#### 30 June 2021

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AIM & ASX Listings: Shares: THR OTCQB Listing Shares: THORF

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Key Projects:

- Gold
- Ragged Range Pilbara WA
   Copper
- Alford East SA
- Uranium / Vanadium Colorado / Utah USA

• Tungsten Molyhil NT Pilot Mountain USA Company Announcements Office ASX Securities Limited, 20, Bridge Street, Sydney, N.S.W. 2000

### POSITIVE PRELIMINARY COPPER RESULTS Alford East Copper-Gold ISR Project, South Australia

The directors of Thor Mining Plc ("Thor") (AIM, ASX: THR, OTCQB: THORF) are pleased to advise positive preliminary internal copper results from early stages of diamond drilling at Alford East Copper-Gold Project, SA.

#### Project highlights:

- 2 diamond holes completed at Alford East Copper-Gold Project (Figure 1): 21AED001 and 21AED002 (Figure 2).
- pXRF copper readings highlight wide downhole intercepts above the Mineral Resource Estimate (MRE) grades (Table A). Intercepts include:
  - 106.5m @ 0.14% Cu (pXRF) from 8m (21AED001), including

33m @ 0.40% Cu (pXRF) from 81.5m (21AED001)

- 55.5m @ 0.28% Cu (pXRF) from 28m (21AED002)
- Drilling to date validates the current geological model and structural controls on mineralisation.
- 21AED001 was drilled in the centre of AE-5 Domain of the Mineral Resource Estimate (MRE), confirming the MRE envelope and the interpreted Top of Fresh Rock (TOFR) contact (Figure 3). This contact is critical for potential In Situ Recovery (ISR) of the copper and gold from the weathered oxide resource.
- 21AED002 was drilled (20m) to the north of AE-5 Domain outside of the MRE envelope, thus extending the limits of known mineralisation.
- Core is currently being cut ready for sample submission to laboratory.
- This 2000m diamond drilling program focuses only on the of the northern mineralised domains of the Alford East copper-gold deposit (Figure 1), targeting depth extension, higher copper-gold grades, and structural delineation.

#### Nicole Galloway Warland, Managing Director of Thor Mining, commented:

"Thor is excited by these preliminary pXRF results. The validation of the geological model and structural controls on mineralisation has a significant impact on subsequent drilling and the confidence level of any future Mineral Resource Estimates. The step out of 21AED002 and confirmation of a wide copper intercept, highlights the potential to increase the current Mineral Resource Estimate."







Figure 1: Tenement & Prospect Location Plan





#### Important notice:

An inhouse Vanta Series C portable X-ray fluorescent (pXRF) analyser was used to take copper readings and are indicative only. Core is currently being cut ready for sample submission to laboratory for analytical analysis including gold assay. The core preparation and sample processing time at the laboratory is anticipated to take approximately 6weeks, for this reason the Directors have elected to update the market with preliminary internal pXRF results.

The Directors believe that with adequate sample preparation the pXRF analyser will yield high-quality analytical data. However, there can be no guarantee that this method provides accurate results similar to those from the laboratory analysis. The results from the laboratory may not confirm these initial pXRF readings.

#### **Project Background**

The Alford East Copper-Gold Project is located on EL6529, where Thor is earning up to 80% interest from unlisted Australian explorer Spencer Metals Pty Ltd, covering portions of EL6255 and EL6529 (Figure 1) (THR:ASX 23 November 2020).

The Alford East Project covers the northern extension the Alford Copper Belt, located on the Yorke Peninsula, SA. The Alford Copper Belt is a semi coherent zone of copper-gold oxide mineralization, within a structurally controlled, north-south corridor consisting of deeply kaolinized and oxidized troughs within metamorphic units on the edge of the Tickera Granite (Figure 1), Gawler Craton, SA.

Utilising historic drillhole information, Thor completed an inferred Mineral Resource Estimate (MRE) (THR:ASX 27 January 2021):

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

www.thormining.com/sites/thormining/media/pdf/asx-announcements/20210127-maiden-copper.goldestimate-alford-east-sa.pdf

Based on the nature on the oxide mineralisation, the deposit is considered amenable to In Situ Recovery (ISR) techniques.

For further information on ISR please refer to Thor website via this link for an informative video: www.youtube.com/watch?v=eG\_1ZGD0WIw

#### **Drilling Program Update**

Two drillholes 21AED001 and 21AED002 totalling 256m are now complete, out of a 2000m diamond drilling program. This initial program for Thor focusses only on the northern portion of the Alford East copper-gold deposit around the AE5 and Netherleigh Park mineralised domains (Figure 2 and Table A), with both initial holes testing AE-5 domain.



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# **Table A:** Alford East Mineral Resource Estimate as at 22 January 2021, with AR-5 and Netherleigh Park domains the focus of the current drilling program highlighted.

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
NP	31.3	0.19	0.008	61,000	8,000
LW_E	7.7	0.14	0.025	10,000	6,000
LW_W	1.3	0.13	0.011	2,000	500
Total	125.6	0.14	0.018	177,000	71,500

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.

Drill Hole ID	Easting	Northing	Azimuth-mag	Dip	RL	EOH
21AED001	763,730	6,256,360	360 <sup>0</sup>	-90 <sup>0</sup>	50	156.17
21AED002	763,910	6,256,600	90 <sup>0</sup>	-70 <sup>0</sup>	50	98.85

#### Table B: Drill Collar Locations

\*GDA94 MGA53

An inhouse Vanta Series C portable X-ray fluorescent (pXRF) analyser was used to take readings every 0.5m down each of the holes. The pXRF copper readings are indicative only (Appendix 1), with samples being submitted to laboratory for analytical analysis including gold assay.

Copper intercepts include:

- 21AED001: 106.5m @ 0.14% Cu (pXRF) from 8m, including 33m @ 0.40% Cu (pXRF) from 81.5m
- 21AED002: 55.5m @ 0.28% Cu (pXRF) from 28m

#### 21AED0001

Preliminary results for 21AED001 validate the new geological model including the interpreted position of the Top of Fresh Rock (TOFR), a critical contact in respect to ISR of oxide copper and gold mineralisation (Figure 3 & 4). The validation of the geological model is vitally important for future drill targeting and geological resource modelling. The geological model predicts that the control on copper mineralisation is a NE-SW fault that may join AE-5 to Netherleigh Park mineralisation (see Figure 2 & 3).

In addition, the copper intercepts were all positioned within the interpreted Mineral Resource Estimate envelope (Figure 4).

Follow up drill holes adjacent to 21AED001 are planned to test areas 'open at depth' (Figure 5) and potentially associated with the north-northeast controlling structure to the east of 21AED001.



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#### 21AED0002

21AED002 steps out of the AE-5 resource area by approximately 20m to the north, hence the preliminary pXRF results are highly significant, as they highlight copper mineralisation extending north into the open zone between AE-5 and Netherleigh Park (Figure 6 & 7).

Copper oxide mineralogy in the drill holes comprises malachite, chalcocite, native copper and atacamite crystals (Plate 1).

Nominal 1m half core samples from AED001 and AED002 are currently being prepared for laboratory submission at Bureau Veritas (BV) labs in Adelaide.



Plate 1: 21AED001 - Copper Mineralogy a) Atacamite (89m), b) Malachite (91m) and c) Native copper (91.7m)





*Figure 2: Alford East Project showing the eight mineralised domains (Plan View) on left and on the right showing a close up of AE-5 domain where drilling is currently underway – 21AED001 and 21AED002.* 



Figure 3: Cross section showing 21AED001





Figure 4: Cross section showing AED001 relative to Mineral Resource Estimate envelope





Figure 5: Areas at depth currently being tested on cross section 6,256,360mN adjacent to 21AED001





Figure 6: Cross section showing AED002



Figure 7: Cross section showing 21AED002 step out relative to Mineral Resource envelope



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This announcement is authorised for release to the market by the Board of Directors.

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#### **Competent Persons Report**

The information in this report that relates to Exploration Results and the Estimation and Reporting of the Alford East Mineral Resource Estimation 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 Mining 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.

Updates on the Company's activities are regularly posted on Thor's website <u>www.thormining.com</u>, which includes a facility to register to receive these updates by email, and on the Company's twitter page @ThorMining.

#### About Thor Mining PLC

Thor Mining PLC (AIM, ASX: THR; OTCQB: THORF) is a diversified resource company quoted on the AIM Market of the London Stock Exchange, ASX in Australia and OTCQB Market in the United States.

The Company is advancing its diversified portfolio of precious, base, energy and strategic metal projects across USA and Australia. Its focus is on progressing its copper, gold, uranium and vanadium projects, while seeking investment/JV opportunities to develop its tungsten assets.

Thor owns 100% of the Ragged Range Project, comprising 92 km<sup>2</sup> of exploration licences with highly encouraging earlystage gold and nickel results in the Pilbara region of Western Australia, for which drilling is planned in the first half of 2021.

At Alford East in South Australia, Thor is earning an 80% interest in copper deposits considered amenable to extraction via In Situ Recovery techniques (ISR). In January 2021, Thor announced an Inferred Mineral Resource Estimate of 177,000 tonnes contained copper & 71,000 oz gold<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% interest in two private companies with mineral claims in the US states of Colorado and Utah with historical high-grade uranium and vanadium drilling and production results.

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.



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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 holds 100% of the Pilot Mountain tungsten project in Nevada, USA which has a JORC 2012 Indicated and Inferred Resources Estimate on 2 of the 4 known deposits.<sup>6</sup>

<u>Notes</u>

<sup>1</sup> <u>www.thormining.com/sites/thormining/media/pdf/asx-announcements/20210127-maiden-copper.gold-estimate-alford-east-sa.pdf</u>

<sup>2</sup> <u>www.thormining.com/sites/thormining/media/pdf/asx-announcements/20172018/20180222-clarification-kapunda-copper-resource-estimate.pdf</u>

<sup>3</sup> <u>www.thormining.com/sites/thormining/media/aim-report/20190815-initial-copper-resource-estimate---moonta-project--</u> <u>-rns---london-stock-exchange.pdf</u>

<sup>4</sup> <u>www.thormining.com/sites/thormining/media/pdf/asx-announcements/20210408-molyhil-mineral-resource-estimate-updated.pdf</u>

<sup>5</sup> <u>www.thormining.com/sites/thormining/media/pdf/asx-announcements/20200129-mineral-resource-estimates---</u> <u>bonya-tungsten--copper.pdf</u>

<sup>6</sup> <u>www.thormining.com/sites/thormining/media/pdf/asx-announcements/20162017/20170522-tungsten-resource-increase.pdf</u>

www.thormining.com/sites/thormining/media/pdf/asx-announcements/20182019/20181214-pilot-mountain-resourceupdate.pdf



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### 1 JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data				
Criteria	JORC Code explanation	Commentary		
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	Diamond drilling programme. pXRF readings taken very 0.5m down the hole. Vanta C Series 800427 XRF - 40sec reading time. Instrument calibrated externally annually and with QA/QC at start prior to sampling and calibration disc every 30 readings		
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Diamond drilling - GMP drilling Pty Ltd. 0-6m open hammer – transported cover sequence. HQ standard tube diamond drilling		
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Core recovery assessed and measured relative to drill rod measurements into laptop computer. No significant sample loss or bias has been noted in current drilling. No relationship is known to exist between sample recovery and grade		
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	All core is qualitative geologically logged (lithology, structure, alteration, veining, mineralization weathering, colour and other features of the core). Core photography completed prior to core cutting. Core (and intersections) logged based on geological, lithological and structural boundaries. All drill samples are measured for magnetic susceptibility at 1m		



			intervals, and XRF readings taken every 0.5m.
Sub- sampling techniques	•	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and	pXRF readings taken on whole (HQ) core at 0.5m intervals prior to cutting.

Criteria	JORC Code explanation	Commentary
and sample preparation	<ul> <li>appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	Handheld pXRF readings reported. Vanta Series C 40 second reading time. Instrument calibrated at start, QAQC with 2 standards and 1 blank every 30 readings. External instrument calibration completed annually. Readings taken every 0.5m down hole
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	All drilling data is collected in a series of templates in excel including geological logging, sample information, collar and survey information, All data is digitally recorded in the company's electronic database. No adjustments have been made to the pXRF assay data. All significant intersections have been verified by an alternative company geologist. There are no twinned drillholes
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Collars picked up using handheld GPS – MGA94 zone 53 (GDA) used. Down hole survey readings taken every 6m with Boart Longyear Truman multi shot camera



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Sample security	The measures taken to ensure sample security.	Samples were trucked from Alford to Adelaide, to Challenger Geological Services for cutting and prep, prior to submission to Bureau Veritas, Adelaide for analysis.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	Drill holes were oriented vertical or 090 degrees which is perpendicular to strike of the geological trough. Orientational bias is not applicable this stage with sampling every 0.5m downhole
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>pXRF readings taken every</li> <li>0.5m down the hole.</li> <li>Sample spacing is considered appropriate to allow confident interpretation of exploration results.</li> <li>No sample compositing has been applied</li> </ul>

Criteria	JORC Code explanation	Commentary
Audits or	<ul> <li>The results of any audits or reviews of sampling techniques</li></ul>	No formal audits have been
reviews	and data.	undertaken

### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Alford East project:</li> <li>The JV area covers portions EL6255 and ELA2020/00019 which are 100% owned by Spencer Metals Ltd.</li> <li>PML 268 for aggregate &amp; sand lies within ELA2020/00019</li> <li>There are no non-government royalties, historical sites or environmental issues.</li> <li>Underlying land title is Freehold land which extinguishes native title.</li> <li>All tenure in good standing.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	The general area of this report has been explored in the past by various companies including Jododex, Uranez, North Broken Hill, MIM, Hillgrove Resources, Argonaut Resources and



	The assumptions used for any reporting of metal equivalent	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	Intersections are calculated by simple averaging of 0.5m assays. No metal equivalents are reported.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Intersections are calculated by
Geology	• Deposit type, geological setting and style of mineralisation.	Sandfire Resources. Activities include AC, RC, & Diamond drilling, and significant geophysical surveying. The Company has reviewed past exploration data generated by these companies. Primary deposits in the region are considered to be of Iron Oxide Copper Gold (IOCG) affinity, related to the 1590Ma Hiltaba/GRV event. Cu-Au- Mo-Pb mineralisation is structurally controlled and associated with significant metasomatic alteration and deep weathering or kaolinisation of host rocks. Locally, the low-grade copper/gold oxide mineralisation that forms the basis for this Exploration results announcement, is hosted within variably weathered and sheared metasedimentary basement



	values should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	The copper oxide mineralization is associated with intense clay alteration. The alteration is interpreted to be similar to that found in the adjacent Alford West area. The drilling intersections quoted are downhole intercept lengths with an unknown orientation to dip and plunge of the target mineralisation
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	Appropriate maps and sections included in document.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All results have been reported
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All data have been reported
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	pXRF results to be followed up by laboratory assays. Drilling to continue along sections and areas open to the north and south. Refer to diagram in document for geological interpretation and potential extensions.