## **ASX Code: "THR"**

THOR MINING PLC

20 May 2020

#### THOR MINING PLC

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AIM & ASX Listings: Shares: THR

Directors: Michael Billing Richard Bradey Mark Potter

#### **Key Projects:**

• Tungsten Molyhil NT Pilot Mountain USA

• Copper Kapunda SA Moonta SA Company Announcements Office ASX Securities Limited, 20, Bridge Street, Sydney, N.S.W. 2000

#### **Investor Presentation – Amvest Capital Webinar**

The directors of Thor Mining Plc ("Thor") (AIM, ASX: THR) are pleased to provide a copy of the presentation that the Company will be presenting at a Webinar hosted by Amvest Capital, a New York City based specialist investment manager and corporate finance firm focussed solely on the natural resources sector on Thursday 21 May 2020.

Mick Billing, Chairman and CEO will be presenting the webinar. Subscribers to the Company's announcements will be provided with a link to the webinar.

Authorised by Mick Billing, Chairman and Chief Executive officer For further information, please contact:

#### **THOR MINING PLC**

Mick Billing, Executive Chairman +61 8 7324 1935

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

THOR

20 May 2020

#### **About Thor Mining PLC**

Thor Mining PLC (AIM, ASX: THR) is a resources company quoted on the AIM Market of the London Stock Exchange and on ASX in Australia.

Thor holds 100% of the advanced Molyhil tungsten project in the Northern Territory of Australia, for which an updated feasibility study in August 2018¹ suggested attractive returns.

Adjacent Molyhil, at Bonya, Thor holds a 40% interest in deposits of tungsten, copper, and vanadium, including an Inferred resource for the Bonya copper deposit<sup>2</sup>.

Thor also holds 100% of the Pilot Mountain tungsten project in Nevada USA which has a JORC 2012 Indicated and Inferred Resources Estimate<sup>3</sup> on 2 of the 4 known deposits. The US Department of the Interior has confirmed that tungsten, the primary resource mineral at Pilot Mountain, has been included in the final list of Critical Minerals <sup>6</sup>2018.

Thor is also acquiring up to a 30% interest 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 in South Australia recoverable by way of in situ recovery<sup>4</sup>, and also holds rights to earn a 75% interest in portion of the Moonta Copper project also in South Australia, and is considered amenable to recovery by way of in situ recovery<sup>5</sup>.

Finally, Thor also holds a production royalty entitlement from the Spring Hill Gold project<sup>6</sup> of:

- A\$5.70 per ounce of gold produced from the Spring Hill tenements, sold for up to A\$1,500 per ounce; and
- A\$13.30 per ounce of gold produced from the Spring Hill tenements, sold for amounts over A\$1,500 per ounce.

#### Notes

<sup>&</sup>lt;sup>1</sup> Refer ASX and AIM announcement of 23 August 2018

<sup>&</sup>lt;sup>2</sup> Refer ASX and AIM announcement of 26 November 2018

<sup>3</sup> Refer AIM announcement of 13 December 2018 and ASX announcement of 14 December 2018

<sup>&</sup>lt;sup>4</sup> Refer AIM announcement of 10 February 2016 and ASX announcement of 12 February 2018

⁵Refer AIM announcement of 5 March 2019 and ASX announcement of 6 March 2019

<sup>&</sup>lt;sup>6</sup>Refer AIM announcement of 26 February 2016 and ASX announcement of 29 February 2016.

# **Thor Mining Plc**

AIM / ASX "THR"

May 2020





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The information in this report that relates to exploration results and exploration targets is based on information compiled by Richard Bradey, who holds a BSc in applied geology and an MSc in natural resource management and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Bradey is an employee of Thor Mining PLC. He 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'. Richard Bradey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



## **Board of Directors and Management**



Mick Billing
CEO & Chairman



Director & Exploration Manager



Mark Potter

Non-Executive

Director



Ray Ridge
CFO & Joint Company
Secretary

#### **Accounting**

Career includes experience in company management, company secretarial, senior commercial, and CFO roles across the spectrum of mining exploration, production, & project evaluation, including lengthy periods with Bougainville Copper Ltd and WMC Resources Ltd.

### Geologist

Holds a Bachelor of Science in Applied Geology and a Masters Degree in Natural Resource Management. His career includes exploration, resource development, and mine geology, with Hillgrove Resources Limited, Xstrata Zinc, and Aditya Birla Minerals Limited, at senior levels.

#### **Finance**

Founding member and Partner of Sita Capital Partners LLP. Formerly a director& CIO of Anglo Pacific Group, a listed natural resources royalty company. Previously Investment Principal of Audley Capital Advisors LLP responsible for management of small resources investments.

Also a director of Metal Tiger PLC.

### Accounting

A chartered accountant with over 20 years accounting and commercial management experience. Roles include Senior Audit Manager with Arthur Andersen, Divisional CFO with Elders Ltd, and GM Commercial & Operations at engineering and construction company Parsons Brinckerhoff.

## Thor's High Value Commodities in Global Demand



## Tungsten

US\$ 21,000 /tonne\*
Two Year Ave = US\$28,000/tonne
Concentrate = US\$17,000/tonne

# A strategic and supply constrained commodity

Global price outlook strong.

China accounts for 75% of global production

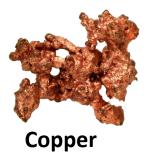
Tungsten Classified as a Critical Commodity by US Dept of the Interior.



US\$ 20,000 /tonne\*
Two Year Ave = US\$25,000/tonne
Concentrate = US\$17,500/tonne

# New supply restrictions & demand growth

Global price up over past 2 years & appears sustained.



US\$ 5,200 /tonne\*
Two Year Ave > US\$6,000/tonne

# The electrification of everything will put huge demands on copper

A battery-powered electric vehicle contains four times the copper as internal combustion engine (80kg v 20kg).

## **Tungsten - The Hardest Metal in the World**





## **Features**

- THardest known metal.
- Very high melting & boiling points.
- THighly corrosion resistant will not oxidise in air.

## Uses

- ☑ Diverse commercial, industrial & military applications.
- Wear resistant products used in metalworking, mining, oil & Construction.
- TElectrical & electronic applications.
- Some chemical applications.

# **Molyhil Tungsten Project – 100% Thor**

### Location

•Northern Territory, Australia – 320km east of Alice Springs

## Geology

 Two adjacent magnetite skarn bodies with economic mineralisation of scheelite & molybdenite

## Feasibility

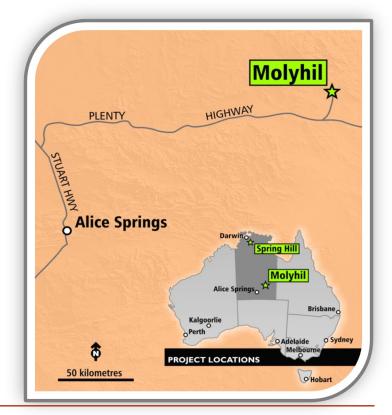
 2018 DFS demonstrates profitable production with low operating costs & early payback of Capex

## **Permitting Status**

Fully Permitted for Development

### Mine Life

- Ore reserve provides for 7 year Open Pit life with subsequent Underground Extension
- Substantial resource at depth below reserve + outcropping Bonya tungsten deposits nearby.



## 2018 Feasibility Highlights

EBITDA	US\$ 177M
Finance Requirement	US\$ 43M
Project Payback	18 Months
Opex	US\$ 90/mtu
Mine Life (Open Pit Only)	7 Years
Significant Mine Life Upside	✓
Development Period	12 Months

## Molyhil High Grade Reserve & Resources

## Seven Year Open Pit Life - Subsequent Underground & Nearby Deposits

## High grade resource

- Molyhil is one of the higher grade open pit tungsten projects in the Western World.
- Reserve delivers 7 year Open Pit mine life and favourable project economics.

## Significant molybdenum credits

• Improves tungsten equivalent resource grade by ~50%.

#### **Ore Sort – Pre Concentration**

• Improves Mill Feed Grade by 64%.

## Resource at depth below reserve

## **Mineral Resource Estimate Upgrade**

- Oct 2019
- Yet to be factored into Reserve Upgrade & DFS Upgrade

## Summary of Molyhil Mineral Resource Estimate (Reported 10 Oct 2019)

RESOURCE		WO <sub>3</sub>		Мо		Cu		Fe
MESOUNCE	Mt	Grade %	tonnes	Grade %	tonnes	Grade %	tonnes	Grade %
Indicated	3.78	0.29	11,000	0.14	5,400	0.05	1,800	18.8
Inferred	0.93	0.25	2,300	0.15	1,400	0.04	300	15.2
Total	4.71	0.28	13,300	0.14	6,800	0.05	2,200	18.1

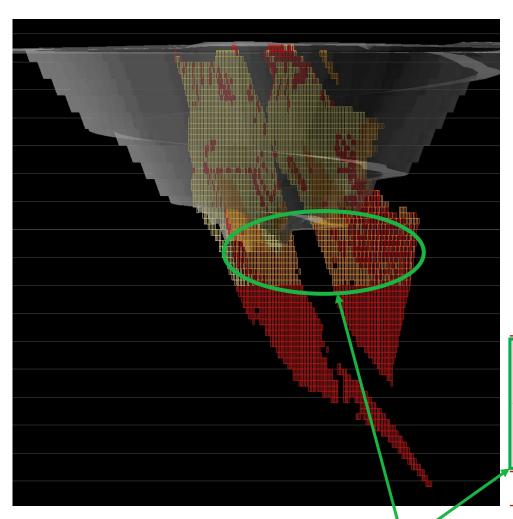
- Thor Mining PLC holds 100% equity in this resource
- The Company is not aware of any information or data which would materially affect this previously announced resource estimate, and all assumptions and technical parameters relevant to the estimate remain unchanged

## Molyhil Open Cut Ore Reserve Statement (Reported 8 Jan 2018)

CLASSIFICATION	Reserve	V	VO3	N	Лο
	'000 Tonnes	Grade %	Tonnes	Grade %	Tonnes
Probable	3,500	0.29	10,200	0.12	4,300
Total	3,500	0.29	10,200	0.12	4,300

- Reserve based upon the Indicated portion of the Molyhil Mineral Resource Estimate
- Thor Mining PLC holds 100% equity in this ore reserve
- The Company is not aware of any information or data which would materially affect this previously announced ore reserve, and all assumptions and technical parameters relevant to the estimate remain unchanged.

## **High Tungsten & Mo Grades Continue below Pit Floor**



	Bench Top mRL	Tonnes '000	Mo%	Mo (t)	WO <sub>3</sub> %	WO <sub>3</sub> (t)
	420	48	0.08	39	0.73	350
	400	359	0.14	487	0.57	2,044
	380	440	0.13	569	0.48	2,096
	360	576	0.12	702	0.29	1,690
	340	605	0.11	678	0.22	1,341
	320	524	0.11	593	0.21	1,109
	300	506	0.12	612	0.19	967
30% below	280	482	0.15	731	0.19	940
pit floor	260	440	0.15	657	0.23	1,031
90% below	240	390	0.16	620	0.25	980
pit floor	220	336	0.17	556	0.18	607
	Total	4,705	0.13	6,244	0.28	13,154

Underground Mining Potential

## **Bonya - Resource Extension Potential - Longer Term Mine Life**

13 Outcropping Tungsten Deposits close by at Bonya! - Plus Copper & Vanadium

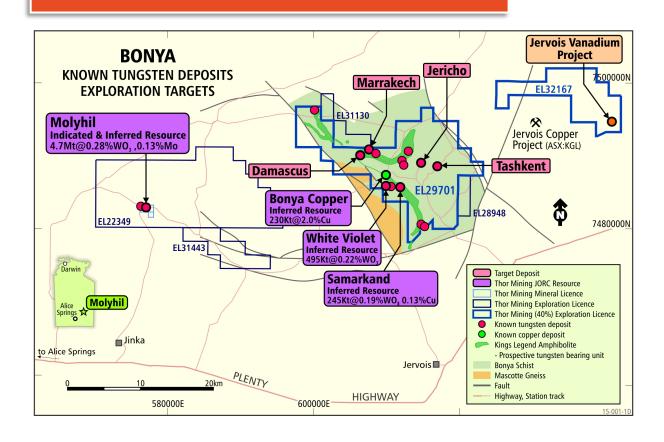
#### TUNGSTEN & COPPER RESOURCES - 29th Jan 2020

Охі	Oxidation		V	/O <sub>3</sub>	(	Cu
		'000	%	Tonnes	%	Tonnes
White Violet Inferred	Oxide	25	0.41	90	0.16	40
illierred	Fresh	470	0.21	980	0.06	260
Sub Total		495	0.22	1,070	0.06	300
Samarkand	Oxide	25	0.11	30	0.07	20
Inferred	Fresh	220	0.20	430	0.13	290
Sub Total		245	0.19	460	0.13	310
<b>Combined</b> Inferred	Oxide	50	0.26	120	0.14	60
	Fresh	690	0.21	1,410	0.08	550
Total		740	0.21	1,530	0.09	610

#### BONYA COPPER MINERAL RESOURCE ESTIMATE(26th NOV 2018)

Resource	Tonnes '000	Grade %	Tonnes
Inferred	230	2.0	4,600
Total	230	2.0	4,600

## Thor Mining hold a 40% Interest in Bonya



Thor Mining PLC holds 40% equity in these resource.

The Company is not aware of any information or data which would materially affect these previously announced resource estimates, and all assumptions and technical parameters relevant to the estimate remain unchanged.

Pilot Mountain Tungsten Project – 100% Thor

#### Location

- Located in Nevada, USA
- 250km south-east of city of Reno

#### Geology

- Tungsten copper zinc silver skarn style mineralisation at four primary locations:
- Desert Scheelite, Garnet, Gunmetal, Good Hope deposits

#### History

- Explored by Union Carbide Corp late 1970s and early 1980s
- Four deposits drilled to resource standards of the time
- Subsequent Thor drilling delivered JORC resources on two deposits
- Metallurgical Testwork to PFS Standard

#### Infrastructure

 Located within close proximity to mains electricity & sealed highways. Ample nearby ground water. Nearby towns should provide workforce on daily commute basis

#### Resource

- Inferred & Indicated Resource of 12.53Mt for 34,290 tonnes WO<sub>3</sub>, 16,000 tonnes Cu, 207 tonnes Ag, 40,300 tonnes Zn
- Largest Tungsten Resource in the USA





## Pilot Mountain Resource - The Largest Reported Tungsten Resource in the USA

## Pilot Mountain Resource Estimate (Reported 13 December 2018)

		Resource	W	O3	A	Ng	(	Cu		Zn	
		Mt	Grade %	Contained Metal (t)	Grade %	Contained Metal (t)	Grade %	Contained Metal (t)	Grade %	Contained Metal (t)	
	Indicated		-	-							
Garnet	Inferred	1.83	0.36	6,590							
	Sub Total	1.83	0.36	6,590							
	Indicated	9.01	0.26	23,400	20.73	187	0.15	13,200	0.41	37,100	
Desert Scheelite	Inferred	1.69	0.25	4,300	12.24	21	0.16	2,800	0.19	3,200	
	Sub Total	10.70	0.26	27,700	19.38	207	0.15	16,000	0.38	40,300	
Curamanan	Indicated	9.01	0.26	23,400	All figures ar		•	urce vels of confidence	. Apparent differ	rences may occur	
Summary	Inferred	3.53	0.31	10,890	The Compan	<ul> <li>due to rounding.</li> <li>The Company is not aware of any information or data which would materially affect this previous announced resource estimate, and all assumptions and technical parameters relevant to the second content of the second conten</li></ul>					
Pilot Mountain Total		12.53	0.27	34,290	estimate ren	nain unchanged. urce reported 22 N		•	·		

Substantial Resource Growth Potential Tungsten classed a "Critical Commodity" by US Government

## Pilot Mountain Scoping Study – Sept 2018

## **Desert Scheelite Open Pit Scoping**

Life of Mine EBITDA	US\$ 125M			
Project Capex	US\$ 30M to US\$ 35M			
Project Payback	30 Months			

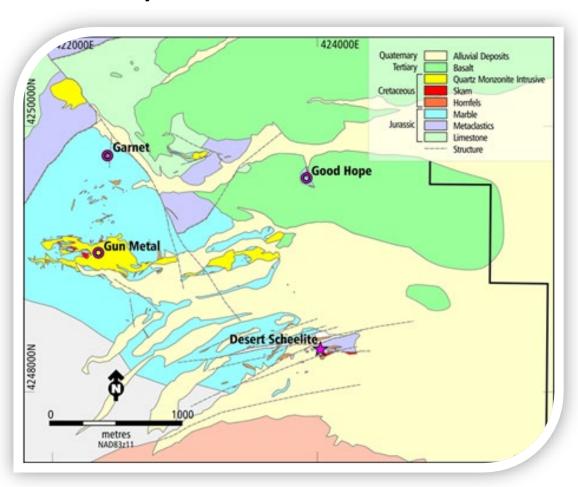
## **Add in Garnet & Process Enhancements**

Life of Mine EBITDA	US\$ 202M-370M
Project Capex	US\$ 35M to US\$ 40M
Project Payback	12-18 Months

"Tungsten Classified as a Critical Commodity by US Dept of the Interior"

"No domestic primary Tungsten production in USA"

## **Key Features – 12 Year Mine Life**



# **EnviroCopper Ltd**

## Thor Hold 25% - Acquiring 30%\*

#### Location

- Located in South Australia
- Kapunda 90km north of city of Adelaide
- Moonta 150km north-west of Adelaide

### Geology

- Substantial near surface oxidised copper mineralisation, transitioning at depth to readily leachable chalcocite then primary chalcopyrite.
- Leachable gold also present.

#### History

- Kapunda Birth of Australian Copper Mining History
- Both areas mined extensively during the latter half of the 19th Century

#### Infrastructure

• Located adjacent to mains electricity & sealed highways. Nearby towns should provide workforce on daily commute basis

#### Resource

- Kapunda Inferred Resource of 47.4Mt for 119,000t Cu suitable for ISR
- Moonta Inferred Resource of 66.1Mt for 114,000t Cu suitable for ISR
- Significant Resource Upside



Australian Government Research Grant A\$2.85 million for Copper ISR Recovery @ Kapunda

\* Thor to invest a further A\$300,000 to increase equity to 30%

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## **Enviro Copper Resources & Exploration Targets**

## **Growing Copper Resources - also with Gold potential**

### Kapunda Copper Resource Estimate (Reported 12 Feb 2018)

	Resource	)	Copper		
Mineralisation	Classification	MT	Grade %	Cu Metal (t)	
Copper Oxide	Inferred	30.3	0.24	73,000	
Secondary Copper Sulphide	Inferred	17.1	0.27	46,000	
	Sub Total	47.4	0.25	119,000	

### Moonta Copper Resource Estimate (Reported 15 Aug 2019)

Resource Classification	Deposit	Tonnes (Mt)	Cu (%)	Cu (Metal Kt)	Au (g/t)	Au (kOz)
	Wombat	46.5	0.17	80		
Inferred	Bruce	11.8	0.19	22		
	Larwood	7.8	0.15	12	0.04	10
Tota	al	66.1	0.17	114		

- Thor Mining PLC is acquiring up to a 22.5% equity in these resources
- The Company is not aware of any information or data which would materially affect these previously announced resource estimates, and all assumptions and technical parameters relevant to the estimate remain unchanged

### **Gold Potential**

- T Substantial evidence of gold in ~1/3 of historical drilling
- Best intersection 95metres @ 3.06g/t
- The EnviroCopper can extract gold concurrently with copper

## **Kapunda Growth Potential**

Geophysical anomaly suggests potential to extend the strike of mineralisation from 1.2kms to 4.5kms.

## Moonta Exploration Target\*(Reported 7 March 2019)

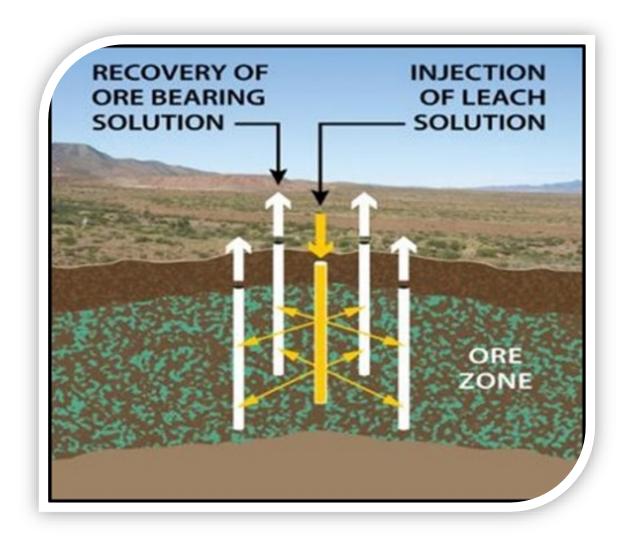
	Tonnag	ge (Mt)	%	Cu
Category	From	То	From	То
Category 1	80	120	0.18	0.23
Category 2	38	45	0.18	0.23
Category 3	120	145	0.18	0.23

<sup>\*</sup>Exploration Targets are conceptual in nature and there has been insufficient exploration to define a Mineral Resource under the JORC Code and it is uncertain if further exploration will result in the determination of a Mineral Resource.

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## In-Situ Recovery (ISR) Recovery Model

- Low cost / low environmental impact meta production.
- A chemical process rather than a high cost mining operation (No large pit / no crushing or grinding / no waste dumps etc).
- Substantial Australian government & research body funding grant to fund technical feasibility.
- \*\*ISR techniques have been utilised commercially in South Australia for >15 years We have the expertise locally.
- Proof of Concept established for Kapunda.
- The Minerals are conductive to leaching confirmed.
- The Both Copper and Gold recovered in Leach test work.
- Ground conditions allow the flow of leaching fluid through the orebody confirmed via field testing.



## Pilbara Gold – 100% Thor

#### Location

• Pilbara Region Western Australia

## Geology

• Greenstone & Granite of Archean Pilbara Craton

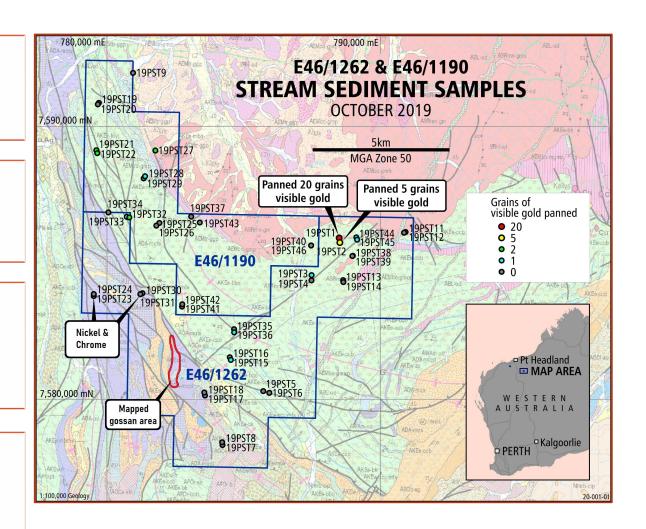
### History

- Acquired 2019
- •Initial Stream Sediment Survey:
- ➤ Gold in 15 of 44 sites
- Nickel & Chrome in 2 of 44 sites

### Program

AIM/ASX: THR

- Follow-up sampling following Receipt of Assays from initial Program
- Geophysics / Drilling
- Potential Farmout



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Drilling at Bonya April 2019

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