for RL2003 & 2006 DMS deposits (now RL2003)	Measured		
	Indicated	1,903	2.8
	Inferred	584	2.9
	<b>Total</b>	<b>2,487</b>	<b>2.8</b>
<b>Total</b>	<b>Total</b>	<b>5,712</b>	<b>3.2</b>

See Table 1 Astron Annual Report 2020 announced to ASX 2 October 2020

### Mineral resource where VHM data is available at 1% HM Cut-off

Report	Classification	Tonnes (MT)	% HM
AMC resource estimate for MIN5532 DMS deposits	Measured	264	5.4
	Indicated	49	4.9
	Inferred	5	4.2
	<b>Total</b>	<b>317</b>	<b>5.3</b>
AMC resource estimate for RL2002 DMS deposits	Measured	185	5.5
	Indicated	454	4.2
	Inferred	647	4.9
	<b>Total</b>	<b>1,286</b>	<b>4.8</b>
AMC resource estimate for RL2003 & 2006 DMS deposits (now RL2003)	Measured		
	Indicated	668	4.9
	Inferred	155	4
	<b>Total</b>	<b>823</b>	<b>4.8</b>

See Table 2 Astron Annual Report 2020 announced to ASX 2 October 2020

# Donald Mineral Sands Project

## Reasons for extended development pathway

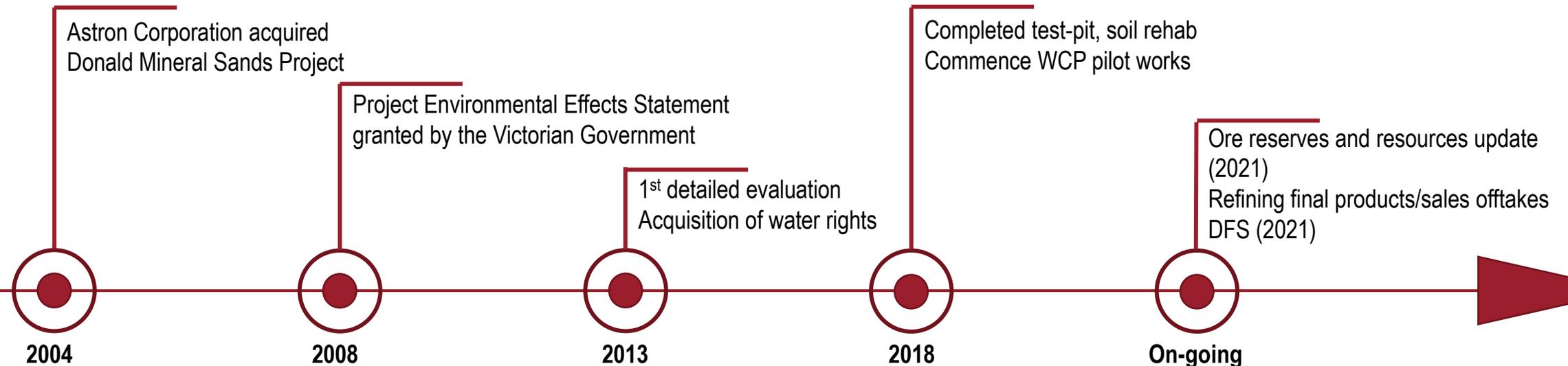
The Donald tenement was first discovered by CRA in 1980s and relinquished following the CRA/ Rio Tinto merger. Since acquisition of the Donald resource, Astron has invested extensively to materially de-risk the Donald project.

### More Favourable Market Conditions

- Zircon demand shift – long-term increase
- Pricing – stronger zircon dynamic, no longer a by-product
- Future supply outlook challenged – maturing production, limited new supply

### Technological Advancements

- Knowledge & technical confidence in fine grain minerals processing advanced significantly since Astron's acquisition of the Donald project -> techniques now proven



# Donald Mineral Sands Project

**Extensive evaluation has significantly de-risk project**

**Advanced** stage of regulatory approvals.

Approval Requirement	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	✓	Jan-12	Jan-41 (with option to renew)
Radiation Licence	✓	Dec-14	Dec-20*
Export Permit	✓	Dec-19	Dec-22
Work Plan	Pending	Pending	Life of mine

\*Radiation Licence renewed December 3<sup>rd</sup> 2020

Geology

Extensively drilled

Mining

Conventional methods

Metallurgy

Continued advances

Market

Favourable dynamics

# Donald Mineral Sands Project

## Multi-stage development process

First production expected ~24 months after construction commencement

- Project to be ramped up via a staged process
  - Stage 1 volumes of ~650ktpa of HMC and ~120ktpa of zircon (current estimates being subject to completion of scoping studies and DFS in 2021)
  - Stage 2 expansion (after ~5 years) – will be based upon market supply / demand characteristics
  - Stage 2 effectively doubles final product volumes
  - Product volumes to be disclosed as part of DFS: zircon production in Stage 1 of at least 120ktpa, plus titanium dioxide products suitable for chlorination process
  
- Conventional mining approach – single pit, use of excavators, contract mining
- Comparatively low strip ratio at 2.6:1
- Mobile mining unit plant for preparation of ore for wet concentration plant (on site)
- Optimal arrangement for mineral processing into final products being finalised as part of DFS
- Land disturbed subject to progressive rehabilitation back to original landform
- Majority of workforce expected to be drawn locally



\* Port of Portland, export facility currently used for mineral sands products



\* Astron's spirals, developed specifically for separation of fine mineral ores.

# Shareholder Value – Fundamental Factors

## Quality Resource Base

Large, consistent ore-body of significant aerial extent

Long mine life, 25 year mine plan extendable to ~50 years+

Low technical risk, based on extensive evaluation, conventional methods

## Strength in Market Place

Established market presence, customer relationships, especially in China

High level of customer interest – high quality zircon and titania products

Multiple product streams – revenue generation from multiple sources

## Strong Project Financials

Subject to completion of DFS in 2021

Relatively low/efficient capital expenditure profile

Expected short payback period & high projected internal rate of return

Comparatively low operating expenses; attractive revenue:cash cost ratio

## Stakeholder Engagement

Advanced regulatory approvals & permits

Local community support

Extensive community engagement over a long period



# Main Priorities for 2021



## *Continued adherence to Astron's Values:*

- 1. We observe the law, our obligations, voluntary commitments and internal standards*
- 2. We value and maintain professionalism in all of our dealings*
- 3. We look after our people*
- 4. We recognise our responsibilities to our stakeholders*

# Contact Us

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