



astro resources nl

Advancing Strong Assets

Gold

Heavy Mineral Sands

Diamonds



Investor Presentation
November 2021

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This presentation has been approved for release by Astro's Board of Directors.

Investment Overview

Poised for strong growth - strategically invested in three unique projects

Needles Gold Project, Nevada, USA

- » Significant gold asset located in highly prospective Nevada, USA
- » Numerous old gold workings on epithermal gold veins
- » Targeting large Round Mountain style deposit
- » Geophysics identified large, strong, chargeability anomaly
- » Initial diamond drilling program to test anomaly– Commenced October 2021

Governor Broome Heavy Minerals, WA

- » Largely de-risked through the definition of Resources of 52Mt @ 4.6% HM Indicated Resources at 4.6% HM plus 66Mt @ 4.0% HM Inferred Resources¹
- » Recent Jack Track acquisition completed
- » Mine scoping study to commence in parallel with JORC upgrade drilling
- » Project has potential for generating strong cash flows with only modest capital required

Kimberley Diamonds, WA

- » Further upside from the Kimberley Diamond Project in the well-known Argyle region of Western Australia
- » Tenement renewed – ARO to review value creation for this asset

Source

1. Information sourced from ASX:ARO *Re-estimation of Jack Track Tenement Resources*: 8th November 2021 and *Update on Tenements*: 25th October 2021.

Corporate Overview

Board of Directors



Jacob Khouri, *Chairman*

Mr Khouri has significant corporate experience and strategic expertise spanning a vast portfolio of businesses that traverse a multitude of industries.

He is currently a Director of Mooter Media Limited and Gun Capital Management, a strategic investment company and was previously a Director of Medibio Limited (ASX: MEB) and Esperance Minerals Limited. He has also served on other publicly listed company boards.

Vince Fayad, *Executive Director & CEO*

Vince has over 35 years' experience in corporate finance, international M&A, accounting and other advisory related services in Sydney-based mid-tier accounting firms. He is the principal of his own firm Vince Fayad & Associates, providing accounting and advisory services. His experience ranges from provision corporate, accounting and secretarial services, together with strong commercial acumen particularly in the planning and execution of development strategies for projects as well as acquisition skills.

Vince has strong public company experience, including, Executive Director, Company Secretary and CFO of Greenvale Energy Limited (ASX: GRV) and European Lithium Limited (ASX: EUR) (formerly known as East Coast Minerals). In addition, he was the Executive Director and Interim CFO of Ashley Services Group Limited (ASX:ASH), Chair of Medibio Limited (ASX: MEB) and NED of Esperance Minerals Limited (ASX: ESM).

Greg Jones, *Non-Executive Director*

Greg is a geologist with more than 35 years of exploration and mine experience within Australia and overseas. Greg has held senior management positions in a number of successful resource companies including Western Mining Corporation (WMC), Sino Gold Limited and CBH Limited. His technical and management experience includes grass-roots exploration through to resource definition and new project generation, project assessment and acquisition, mine feasibility studies and mine operations.

Greg has served on boards of a number of ASX listed resource companies, is member of the Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists, and is a Competent Person as defined under the 2012 JORC code.



Key Financials

Share Price (@ 09.11.2021)	\$0.005
Shares on Issue	3,764,193,013
Options (exercisable @ 1c, exercise date 21.04.2022)	1,098,500,001
Market Cap (@ 09.11.2021)	\$18.82m
Cash (@ 30.09.2021)	\$2.59m
Enterprise Value	\$16.23m
Debt (@ 30.09.2021)	Nil
Top 20 Shareholders (@ 09.11.2021)	66.56%

Major Shareholders

Holdmark Property Group	19.77%
Mining Investments Ltd	9.32%

Needles Gold Project, Nevada

Located in one of the world's most prolific gold regions

- » Nevada has produced more than 215Moz Gold since 1835¹
- » Project is 100km southeast of the 15Moz Kinross Round Mountain open-cut mine (200Mt @ 1.5g/t Au)²
- » Targeting large low-grade gold mineralisation in Round Mountain or Carlin style deposits, which may also contain epithermal, bonanza mineralisation
- » Numerous old gold workings, pits and shafts within project
- » Recent mapping, rock chip sampling and geophysics has confirmed Astro's geological model and the excellent prospectivity of area
- » Diamond Drilling program commenced October 2021 – results to be provided as soon as available



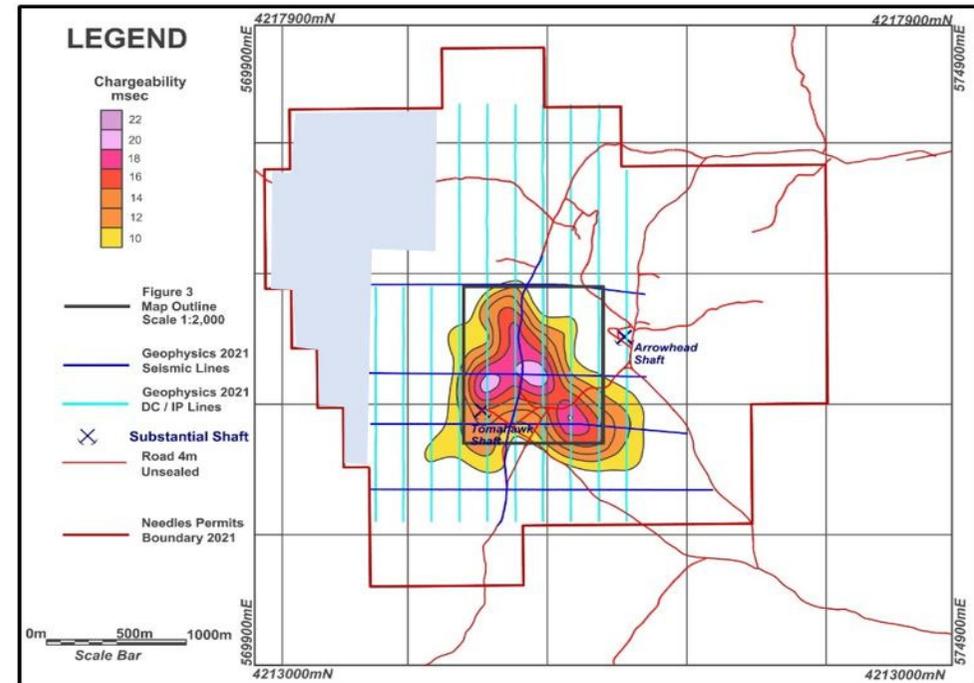
Sources

1. Perry, Rick; Visher, Mike (2019). "[Major mines of Nevada 2018: Mineral industries in Nevada's economy](#)" (pdf). Nevada Division of Minerals. Nevada Bureau of Mines and Geology. Retrieved 16 January 2020.
2. Coyner, Alan R. (4 December 2014). "[Update on Nevada Mineral Production and Exploration](#)" (ppt). State of Nevada Division of Minerals. Reno, NV: Northwest Mining Association

Needles Exploration Work to Date

Targeted exploration program

- » Acquisition and analysis of detailed historic drilling and surface exploration dataset
- » Detailed geological/structural mapping and rock chip sampling (with assays up to 5.5g/t Au recorded)¹
- » Anomalous gold, silver and other pathfinder elements returned
- » Strong DC/IP Chargeability anomaly confirmed by two separate modelling techniques
- » Seismic survey indicated the presence of multiple structures within the target area. They may have acted as paths for ascending mineralizing fluids, and they may contain higher grade gold mineralisation
- » Drill testing (3 deep holes) of chargeability anomaly commenced October 2021
- » Fourth hole to test Tomahawk Workings



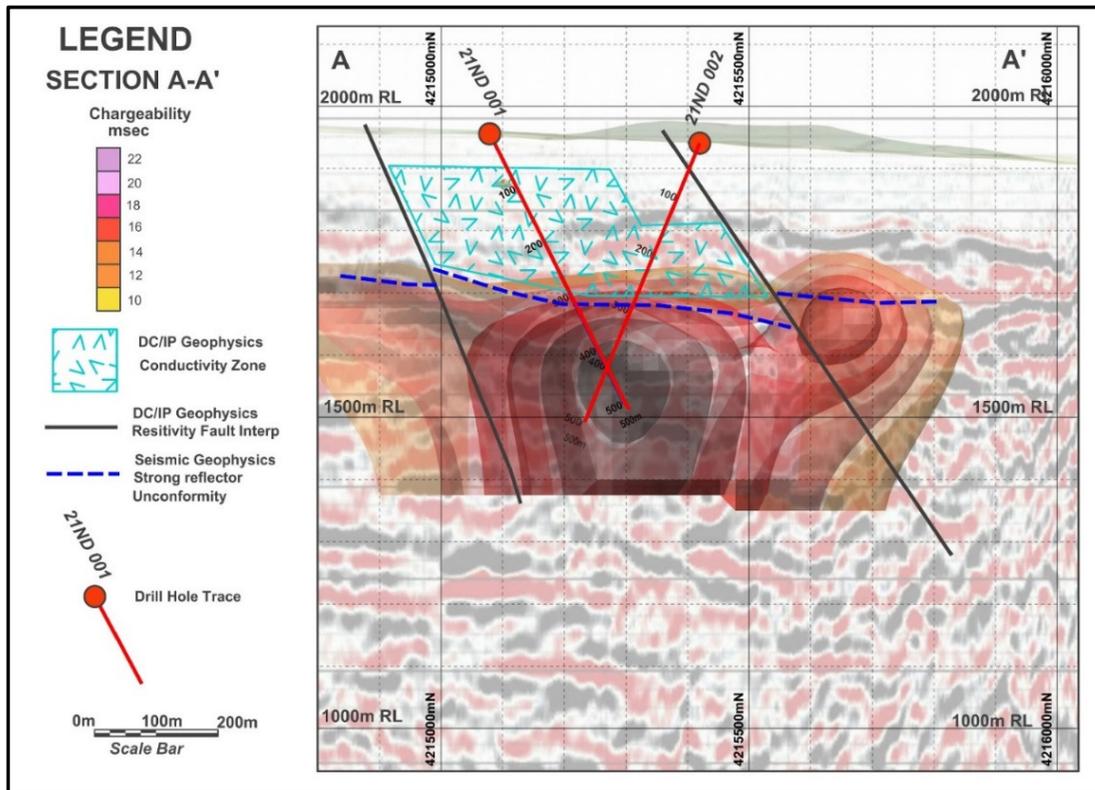
Needles Property with new claims in pale blue, IP and seismic survey lines, and IP anomaly

Source

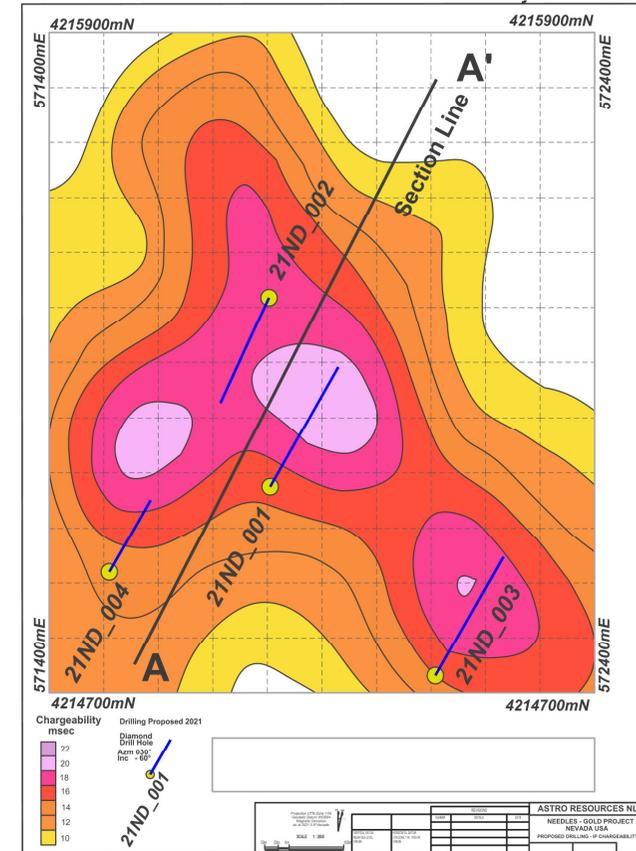
1. Information sourced from ASX:ARO Mapping results confirms Needles Project as a viable exploration gold project: 1 December 2020

Needles Diamond Drill Program

Strong, robust IP chargeability anomaly

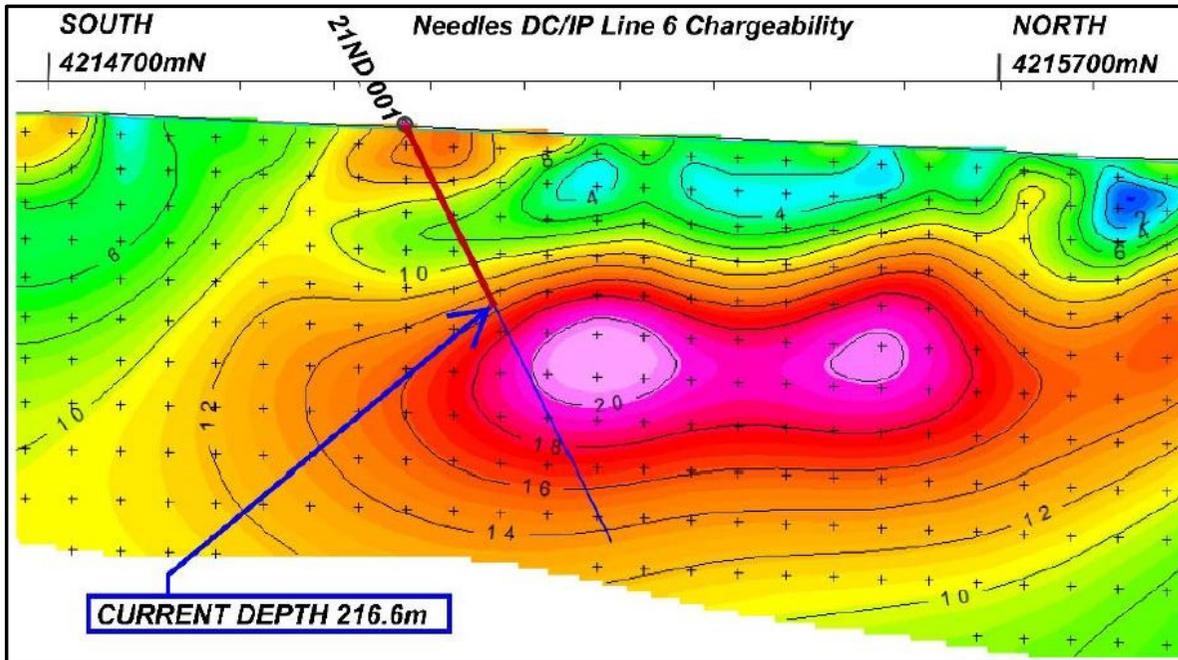


Seismic section looking west, with chargeability anomaly overlain, interpreted faults (black), major sub-horizontal break (blue dashes), and conductive zone (pale blue patterned). Planned holes on this section are shown in red



Detail of 200m depth slice of chargeability anomaly showing planned drill-holes

Needles Drill Program Progress at 7th November



Cross-section of chargeability anomaly showing progress of first diamond drill-hole at 7th November

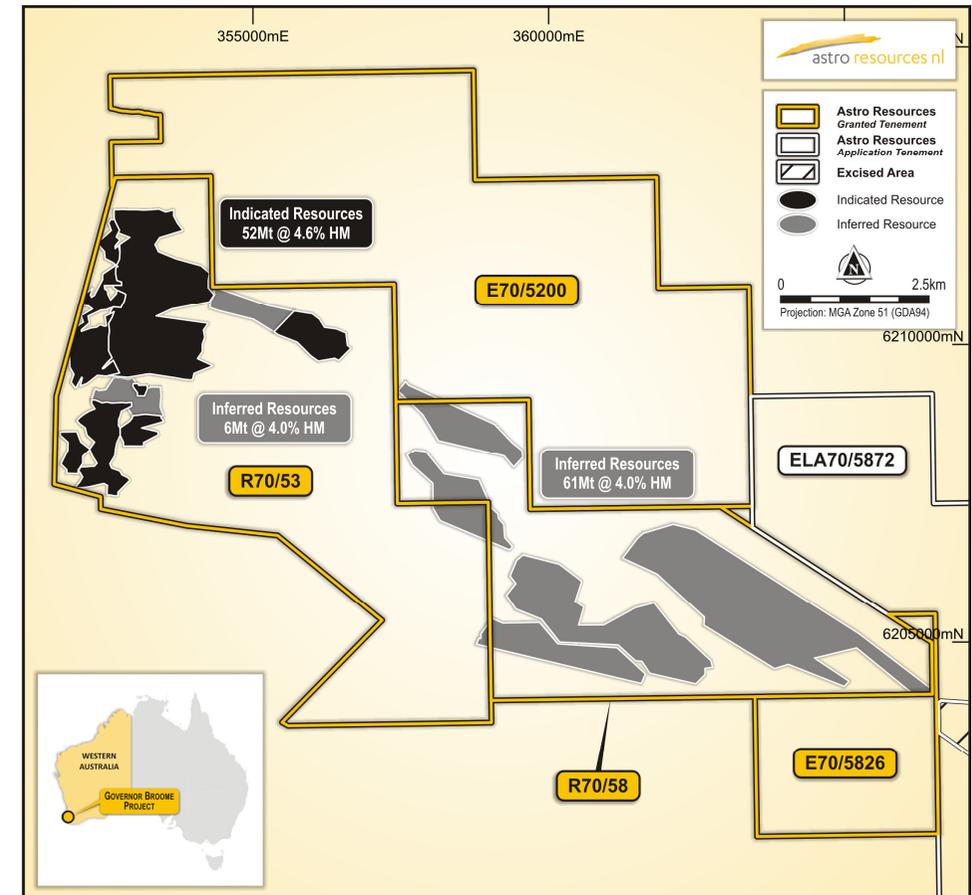


Diamond drill-rig sited over hole 21ND_001 (view to east across the chargeability anomaly)

Governor Broome Heavy Minerals Sands Project, WA

Substantial HM Resources Moving Toward Production

- » Located in mineral sands rich coastal plains of WA's South-West
- » Jack Track tenements recently acquired from Iluka Resources
- » Inferred Resources of 52Mt @ 4.6% HM plus 66Mt @ 4.0% HM of Inferred Resources¹
- » HM assemblage of the Jack Track deposit mineralisation is of high value, containing 75% ilmenite, 10.8% zircon, 2.4% rutile, and 6.8% leucosene²
- » Astro intends to commence infill drilling at Jack Track as soon as possible to convert the Resources from Inferred to Indicated category
- » A Scoping Study will now be completed incorporating both the Governor Broome and Jack Track deposits, including the results from the proposed drilling
- » Feasibility study to be undertaken post completion of Mine Scoping Study
- » Astro looking to move asset towards production



Sources

1. Information sourced from ASX:ARO *Re-estimation of Jack Track Tenement Resources*: 8th November 2021 and *Update on Tenements*: 25th October 2021;
2. Information sourced from ASX:ARO *Astro Secures 100% Ownership of High Value Jack Track Mineral Sands Deposit*: 27th September 2021.

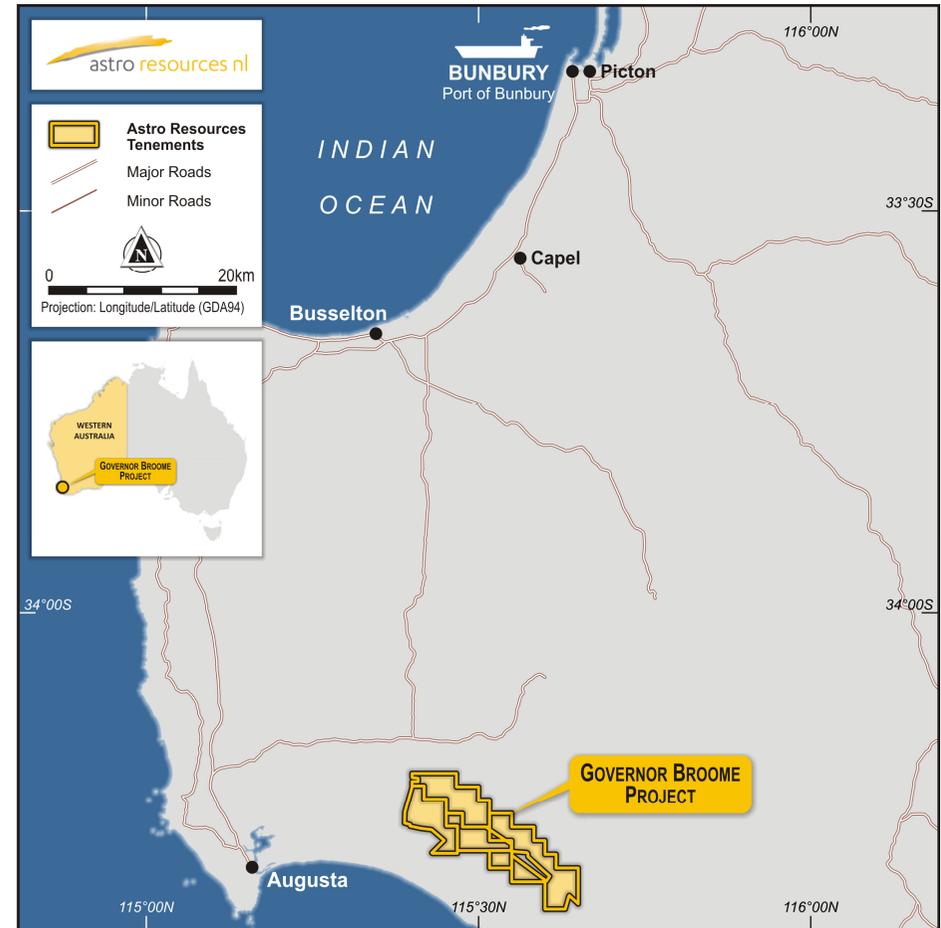
Governor Broome Project Location

Location

- » South-West Western Australia on the Scott Coastal Plain
- » The project is, by road:
 - ~95km south of Busselton,
 - 105km south of Iluka's Capel Processing Plant
 - 135km from Bunbury Port and Picton, where Doral has a heavy mineral separation plant
- » A 132 kV power line is 5km to the north and a three-phase power line passes through the Project¹

Assets

- » R70/53 and R70/58; plus E70/5200, 5826, 5872
- » Astro's tenements have a total area of 171km² and a strike length of 25km



Source

1. Information sourced from ASX:ARO *Update on Tenements*: 25th October 2021

§ Governor Broome Project – Resources

Total Resources to 118Mt at 4.4% Heavy Minerals^{1,2}

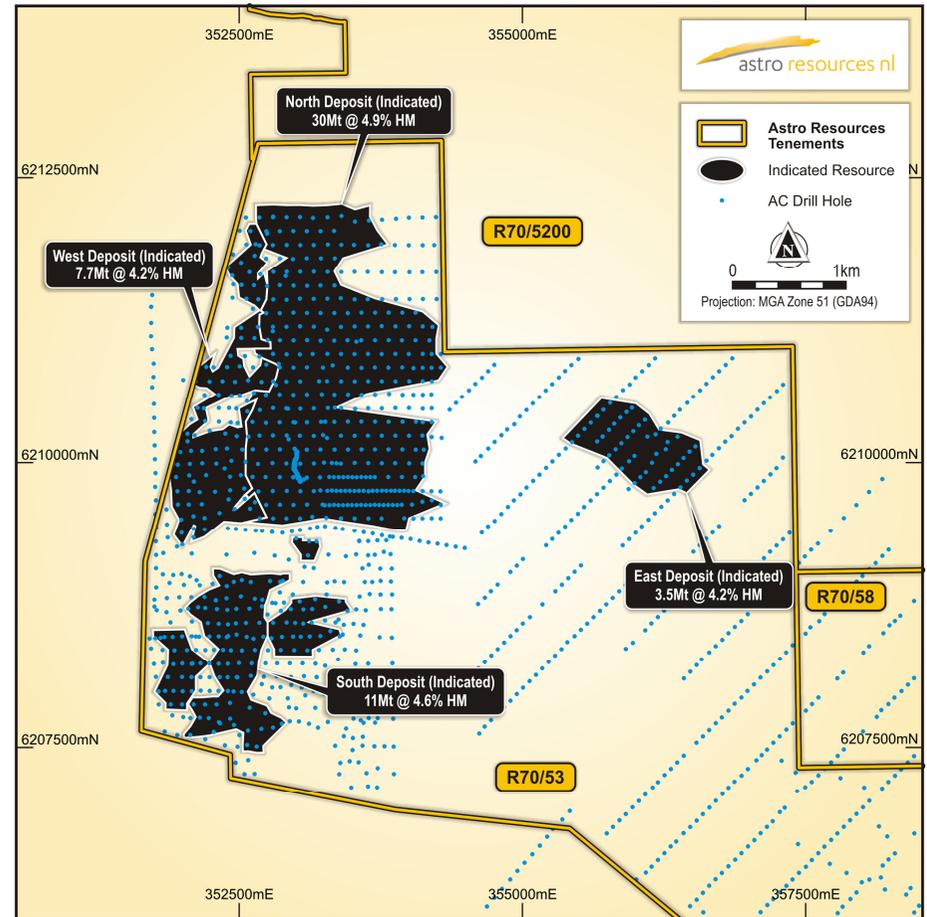
Deposit	Category	Tonnage (Mt)	HM (%)	Slimes (%)	Oversize (%)
West	Indicated	8.0	4.2	13	7.5
East	Indicated	3.5	4.2	12	3.7
East	Inferred	3.2	3.1	14	2.9
South	Indicated	11	4.4	15	11
South	Inferred	2.5	4.6	16	9.1
North	Indicated	30	4.9	12	8.1
Total Governor Broome	Indicated	52	4.6	13	8.5
Total Governor Broome	Inferred	6	4	15	6
Jack Track	Inferred	28	4.1	7.6	1.5
Jack Track Northwest	Inferred	3.8	4.5	11	4.2
Jack Track West	Inferred	5.0	3.9	10	2.7
Jack Track Southwest	Inferred	24	3.8	10	4.3
Total Jack Track	Inferred	61	4.1	9.1	2.9
Total Project	Indicated	52	4.6	13	8.5
Total Project	Inferred	66	4.0	9.6	3.1
Total Project	Resources	118	4.4	10	5.5

Sources

1. The above figures have been appropriately rounded.
2. Information sourced from ASX:ARO *Re-estimation of Jack Track Tenement Resources*: 8th November 2021

§ Governor Broome Project – Indicated Resources

- » Astro has defined and reported Indicated Resources of Heavy Minerals in 4 separate Deposits within R70/53
 - The West Deposit was discovered in previously undrilled ground in February 2020
 - The East and South Deposits were defined by infill drilling of Inferred Resources in March 2020
 - The North Deposit Resources had been previously drilled and reported
- » The combined Indicated Resources of the four deposits total 52Mt @ 4.6% HM, 13% Slimes, and 8.4% Oversize, above a cut-off grade of 2% HM¹

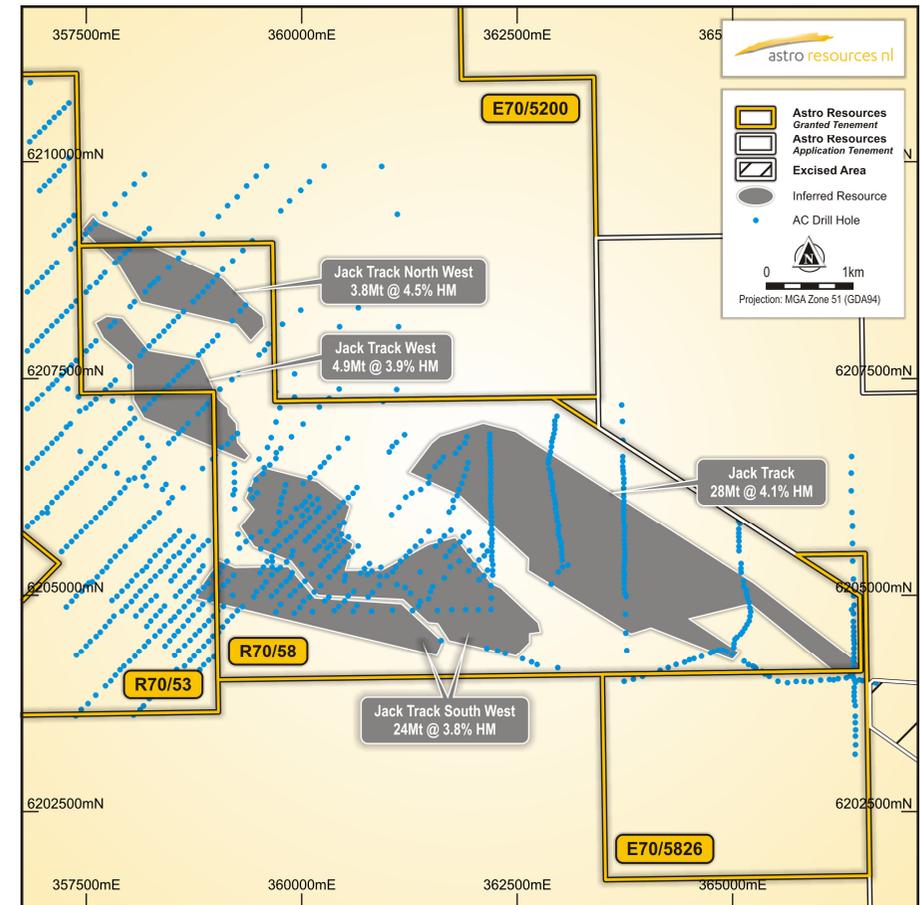


Source

1. Information sourced from ASX:ARO *Governor Broome Resource Update*: 24th May 2021

§ Governor Broome Project – Jack Track Inferred Resources

- » Astro in 2021 defined and reported Inferred Resources of Heavy Minerals in 4 separate Deposits that are mainly within R70/58
- » The combined Inferred Resources of the four deposits total 61Mt @ 4.0% HM, 9% Slimes, and 3% Oversize, above a cut-off grade of 2% HM¹
- » The Jack Track Deposit was previously reported above a 3% HM cut-off grade
- » The assemblage of the Jack Track Deposit is ilmenite dominated and high in zircon; containing 75% ilmenite, 10.8% zircon, 6.8% leucoxene, and 2.4% rutile; for a 94% VHM content and 59.4% TiO₂¹

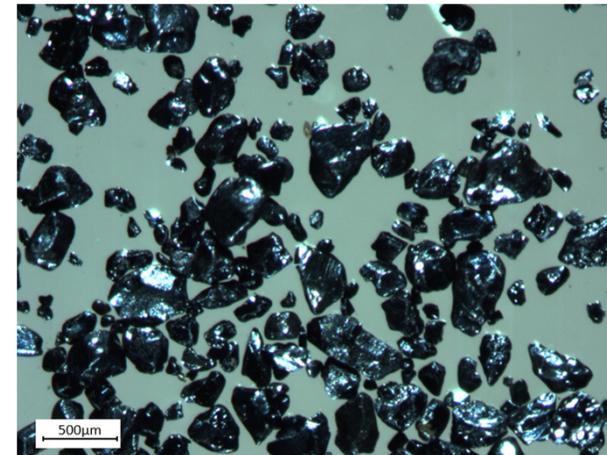
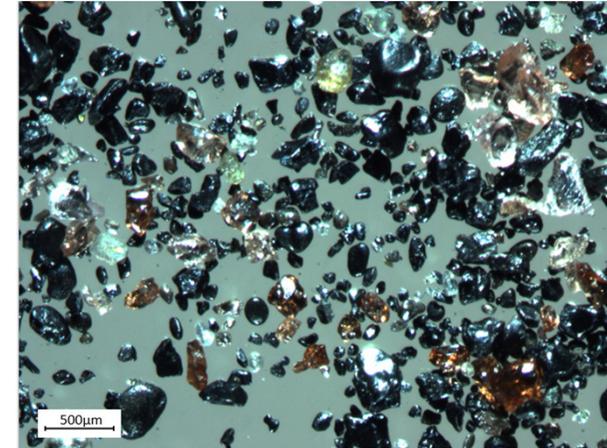


Source

1. Information sourced from ASX:ARO *Re-estimation of Jack Track Tenement Resources*: 8th November 2021

BULK TESTWORK

- » Wet and Dry Plant test work programs successfully carried out by AML on a 2.6t bulk sample from Governor Broome West Deposit¹
- » Slimes were easily removed from the sample using a scrubber and trommel and found to behave similarly to those from other producing HM deposits in WA
- » A heavy mineral concentrate (HMC) was successfully produced in the wet concentrator using conventional mineral sands processing equipment (HMC shown in top photomicrograph to right)
- » High grade ilmenite and zircon products were produced from the HMC using conventional dry plant mineral separation equipment (ilmenite product shown bottom right)



Source

1. Information sourced from ASX:ARO *Bulk Testwork Program Delivers Further Positive Results for Governor Broome Heavy Mineral Project*: 16th June 2021

MINERALOGY

- » The heavy mineral assemblage of the North Deposit has been estimated to be 51.8% ilmenite (53% TiO₂), 5.4% secondary ilmenite (63% TiO₂), 5.0% leucoxene (85% TiO₂), 1.6% rutile, 4.7 % zircon, and 12% garnet; for an 80.5% valuable heavy mineral (VHM) content¹
- » The heavy mineral assemblage of the South Deposit has been estimated to be 44.2% ilmenite, 2.5% secondary ilmenite, 2.2% leucoxene, 1.2% rutile, 4.4% zircon, and 12.8% garnet; for a 67.4% VHM content²
- » A West Deposit HMC contained 60.8% primary ilmenite (50.8% TiO₂) and 4.5% secondary ilmenite (60.7% TiO₂)²
- » An East Deposit HMC contained 56.9% primary ilmenite (52.8% TiO₂)²
- » The assemblage of the Jack Track Deposit is ilmenite dominated and high in zircon; containing 75% ilmenite, 10.8% zircon, 6.8% leucoxene, and 2.4% rutile; for a 94% VHM content and 59.4% TiO₂³

Sources

1. Information sourced from ASX:ARO *Update on Governor Broome Mineral Resources*: 12th February 2015
2. Information sourced from ASX:ARO *Bulk Testwork Program Delivers Further Positive Results for Governor Broome Heavy Mineral Project*: 16th June 2021
3. Information sourced from ASX:ARO *Astro Secures 100% Ownership of High-value Jack Track Mineral Sands Deposit*: 8th November 2021

Governor Broome ilmenite products

Comparison with selected competing ilmenite products

Composition (%)	Governor Broome primary ilmenite	African sulfate ilmenite	Indian sulfate ilmenite	Governor Broome secondary ilmenite	African chloride ilmenite 1	African chloride ilmenite 2
TiO ₂	50.8	52.7	50.4	60.9	60.0	60.0
FeO	NA	19.4	34.4	NA	8.9	-
Fe ₂ O ₃	47.8*	22.2	12.1	30.4*	25.3	31.8*
Al ₂ O ₃	0.38	0.54	0.72	1.6	1.16	1.66
CaO	0.05	<0.01	0.05	0.10	0.03	0.03
Cr ₂ O ₃	0.03	0.10	0.05	0.30	0.06	0.23
MgO	0.26	0.31	0.78	0.30	0.49	0.63
MnO	1.24	1.67	0.55	0.90	0.39	0.36
Nb ₂ O ₅	0.13	0.10	-	0.20	-	-
P ₂ O ₅	0.05	0.02	0.04	0.10	0.07	0.10
SiO ₂	0.52	0.46	0.90	1.0	0.15	1.20
V ₂ O ₅	0.16	0.12	0.22	0.30	0.19	0.30
U+Th (ppm)	<20	101	45	135	117	300

* Total iron expressed as Fe₂O₃

- » Governor Broome product assessment by TZMI indicates ilmenite products compare favourably with other global benchmark ilmenite products
- » The TiO₂ content in the primary and secondary ilmenite are within the typical range found in sulfate and chloride ilmenite.
- » The critical impurities Cr₂O₃ and V₂O₅ are well below the generally acceptable thresholds for sulfate pigment manufacture.
- » For the Governor Broome secondary ilmenite product, the CaO and MgO levels are sufficiently low to be considered as a direct feed for chloride pigment production or as a feed for chloride slag manufacture.
- » The primary ilmenite product appears suitable either as a feed for sulfate pigment production or as smelter feed for chloride slag manufacture.

Source

1. Information sourced from ASX:ARO Market Update and Investor Presentation: 17th June 2021

Governor Broome zircon product

Comparison with selected competing zircon products

Composition (%)	Governor Broome primary zircon	Australian premium zircon	African premium zircon	Indonesian premium zircon
ZrO ₂ (+HfO ₂)	66.0	66.4	66.3	66.3
Fe ₂ O ₃	0.08	0.06	0.05	0.10
TiO ₂	0.10	0.13	0.11	0.10
Al ₂ O ₃	0.39	0.39	0.25	0.28
SiO ₂	32.6	32.2	32.5	32.5
U+Th (ppm)	376	430	410	300 – 400

* Total iron expressed as Fe₂O₃

- » Governor Broome product assessment by TZMI indicates levels of ZrO₂ (+HfO₂) of primary zircon are consistent with competing premium zircon products in the marketplace.
- » Potential zircon product appears to meet specifications for premium classification in the ceramic sector.
- » Potential zircon product is also suitable as a feed for opacifier or investment casting end-use to achieve premium pricing.

Source

1. Information sourced from ASX:ARO Market Update and Investor Presentation; 17th June 2021

Governor Broome Scoping Study

New scoping study based on new total of 118Mt @ 4.4% HM¹

- » Scoping Study to be carried out to incorporate Jack Track deposits into the wider Governor Broome Project. The study will update the previous analysis of the Project which was based upon the 30Mt at 4.9% HM of Indicated Resources²
- » The study will incorporate metallurgical results received from test-work on a 2.6t bulk-sample of the West Deposit mineralisation
- » The inclusion of the Jack Track tenement and its four newly reported deposits is expected to positively impact the potential development of the GBP due to:
 - Significantly increased Resources will enable longer mine-life and/or increased mining rate
 - High-value Jack Track mineralisation will enable a reduced capital payback time
 - Increased Resources will result in lower capital expenditure and overheads per tonne mined

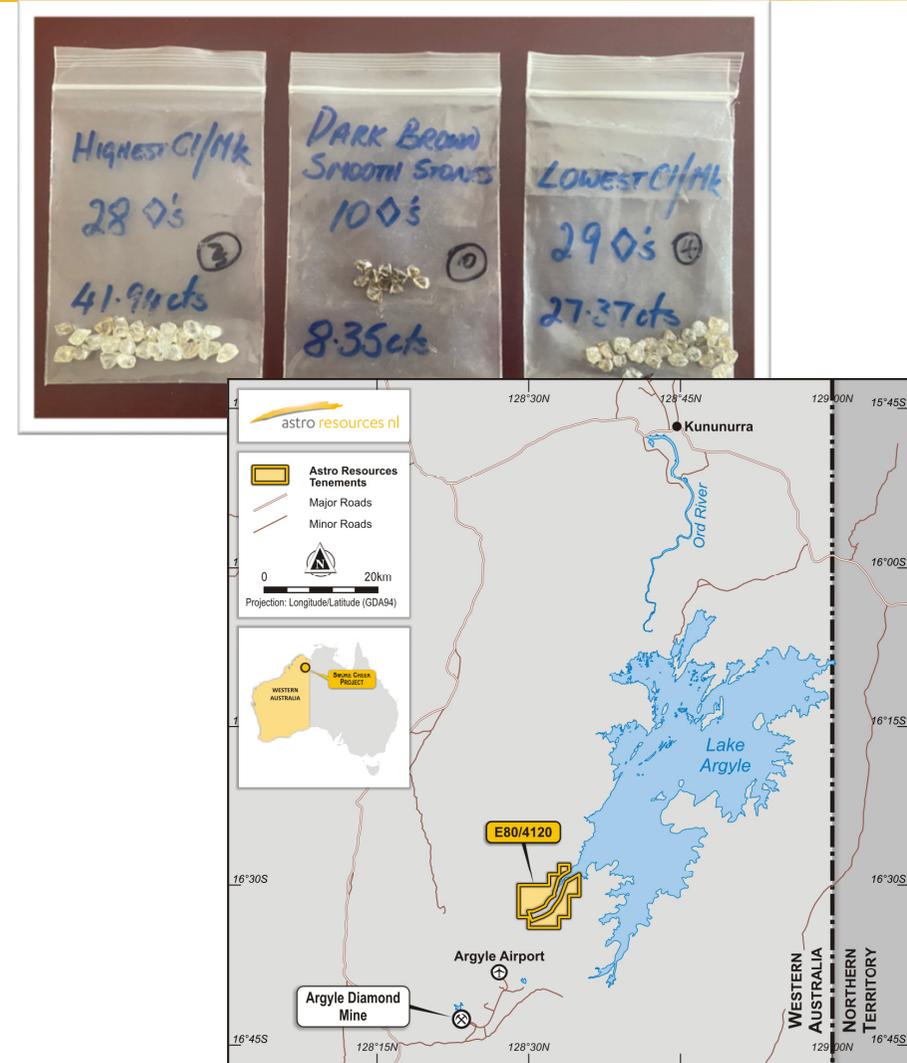
Source

1. Information sourced from ASX:ARO *Re-estimation of Jack Track Tenement Resource*: 8th November 2021
2. Information sourced from ASX:ARO *Review of the Governor Broome Project Preliminary Study*: 16th October 2019

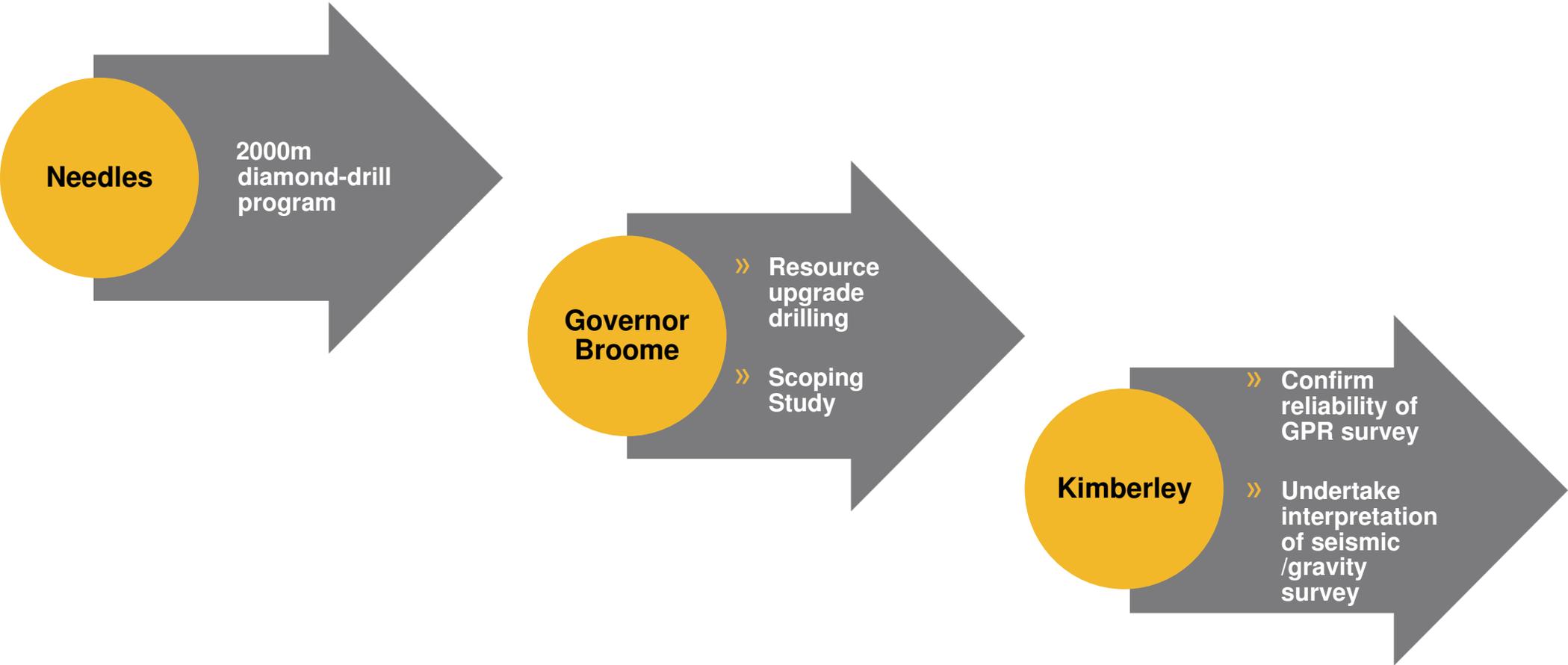
Kimberley Diamonds Project, WA

Lower Smoke Creek Project

- » Located immediately southwest of Lake Argyle, in the East Kimberly Region
- » 20km northeast of Rio Tinto's AK1 diamond deposit, formerly the largest diamond producer in the world
- » Alluvial diamonds previously recovered from the LSC project area are derived from the AK1 diamondiferous pipe
- » POW currently paused due to travel constraints caused by Covid-19 impacting finalisation of agreement with Traditional Owners
- » Project well supported by Mitchell and Cotts 10 tonne/hr HMS Plant
- » Astro successfully renewed licence and extended for two years
- » Initial work plan to be focused on reliability of GPR mapping of the paleo-stream and undertake interpretation of the passive seismic and/or detailed gravity surveys
- » Plans to create value for this asset currently being reviewed



Current Work Program



Advancing Diverse, High Quality Assets

With a strong portfolio of assets and an enterprise value of \$16M, Astro Resources represents excellent “value for money”



Competent Persons Statement

- » The information in this report that relates to the Needles Property is based on information compiled by Richard Newport. Mr Newport, who is a member of the Australian Institute of Geoscientists, 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'. Mr. Newport consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.
- » The information in this presentation as it relates to Mineral Resources and Exploration Targets for the Governor Broome Deposit is based on information compiled by John Doepel, Director of Continental Resource Management Pty Ltd (CRM), who is a member of the Australasian Institute of Mining and Metallurgy. Mr Doepel has sufficient experience in mineral resource estimation, which is relevant to the style of mineralisation and type of deposit under consideration and is qualified as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Doepel consents to the inclusion in the report of the information in the form and context in which it appears.
- » The information in this presentation is based on and fairly represents information and supporting documentation prepared by SRK Consulting who have been nominated by Astro Resources as technical managers to this project. SRK Consulting will continue to co-ordinate all exploration and evaluation for the Lower Smoke Creek Project and consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.



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