



## **ANT Geophysical Surveys Commence** Alford East Copper-REE Project, South Australia

The directors of Thor Energy Plc (“Thor” or the “Company”) (AIM, ASX: THR, OTCQB: THORF) are pleased to announce the commencement of Ambient Noise Tomography (“ANT”) geophysical surveys, in partnership with Fleet Space Technologies (“Fleet”), at the Alford East Copper-REE Project in South Australia.

### **Highlights:**

- Low-impact, ANT surveys are now underway at the Alford East copper-gold Project using EXOSPHERE BY FLEET® technology (**Figure 1**).
- The ANT surveys are designed to delineate the low-velocity, weathered ‘troughs’ that host the oxide copper-REE mineralisation within the Alford Copper Belt (**Figure 2**). They will be completed over the next few weeks.
- As part of the collaborative partnership between Thor and Fleet, Fleet will integrate the ANT results with Thor’s 3D geological model using Artificial Intelligence (“AI”) and Machine Learning (“ML”) to generate a new model for drill targeting higher-grade oxide copper-gold mineralisation (ASX/AIM: 4 September 23).
- Future drilling will be concentrated on these targets, characterised by low seismic velocity, to intersect higher-grade oxide copper-gold mineralisation hosted in units conducive to the possibility of In-Situ Recovery (“ISR”).



*Photo 1: Deployment of Exosphere by Fleet® geodes for ANT Surveys, at Alford East Project*

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**AIM & ASX Listings**  
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**Key Projects:**  
**USA**

Uranium / Vanadium  
*Wedding Bell, Colorado*  
*Radium Mountain, Colorado*  
*Vanadium King, Utah*

**Australia**  
Gold

*Ragged Range, Pilbara, WA*  
Copper  
*Alford East, SA*



**Nicole Galloway Warland, Managing Director of Thor Energy, commented:**

*“The commencement of the low-impact ANT geophysics surveys over the Alford East copper-REE Project, as part of the collaborative partnership with Fleet Space Technologies, is a key step in accelerating our exploration and ISR assessment strategy at our Alford East Copper-REE Project.*

*“Fleet will integrate the data from the ANT surveys, and in conjunction with Thor’s 3D geological model, it will result in a revised model to support drill targeting of higher-grade copper and REE mineralisation along strike of our mineral resource estimate and in new zones of the Alford Copper Belt.*

*“The results from the surveys will help us become more precise in our future drilling campaigns, which will help us reduce our environmental footprint. We look forward to keeping the market updated as the results come in.”*

**Next Steps**

1. Continue the ANT Surveys with the deployment of Exosphere geodes (**Figure 1, Photo 1 and 2**)
2. ANT Surveys are estimated to take 3-4 weeks
3. Modelling of ANT results, incorporating Thor’s 3D model and using AI to extrapolate controlling structures along the Alford Copper Belt (October)
4. Target generation from the final 3D Model (November)
5. Drill preparations and Drilling (Early 2024)



**Photo 2:** Low-impact nature of ANT surveys at Alford East Project



### Geophysics Survey

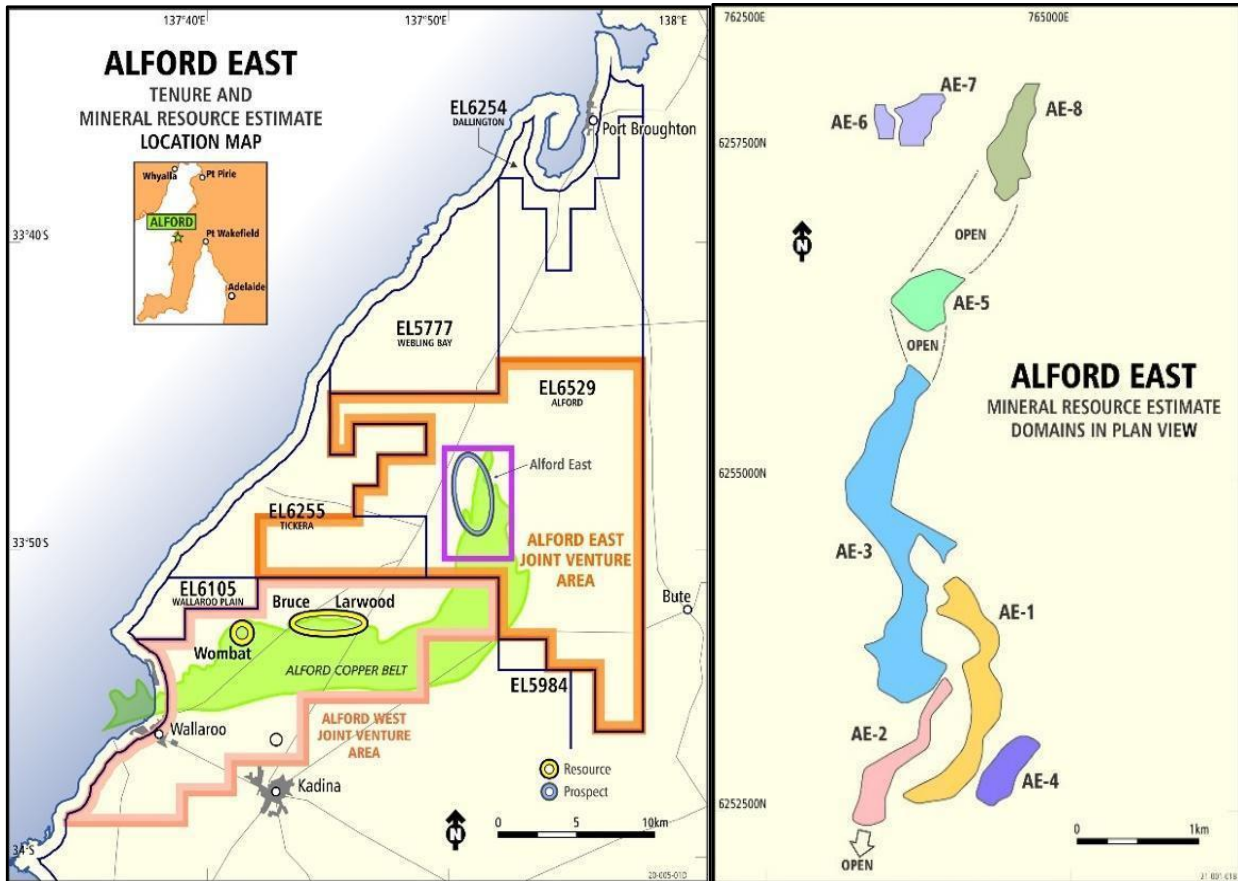
EXOSPHERE BY FLEET® scans the ground using an advanced ANT seismic tomography technique. This technique consists of laying an array of approximately 100 lightweight, battery-powered surface sensors called Geodes (**Photo 1 and Figure 1**) at a spacing of approximately 150 m, to measure faint, naturally occurring environmental seismic vibrations in the ground (caused by ocean waves, weather, and traffic) in near real time, over a 7 day-period. The data is transmitted through satellites and then can be processed rapidly.

A series of surveys over the Alford East Project will be completed to successfully delineate the low-velocity, weathered 'troughs' that host the oxide copper-REE mineralisation within the Alford Copper Belt (**Figure 2**). Known copper-oxide copper mineralisation within the Alford Copper Belt is associated with rocks that are significantly less dense with lower seismic velocity than the surrounding fresh units.

The survey will compare and integrate the subsurface ANT results with geological information (surface geochemistry, drilling, and historic geophysics) that has been compiled by Thor. The resultant 3D model will provide a refined targeted strategy, focusing future drilling in areas with potential high grade oxide copper-REE mineralisation.



**Figure 1:** Exosphere used by Fleet Space® for ANT surveying



**Figure 2:** Alford East Location Map showing the lateral extent of the Alford Copper Belt (left), and the Alford East Mineral Resource Domains showing the area for initial ANT Surveys (right)

### Alford East Project Background

The Alford East Copper-REE Project is located on EL6259, where Thor is earning up to 80% interest from unlisted Australian explorer Spencer Metals Pty Ltd, covering portions of EL6255 and EL6259 (**Figure 2**) (ASX/AIM: 20 November 2020).

The Alford East Project covers the northern extension of the Alford Copper Belt, located on the Yorke Peninsula, SA. The Alford Copper Belt is a semi-coherent zone of copper-gold oxide mineralisation, within a structurally controlled, north-south corridor consisting of deeply kaolinised and oxidised troughs within metamorphic units on the edge of the Tickera Granite (**Figure 2**), Gawler Craton, SA.

Thor completed an inferred Mineral Resource Estimate (MRE) by utilising historic drill hole information. **Table C** - (ASX/AIM: 27 January 2021):

- 125.6Mt @ 0.14% Cu containing 177,000t of contained copper
- 71, 500oz of contained gold

<https://thorenergyplc.com/investor-updates/maiden-copper-gold-mineral-resource-estimate-alford-east-copper-gold-isr-project/>



**Table C: Alford East Mineral Resource Estimate as of 22 January 2021– Figure 2 (ASX/AIM: 27 January 2021).**

Domain	Tonnes (Mt)	Cu %	Au g/t	Contained Cu (t)	Contained Au (oz)
AE_1	24.6	0.12	0.021	30,000	16,000
AE_2	6.8	0.13	0.004	9,000	1,000
AE_3	34.9	0.09	0.022	33,000	25,000
AE_4	8.0	0.11	0.016	8,000	4,000
AE_5	11.0	0.22	0.030	24,000	11,000
AE-8 (NP)	31.3	0.19	0.008	61,000	8,000
AE-7 (LW_E)	7.7	0.14	0.025	10,000	6,000
AE-6 (LW_W)	1.3	0.13	0.011	2,000	500
<b>Total</b>	<b>125.6</b>	<b>0.14</b>	<b>0.018</b>	<b>177,000</b>	<b>71,500</b>

Note: MRE reported on oxide material only, at a cut-off grade of 0.05% copper which is consistent with the assumed In-Situ Recovery technique.

REE results were later reported from the 2021 diamond drilling program, with significant drill intercepts (>500ppm TREO<sup>1</sup>) including (THR: ASX/AIM 26 April 2023):

- **21AED005:** 36.7m @ 1568ppm (0.16%) TREO & 1.2% Cu from 6.3m, including 11.8m @ 2095 ppm (0.21%) TREO and 1.2% Cu from 10m, and including 11m @ 2088ppm (0.21%) TREO and 0.8% Cu from 47m, including 2m @ 5042ppm (0.5%) TREO from 47m
- **21AED002:** 11.6m @ 1699ppm (0.17%) TREO and 0.26% Cu from 30.4m including 6.1m @ 2262ppm (0.22%) TREO from 34.0m
- **21AED001:** 16.8m @ 1721ppm (0.17%) TREO and 0.5% Cu from 91.4m

The Board of Thor Energy Plc has approved this announcement and authorised its release.

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**Competent Person's Report**

The information in this report that relates to exploration results is based on information compiled by Nicole Galloway Warland, who holds a BSc Applied geology (HONS) and who is a Member of The Australian Institute of Geoscientists. Ms Galloway Warland is an employee of Thor Energy PLC. She has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Nicole Galloway Warland consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

<sup>1</sup> TREO = (Total Rare Earth Oxides) = (La<sub>2</sub>O<sub>3</sub> + CeO<sub>2</sub> + Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub>)



Updates on the Company's activities are regularly posted on Thor's website <https://thorenergyplc.com> which includes a facility to register to receive these updates by email, and on the Company's twitter page [@thorenergyplc](https://twitter.com/thorenergyplc)

### **About Thor Energy Plc**

The Company is focused on uranium and energy metals that are crucial in the shift to a 'green' energy economy. Thor has a number of highly prospective projects that give shareholders exposure to uranium, nickel, copper, lithium and gold. Our projects are located in Australia and the USA.

Thor holds 100% interest in three uranium and vanadium projects (Wedding Bell, Radium Mountain and Vanadium King) in the Uravan Belt Colorado and Utah, USA with historical high-grade uranium and vanadium drilling and production results.

Thor owns 100% of the Ragged Range Project, comprising 92 km<sup>2</sup> of exploration licences with highly encouraging early-stage gold and nickel results in the Pilbara region of Western Australia.

At Alford East in South Australia, Thor is earning an 80% interest in oxide copper deposits considered amenable to extraction via In Situ Recovery techniques (ISR). In January 2021, Thor announced an Inferred Mineral Resource Estimate<sup>1</sup>. Thor also holds a 30% interest in Australian copper development company EnviroCopper Limited, which in turn holds rights to earn up to a 75% interest in the mineral rights and claims over the resource on the portion of the historic Kapunda copper mine and the Alford West copper project, both situated in South Australia, and both considered amenable to recovery by way of ISR.<sup>23</sup>

Thor holds 100% of the advanced Molyhil tungsten project, including measured, indicated and inferred resources<sup>4</sup>, in the Northern Territory of Australia, which was awarded Major Project Status by the Northern Territory government in July 2020. Thor executed a A\$8m Farm-in and Funding Agreement with Investigator Resources Limited (ASX: IVR) to accelerate exploration at the Molyhil Project on 24 November 2022.<sup>6</sup>

Adjacent to Molyhil, at Bonya, Thor holds a 40% interest in deposits of tungsten, copper, and vanadium, including Inferred resource estimates for the Bonya copper deposit, and the White Violet and Samarkand tungsten deposits.<sup>5</sup> Thor's interest in the Bonya tenement EL29701 is planned to be divested as part of the Farm-in and Funding agreement with Investigator Resources Limited.<sup>6</sup>

### *Notes*

<sup>1</sup> <https://thorenergyplc.com/investor-updates/maiden-copper-gold-mineral-resource-estimate-alford-east-copper-gold-isr-project/>

<sup>2</sup> [www.thorenergyplc.com/sites/thormining/media/pdf/asx-announcements/20172018/20180222-clarification-kapunda-copper-resource-estimate.pdf](http://www.thorenergyplc.com/sites/thormining/media/pdf/asx-announcements/20172018/20180222-clarification-kapunda-copper-resource-estimate.pdf)

<sup>3</sup> [www.thorenergyplc.com/sites/thormining/media/aim-report/20190815-initial-copper-resource-estimate---moonta-project---rns---london-stock-exchange.pdf](http://www.thorenergyplc.com/sites/thormining/media/aim-report/20190815-initial-copper-resource-estimate---moonta-project---rns---london-stock-exchange.pdf)

<sup>4</sup> <https://thorenergyplc.com/investor-updates/molyhil-project-mineral-resource-estimate-updated/>

<sup>5</sup> [www.thorenergyplc.com/sites/thormining/media/pdf/asx-announcements/20200129-mineral-resource-estimates---bonya-tungsten--copper.pdf](http://www.thorenergyplc.com/sites/thormining/media/pdf/asx-announcements/20200129-mineral-resource-estimates---bonya-tungsten--copper.pdf)

<sup>6</sup> <https://thorenergyplc.com/wp-content/uploads/2022/11/20221124-8M-Farm-in-Funding-Agreement.pdf>



### **About Fleet Space Technologies**

[Fleet Space Technologies](#), a leading Australian space company with a mission to connect Earth, Moon, and Mars, is revolutionising the mineral exploration, defence, and space exploration sectors through its ground-breaking products and connectivity solutions. Headquartered at a state-of-the-art facility in Adelaide, South Australia, Fleet has rapidly grown to over 100 employees and boasts a global presence, including a team in the US and offices in Canada, Luxembourg, and Chile.

Fleet created EXOSPHERE BY FLEET®, a solution for the mineral exploration industry providing lightning fast, 3D mapping of underground structures and providing increased accuracy in drilling targets. This cutting-edge technology is helping the world transition to clean-air mobility technologies by creating a faster, more sustainable, and less expensive route to finding critical mineral deposits. EXOSPHERE BY FLEET® is an end-to-end service offered to mineral exploration customers to decrease the time it takes to find a deposit. Fleet's sensors, the Geodes, are deployed in a survey area and leverage real-time passive seismic methods to 'scan' the subsurface. This is enabled through non-invasive Ambient Noise Tomography (ANT) which listens to seismic waves present on Earth. 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.

Since launching EXOSPHERE, Fleet Space has signed contracts with over 30 clients around the world including players such as Rio Tinto, Barrick Gold and Core Lithium. Fleet has conducted more than 150 ANT surveys on different commodity types and completed deployments in 5 continents. EXOSPHERE BY FLEET® is contributing to solve the pressing global priority to decarbonise mobility and find more than \$13trillion USD worth of minerals required for the energy transition to help meet global net zero priorities.

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