Thor Mining announce an initial resource at Moonta

Thor Mining Plc {AIM, ASX: THR}

Announced an initial Mineral Resource Estimate containing 114,000 tonnes of copper, considered amenable to In Situ Recovery techniques at Moonta.

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Thor Mining PLC

15 August 2019

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SUBSTANTIAL INITIAL COPPER RESOURCE – MOONTA PROJECT

INFERRED ISR COPPER RESOURCE OF 114,000 TONNES CONTAINED COPPER

The Board of **Thor Mining Plc** ("Thor" or the "Company") (AIM, ASX: THR), is pleased to announce an initial Mineral Resource Estimate (MRE) containing 114,000 tonnes of copper, considered amenable to In Situ Recovery techniques ("In Situ Recovery" or "ISR"), released 15 August 2019 by EnviroCopper Ltd. ("ECL").

Thor, as announced on 5 March 2019, is acquiring up to a 30% interest in EnviroCopper, which in turn is earning from Andromeda Metals Limited (ASX: ADN) up to a 75% interest in the mineral rights and claims over the northern portion of the Moonta exploration licence area (EL5984) in South Australia.

EnviroCopper Ltd are also earning, from Terramin Australia Limited (ASX:TZN), up to a 75% interest in the mineral rights and claims over the portion of the historic Kapunda copper mine in South Australia recoverable by way of in situ recovery techniques

Subject to full earn in Thor would therefore hold an effective 22.5% interest in each of the Moonta and Kapunda copper projects.

Highlights include;

– An Inferred Resource estimate of 66.1 million tonnes (MT) grading 0.17% copper (Cu), containing 114,000 tonnes of

contained copper, at a cutoff grade of 0.05%Cu;

– At a higher cutoff grade of 0.1% Cu the resource stands at 35.4 MT grading 0.26% copper (Cu), containing 93,000 tonnes of contained copper;

– The EnviroCopper managed resource inventory when included with the Mineral Resource Estimate for the Kapunda Copper Project, now stands at 233,000 tonnes of copper;

– The resource estimate is considered preliminary, with an additional 308 drill holes over Wombat, Bruce, and Larwood deposits to be included in the resource modelling once scheduled quality assurance processes are complete;

– ISR processes are not burdened by the normally high capital and operating cost activities of mining, crushing, grinding, and often flotation associated with conventional mining and processing operations. Subject to testwork and feasibility study outcomes at Moonta, there is therefore an expectation that copper production from deposits amenable to ISR techniques may be at relatively low cost;

– Further work is required to advance a range of areas prior to commercial development including ongoing local government and community engagement, continuing technical assessment, and various environmental and regulatory issues.

Mick Billing, Executive Chairman, commented:

“An Inferred Resource estimate containing 114,000 tonnes of copper is outstanding news for our investors, and we look forward to further upgrades to this estimate as additional historical drillholes are validated”.

This builds upon the EnviroCopper Kapunda resource of 119,000 tonnes contained Cu, (refer AIM announcement of 10 February 2016 and ASX announcement of 12 February 2018), with copper emerging as a very significant component of the Thor Mining

project portfolio.

“Global copper pricing outlook, despite some recent falls, remains firm. At the date of this announcement of approximately US$5,700 per tonne, this Inferred Resource demonstrates that the project has considerable potential value.”

“Thor holds a 25% interest in EnviroCopper, with rights to increase that equity to 30%, and is therefore very well placed with its interest in this strategically significant project, at a time when new copper opportunities in safe jurisdictions are at a premium.”

“The advancements in ISR and lixiviant technologies offer new methods to extract copper. The ISR method is considered to be a viable method of extracting the copper in this location with minimal disturbance to the existing surface profile.”

Thor and EnviroCopper are committed to ongoing community engagement being fundamental in the development of the Moonta project, and we will engage widely through review and feedback of our plans and processes as we advance this important opportunity”.

“We look forward to updating investors regularly as news on this project becomes available.”

Background

On 5 March 2019, Thor announced it had signed a Memorandum of Understanding (MOU) for the vending of its interest in the Kapunda Copper Project into a new copper focused Company, EnviroCopper Limited (“EnviroCopper”), to include an interest in the Moonta project, subject to due diligence processes, and execution of a binding Farm-In and Joint Venture Agreement. The due diligence portion of that work is complete, and the parties are proceeding with documentation of the binding Farm-In and Joint Venture Agreement.

Resource Estimate

Following a review of both historical mining records, historical drilling reports and drill core an update of the geological model has been prepared upon which mining consultants, Mining Plus, have prepared for EnviroCopper an Inferred Resource Estimate for the Moonta Copper Deposit assessed as being potentially amenable to Insitu Recovery.

Table A: Moonta Copper Mineral Resource Estimate JORC 2012

Resource Classification	COG (Cu %)	Deposit	Volume (Mm3)	Tonnes (Mt)	Cu (%)	Cu (metal Kt)	Au (g/t)	Au (kOz)
INFERRED	0.05	Wombat	20.91	46.5	0.17	80		
		Bruce	5.51	11.8	0.19	22		
		Larwood	3.48	7.8	0.15	12	0.04	10
Total			29.9	66.1	0.17	114		

Notes:

– Figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.

– EnviroCopper are earning a 75% interest in this resource, and Thor have investment rights for up to 30% of EnviroCopper.

-- Cut-off grade used of 0.05% Cu

Exploration Target

An ISR amenable Exploration Target for the Moonta Project was published on 5 March 2019 (and on ASX on 6 March 2019: https://www.asx.com.au/asxpdf/20190306/pdf/4437wcrytk0qmr.pdf) of between 238 Mt and 310 Mt at a grade range of 0.18% to 0.23% Copper (between 428,000 and 713,000 tonnes of contained copper). The Mineral Resource Estimate sits within, and forms part of, that Exploration Target. 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.

Further Information

The Wombat, Bruce and Larwood deposits fall on freehold land used for cereal cropping. Native Title is extinguished on freehold land.

Copper minerals observed in the weathering troughs include those typically seen in the weathered profile of copper sulphide deposits, including chalcocite (Cu(2) S), native copper, rare copper carbonates, and a black oxide phase tentatively identified as tenorite (CuO). Chalcopyrite is present but rare.

All three deposits remain open along strike or at depth, presenting opportunities to find further mineralisation in the trough extensions. The hydrological characteristics of the troughs are positive, with the mineralised material identified as being porous and likely permeable. The troughs are bounded laterally by fresh and impermeable bedrock that form natural aquacludes.

Preliminary metallurgical testwork confirms that copper is present in phases amenable to leaching, with improved

recoveries anticipated with leachant optimisation. Non-copper bearing minerals that might consume ISR leachant, such as carbonates, have not been observed in the weathering trough hosted mineralisation.

The supplied drilling database consists of 164 drillholes for 18,485 m of drilling. Drill methods undertaken at Moonta include, Diamond Drilling (DD), Reverse Circulation (RC), Air Core (AC), Rotary Air Blast (RAB) and also Auger drilling. ECR has also supplied survey, assay and logged geology data for the project area.

As the ISR process is more effective in heavily oxidised rocks, EnviroCopper have supplied a 3-D surface representative of the deeply weathered trough that hosts the deposits. Mining Plus have reviewed these wireframes to verify that they are suitable for Mineral Resource Estimation (MRE) work. The copper mineralisation above and below these weathered surfaces has then been modelled to ensure that they represent unique and consistent mineralised domains.

The drillhole assays have been composited to 3 m lengths, with the composites inside the mineralisation domains analysed to ensure that they represent a single grade population, with no need for additional sub-domaining. The presence of extreme values inside each of the mineralised domains has been assessed using a combination of statistical measures and cumulative log probability and log histogram plots. Where extreme values have been identified, top-cuts have been applied to reduce their influence during the geostatistical analysis and grade estimation. Variographic analysis has been undertaken on the top-cut composite data within each mineralised domain.

Quantitative Kriging Neighbourhood Analysis (QKNA) has been undertaken on the main mineralised domains at both Bruce and Wombat to determine the optimal block size and interpolation parameters for the deposits. The optimal parameters derived

from data at Bruce have been used for the Larwood deposit.

Separate block models have been created for the Bruce, Larwood and Wombat deposits. Bruce and Larwood have utilised a parent block size of 60 m (X) by 20 m (Y) by 10 m and sub-blocks to 6 m (X) by 2 m (Y) by 1 m (Z). The Wombat block model has a parent block size of 50 m (X) by 20 m (Y) by 10 m and sub-blocks to 2.5 m (X) by 2.5 m (Y) by 1.0 m (Z). The sub-blocks have been estimated at the parent block scale. The block size selected is considered appropriate for the drillhole spacing defining the majority of the mineralisation within all three deposits.

Copper grades at Bruce and Wombat have been estimated using Ordinary Kriging inside the mineralised domains and surrounding waste using three interpolation passes, with the domains used as hard boundaries during the estimation. The search parameters and ranges have been defined from the modelled variography and QKNA. The small number of samples within Larwood has resulted in an inability to generate meaningful variograms. Therefore, an Inverse Distance weighted to the power of two interpolation method has been utilised for copper and gold. Grades have been estimated for Bruce and Wombat with:

– Pass 1 search ellipse set at one third the variogram range with a minimum of four and a maximum of 12 samples required to fill each block,

– Pass 2 search ellipse set at two thirds the variogram range with the same minimum and maximum samples as Pass 1,

– Pass 3 is set at the variogram range with the minimum number of samples required reduced to two.

Estimation parameters for Larwood have been defined in the same way as Bruce and Wombat, but with a different interpolation method.

Oxidised low-grade material has been assigned a bulk density of 2.35 t/m(3) . Oxidised high-grade material has been assigned a bulk density of 1.82 t/m(3) . All fresh material below the supplied wireframe surfaces has been assigned a bulk density of 2.65 t/m(3) .

The Mineral Resource estimate has been validated using visual and statistical methods, including checking of the block model grades against the de-clustered input composite grades, use of swath plots on northings, easting and RL's and visual comparison of the block model grades versus the drillhole grades. The estimated grades for the main mineralised domains within the oxidised channel validate well compared to the de-clustered composite grades. However, the low-grade domains have been generally underestimated in the block model as a result of the low sample populations informing large areas of the block model in these domains. Given the extraction of copper is concentrating on the oxidised channel, Mining Plus concludes that the block model is an accurate representation of the input samples at a global scale.

Classification of the Bruce, Larwood and Wombat Mineral Resource Estimates are in keeping with the "Australasian Code for Reporting of Mineral Resources and Ore Reserves" (the JORC Code as prepared by the Joint Ore Reserve Committee of the AusIMM, AIG and MCA and updated in December 2012). All classifications and terminologies have been adhered to. All directions and recommendations have been followed, in keeping with the spirit of the code.

The resource classification has been applied to the MREs based on the drilling data spacing, grade and geological continuity, and data integrity.

Due to the relatively widely spaced drilling density, no blocks have met the requirements to be classified as Measured or Indicated Mineral Resources. Mining Plus has classified the areas within the deposit where the estimated grade has been

interpolated between drillhole intercepts as Inferred Mineral Resources, with the areas where extrapolation of grade has been identified, remaining as Unclassified. The results reflect the Competent Person’s view of the deposits.

The information contained within this announcement is deemed to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014. Upon the publication of this announcement, this inside information is now considered to be in the public domain.