

## EXOSPHERE AMBIENT NOISE TOMOGRAPHY SURVEY COMMENCES AT GEORGINA IOCG PROJECT

Cutting-edge technology to help refine existing survey data and  
identify potential mineralised zones



### Key Highlights

- **ExoSphere Ambient Noise Tomography (ANT) Survey has commenced at Georgina Central tenement EL33375.**
- **ANT technology has been successfully used by other ASX listed companies**
- **ExoSphere is a cutting-edge exploration technology that provides real-time geophysical data**
- **The survey is expected to:**
  - **Delineate cover sequence contacts, faults and other structural features**
  - **Identify zones of potential IOCG alteration**
- **Survey results will be used to further constrain existing geophysical data and generate future drill targets**
- **Survey co-funded under NT Government Grants**

Astute Metals NL (ASX: ASE) (“ASE”, “Astute” or “the Company”) is pleased to advise that an Ambient Noise Tomography (ANT) geophysical survey has commenced over its highly prospective central Georgina tenement, EL33375, in the Northern Territory. The survey, conducted using Fleet Space Technologies “ExoSphere” technology, is the first of its kind to be employed in the frontier IOCG-prospective East Tennant region.

### **Astute Executive Chairman, Tony Leibowitz, said:**

*“Drilling to date has indicated excellent potential for a significant copper-gold deposit within the central tenement area. Data from this new ANT survey, which is supported by a co-funding grant from the NT Government, will allow the Astute technical team to refine existing geophysical information and narrow in on drill targets, providing an elegant solution to the challenge of exploring for a world-class deposit under cover.”*

### **Background**

Previous drilling conducted in the central tenement area by the Company and its previous operator - Greenvale Energy Ltd (ASX: GRV), targeted coincident magnetic and gravity anomalies. Such drilling intersected prospective host-rocks that exhibit alteration and geochemical anomalism that may be associated with an Iron-Oxide-Copper-Gold (IOCG) style mineralising system. The most recent Leichhardt East drilling intersected uranium mineralisation in ironstones, with intervals grading 0.24% U<sub>3</sub>O<sub>8</sub> from 689.09–689.41m and 0.11% U<sub>3</sub>O<sub>8</sub> from 481.1–481.85m, along with associated elevated copper and bismuth<sup>1</sup>.

The intent of the ExoSphere survey is to gain an improved understanding of the subsurface structure, which, when used to constrain the Company's existing gravity and magnetic survey data, is expected to be a highly powerful tool for the identification of IOCG-style targets for future drill testing.

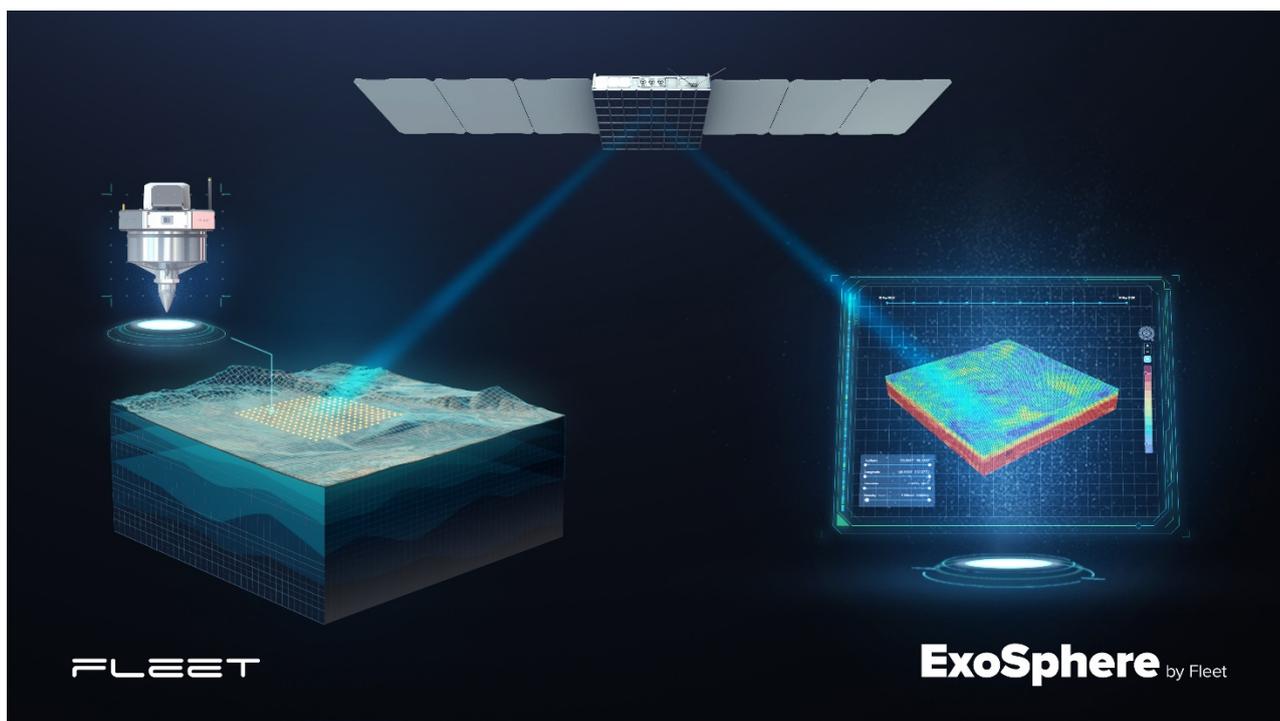
Astute Metals has been awarded a co-funding grant by the NT Government to conduct the ANT survey, under Round 16 of the Geophysics and Drilling Collaborations program. The grant, valued at \$100k, is one of two awarded to the Company this year<sup>2</sup>. The award of this grant is testament to the sound technical rationale employed by the Astute technical team in the survey design. The Company would like to acknowledge the Northern Territory Geological Survey for their continued support and their commitment to establishing the Northern Territory as a Tier-1 exploration jurisdiction.

### ExoSphere Technology

EXOSPHERE BY FLEET® is a solution for the mineral exploration industry that provides 3D mapping of the subsurface at greater depths and increases accuracy in drilling targets. The cutting-edge technology utilises Ambient Noise Tomography (ANT) and is helping the world in the energy transition by creating a faster, more sustainable and less expensive route to finding critical mineral deposits.

The sensors are deployed in a survey area and leverage real-time passive seismic methods to 'scan' the land beneath in search for minerals. This is enabled through non-invasive ANT which listens to seismic waves. The data is rapidly processed and transmitted through Fleet's low power satellite network to create a 3D model of the area in near real-time.

ANT surveys have been successfully employed by a number of resources companies across Australia, including Northern Star Resources (ASX: NST)<sup>3</sup>, Hillgrove Resources (ASX: HGO)<sup>4</sup> and fellow IOCG explorer Coda Minerals (ASX: COD)<sup>5</sup>. More information is available at <https://fleetspace.com/mineral-exploration>



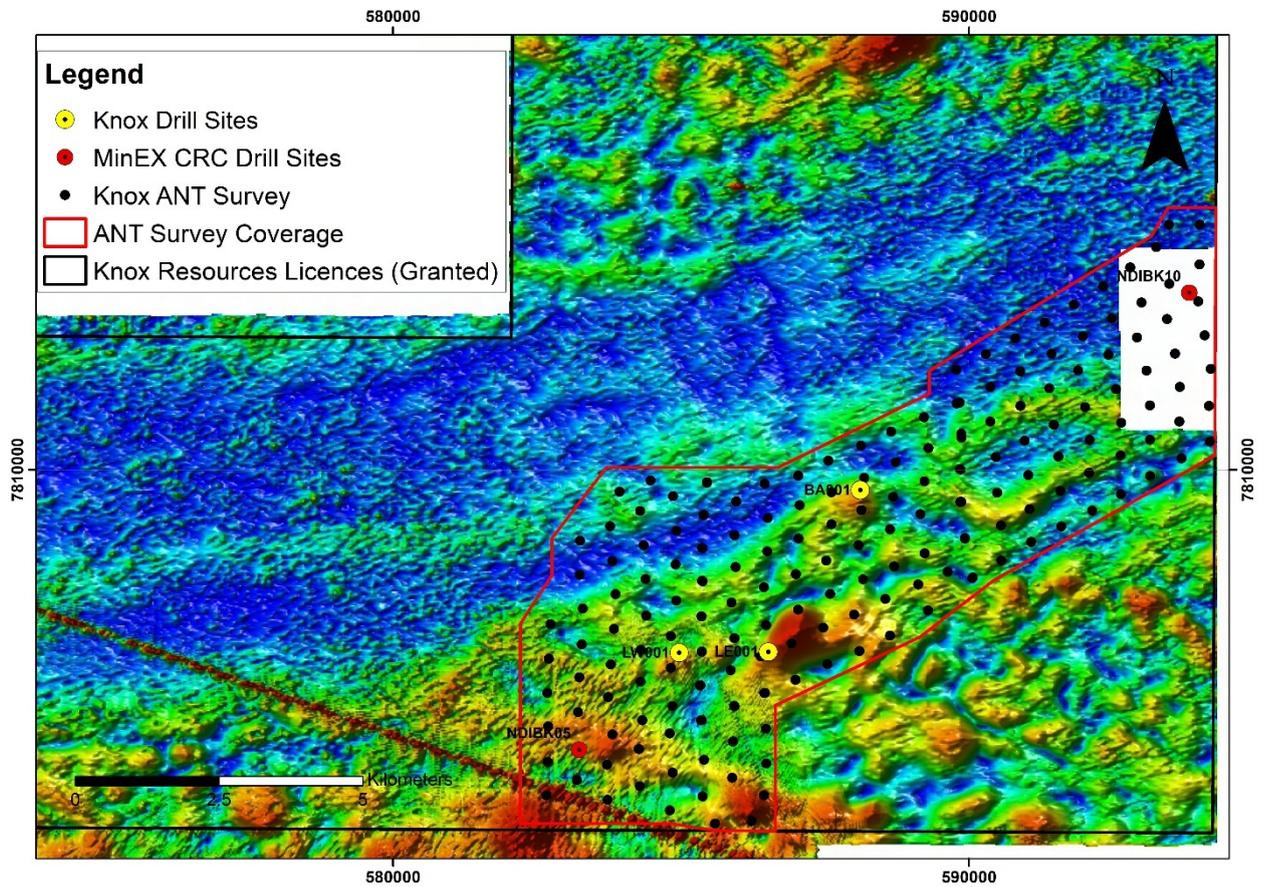
**Figure 1.** ExoSphere seismic data is processed in real-time through Fleet's satellite network

### Survey Details

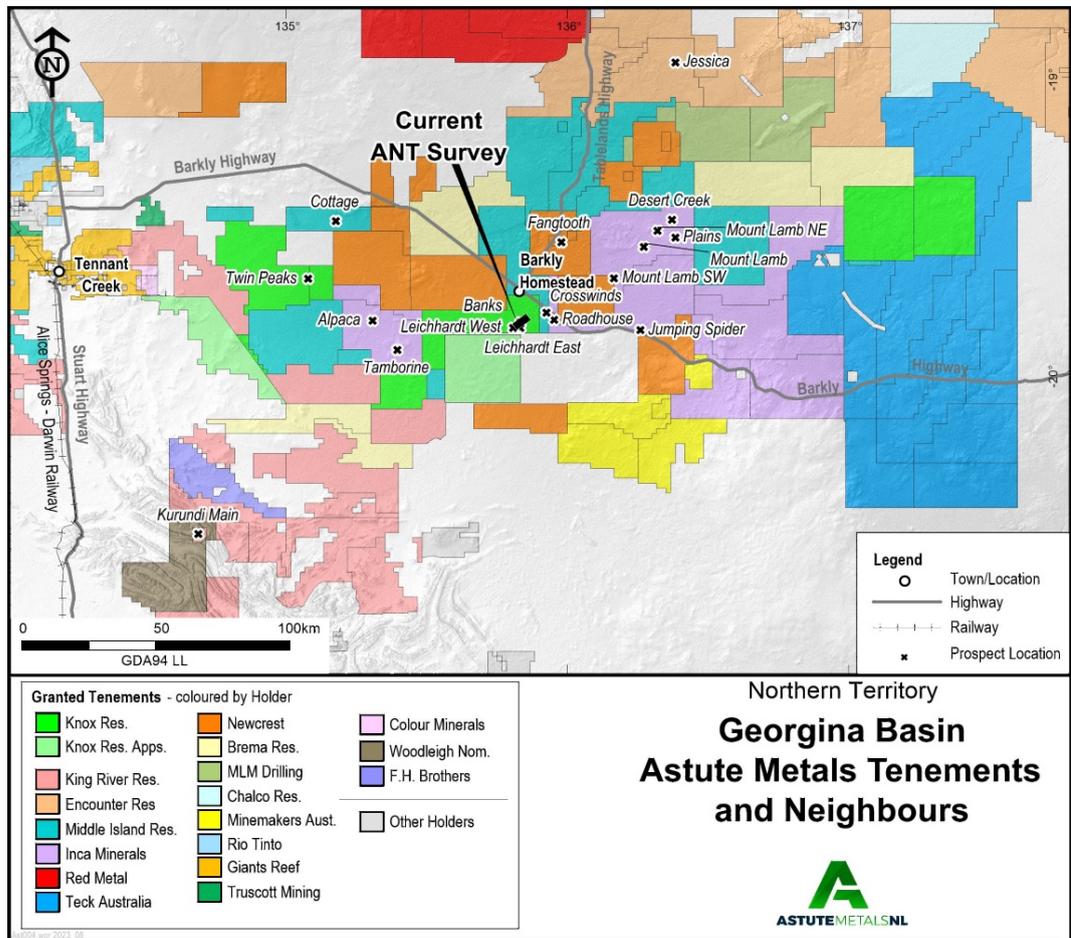
Astute's survey comprises a planned 192 survey points stretching across a 14km survey axis incorporating previous drilling, including two National Drilling Initiative (NDI) drill holes. Geodes are placed in the field and left in place until sufficient seismic data has been collected, after which they are relocated to a new survey point. The survey is expected to be completed during the month.

### Next Steps

Once the survey has been completed, surfaces of the two broad cover sequences of the Georgina Basin limestones and Kalkarindji flood basalt will be established over the survey area. These will be used to construct a series of constrained geophysical inversion models for gravity and magnetic data, providing greater insight into basement geophysical anomalies that may be characteristic of IOCG-style mineralisation and warrant drill testing. This targeting work will be completed in Q4 of 2023.



**Figure 2. Planned ANT geode locations, NDI drillholes and Project drillholes over TMI-RTP Magnetic image**



**Figure 3. Astute (Knox Resources) tenements (green), neighbouring tenements and location of ANT Survey**

<sup>1</sup> ASX: ARO 3 April 2023 'Significant polymetallic anomalism intersected at Georgina IOC Project, NT'

<sup>2</sup> ASX: ARO 2 June 2023 'Georgina IOCG Project awarded Northern Territory Exploration Co-Funding Grants'

<sup>3</sup> Australian Exploration Geoscience Conference Brisbane, 13-18 March 2023 'Fleet's real-time ambient noise tomography service trialled at Northern Star's Kalgoorlie Operations'

<sup>4</sup> ASX: HGO 24 October 2022 'Hillgrove Resources Limited (ASX: HGO) report for the quarter ended 30 September 2022'

<sup>5</sup> ASX: COD 20 April 2023 'ANT Survey Transforms Understanding of Emmie Bluff, IOCG'

## Authorisation

This announcement has been authorised for release by the Board of Astute.

## More Information

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## Competent Person

The information in this report is based on information compiled by Mr Matthew Healy, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM Member number 303597). Mr Healy is a full-time employee of Astute Metals NL and is eligible to participate in a Loan Funded Share incentive plan of the Company. Mr Healy 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'. Mr Healy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.