

## ASX ANNOUNCEMENT

6 July 2021

# Site Operations Continue to Accelerate at Nifty

## HIGHLIGHTS

- **Mineral Resource Definition Drilling has commenced:**
  - **3,000m of drilling of south-east limb complete**
  - **16,000m drill out of the western limb has commenced**
  - **2<sup>nd</sup> RC drill rig is due to arrive at site in mid-July**
  - **3<sup>rd</sup> drill rig for surface diamond drill holes is scheduled for mid-July**
  - **Sterilisation drilling for site infrastructure is complete**
- **Multiple streams of Metallurgical testwork underway with initial observations very encouraging:**
  - **Column tests underway on heap leach pad trench samples**
  - **Sonic drill rig successfully drilling samples from the heap leach pads**
  - **Diamond Drill rig to arrive in mid-July to provide core samples from in-situ mineralisation for testwork**
- **Site surveys and baseline studies being conducted**
- **Further key management and personnel appointments completed**
- **Stakeholder site visits conducted, including Traditional Owners and Government representatives**

Cyprium Metals Limited (“**CYM**”, “**Cyprium**” or “**the Company**”) is pleased to provide an operational update on the Nifty Copper Project. The Company continues to make significant progress on its strategy of developing an open pit heap leach, Solvent Extraction and Electrowinning (“**SX-EW**”) operation to produce LME grade A copper cathode metal plate on-site.

Executive Director Barry Cahill commented:

*“We are pleased to provide an update on the activities at our rapidly evolving Nifty Copper Project. An RC drill rig has been at Nifty for more than two months now to conduct sterilisation and resource definition drilling with another RC rig due to arrive shortly. A diamond drill rig is also scheduled to arrive at Nifty in the coming weeks.*

*These additional drill rigs have been brought to site due to the expansion of our resource drilling programmes into the targeted in-situ resources areas around the open pit.*

*Metallurgical test-work is underway on the trench samples taken from the heap leach and further samples are on their way to Perth from a sonic rig drilling campaign. We are very excited with the initial observations of the leaching from the column testwork at this early stage. We are also proceeding with the optimisation of the leaching process for the heap leach retreat at Nifty. Manning numbers continue to increase as we recruit more personnel to site and ramp up our activities. All facets of the planned work for the Nifty study and recommencement are proceeding as scheduled. We will keep the market updated as drilling and metallurgical results come to hand in the coming weeks and months.”*

## Resource Definition Drilling

A reverse circulation (“RC”) drill rig was mobilised to site immediately upon CYM taking control of the site. The drill rig has been focused on completing several time critical activities to enable the project to move forward to construction and production.

The initial estimated RC resource drilling programme has been increased to approximately 19,000 metres and a second drill rig has been mobilised, which is due to arrive on site in the coming weeks, to complete the drilling in a timely manner. Cyprium maintains its view that more mineral resources exist higher up in the mineralised envelope of the orebody and, subject to the result of the initial programmes, further drilling would be required to quantify increase to the existing Nifty resource.

### *South-East Limb Drilling*

An RC drilling programme of over 3,000 metres has been completed on the South-East limb. Drilling was undertaken to increase density of existing drilling and test the potential for transitional and supergene ore extensions from the south-east corner of the Nifty open pit. The previously identified oxide and transitional mineralisation is being drilled to an appropriate density to add to the base load in-situ resource for Cyprium’s heap leach restart strategy. Sample preparation is complete and are currently on the way to the laboratory for analysis.



Figure 1: Drilling Locations and Survey Area

### *Western Limb Drilling*

A 16,000 metre RC drilling campaign has commenced to test the potential up-plunge extensions of the oxide and transitional mineralisation’s at the western extremity of the Nifty open pit. Historically, mineralisation in this region has been of lower confidence, being in the inferred resource category, due to the sparse drilling density.

### **Sterilisation Drilling**

Sterilisation drilling was undertaken on the western end of the current heap leach pad which potentially lay over a portion of the southern limb of the Nifty mineralisation. This drilling has now been completed with all holes intersecting the footwall sequences of the Nifty rock formations, which effectively sterilises the area. This is positive for the project as it allows the more detailed planning and investigation to be commenced on the location designated for the required infrastructure.

## Metallurgical Testwork

### *Heap Leach Pad Drilling*

A sonic drill rig was mobilised to site to obtain specialised core samples for metallurgical testwork. The rig has been very effective in producing complete core samples from the existing heap leach pads, which are being despatched to the laboratory for testing.



Figure 2: Sonic Rig at the Heap Leach Pads



Figure 3: Metallurgical test-work sample from Sonic Rig

### *Diamond Drilling*

A diamond rig has been contracted and is mobilising to site during July 2021. This rig will obtain diamond core samples of in-situ mineralisation around the open pit for column leach tests on the copper mineralisation. Whilst over 200,000 tonnes of copper metal plate has been produced at Nifty historically and the metallurgy is well understood, it has been over a decade since new methods have been tested, particularly the unique methodology utilised by Cyprium on its Hollandaire resource. Once the diamond rig has completed the program at Nifty, it will complete some preliminary geotechnical drilling before mobilising to the Maroochydore Copper Project to drill core samples for similar metallurgical testwork.



**Figure 4: Heap Leach Pads at the Nifty Copper Project**

#### *Bulk Samples*

Samples taken from the trenching of the heap leach pads have been prepared and are currently in the laboratory, undergoing column testwork leaching analysis. The initial testwork reflects the expected leach conditions and is in line with Cyprium's internal expectations for the heap leach re-treat studies. The preliminary leaching results have been excellent in the short period to date. The column will continue to leach and once the final results are compiled into a presentable form, they will be released to market.

The initial stages of this testwork are confirming both the improved leaching rates that Cyprium's proprietary methods can produce, and the parameters used in the proof-of-concept studies.



**Figure 5: Trenching of the heap leach at the Nifty Copper Project**



**Figure 6: Copper sulphate solution from Nifty testwork column 1**

## Site Surveys and Studies

### *SX-EW Studies & Geotechnical*

The studies into the SX-EW plant continue with early indications that a new plant will add significant value to the project through improved efficiencies at lower operating costs, although at a moderately higher capital cost than refurbishing the existing plant. This work is ongoing, particularly regarding the determination of the full cost to the battery limits and to the timing of commissioning of either facility.

Reporting and costing of various components for inclusion in the Feasibility Study to finance the construction phase are continuing. Since the Heap Leach and SX-EW operations ceased, there has been material improvements in technology and process methods and Cyprium believe these will further enhance the project's value.

Geotechnical work and surveys on the planned locations is ongoing, including drilling activities to ensure these studies are completed on schedule. A geotechnical test pit has commenced.

### *Site Infrastructure*

Communications upgrades are underway for both mobile and satellite services. The camp refurbishment programme has been approved and a dedicated team will manage this project. Discussions are ongoing for contractor tender, selection and mobilisation. The camp upgrade will involve a mix of new and refurbished rooms with some of the older areas of the accommodation being scrapped due to the age and deteriorated condition.

### *Site surveys and baseline studies*

As previously reported, initial flora and fauna surveys (part of the approval and permitting process) have been conducted and the second phase of surveys has commenced. All surveys are expected to be completed and finalised in accordance with the project timeline.

Water management planning is continuing and the reporting is expected on time, including the initial considerations of water extraction from the underground voids below the open pit.

Preliminary site visits have been conducted with government, traditional owners and investors to showcase in a broad sense the current state of the facilities and the plans for the restart of the project. All visits have been well received with follow up meetings being undertaken. Further site visits are being planned with various parties to continue to engage with stakeholders regarding our plans. The CYM Board have conducted their first Board meeting on site in conjunction with a detailed site visit.



Figure 7: Commencement of the Nifty Geotechnical test pit with a 20t Excavator



**Figure 8: Nifty SX-EW Plant**

### **Key Appointments**

The key manager appointments have been continuing at the Nifty Copper Project and the recruitment of rostered back-to-back Superintendents for each of the management positions is ongoing. The labour market remains tight for these positions, however Cyprium has successfully appointed quality personnel to the project.

Cyprium has also employed a number of general hands to site who will be trained for skilled operating and maintenance roles for the Heap Leach and SX-EW Plant.

There is currently more than 40 Nifty site-based personnel employed by Cyprium, excluding contractors, which will continue to grow.

This ASX announcement was approved and authorised by the Board.

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## **About Cyprium Metals Limited**

Cyprium Metals Limited (ASX: CYM) is an ASX listed company with copper projects in Australia. The Company has a highly credentialed management team that is experienced in successfully developing sulphide heap leach copper projects in challenging locations. The Company's strategy is to acquire, develop and operate mineral resource projects in Australia which are optimised by innovative processing solutions to produce copper metal on-site to maximise value.

The Company has projects in the Murchison and Paterson regions of Western Australia, that is host to a number of base metals deposits with copper and gold mineralisation.

### **Paterson Copper Projects**

This portfolio of copper projects comprises the Nifty Copper Mine, Maroochydore Copper Project and Paterson Exploration Project.

The Nifty Copper Mine ("Nifty") is located on the western edge of the Great Sandy Desert in the north-eastern Pilbara region of Western Australia, approximately 350km southeast of Port Hedland. Nifty contains a 2012 JORC Mineral Resources of 658,500 tonnes of contained copper. Cyprium is focussed on a heap leach SX-EW operation to retreat the current heap leach pads as well as open pit oxide and transitional material. Studies will investigate the potential restart of the copper concentrator to treat open pit sulphide material.

The Maroochydore deposit is located ~85km south east of Nifty, and includes a shallow 2012 JORC Mineral Resources of 486,000 tonnes of contained copper.

An exploration earn-in joint venture has been entered into with IGO on ~2,400km<sup>2</sup> of the Paterson Exploration Project. Under the agreement, IGO is to sole fund A\$32 million of exploration activities over 6.5 years to earn a 70% interest in the Paterson Exploration Project, including a minimum expenditure of A\$11 million over the first 3.5 years. Upon earning a 70% interest, the Joint Venture will form and IGO will free-carry Paterson Copper to the completion of a Pre-feasibility Study (PFS) on a new mineral discovery.

### **Murchison Copper-Gold Projects**

Cyprium has an 80% attributable interest in a joint venture with Musgrave Minerals Limited (ASX: MGV) at the Cue Copper-Gold Project, which is located ~20km to the east of Cue in Western Australia. Cyprium will free-carry the Cue Copper Project to the completion of a definitive feasibility Study (DFS). The Cue Copper-Gold Project includes the Hollandaire Copper-Gold 2012 JORC compliant Mineral Resources of 51,500 tonnes contained copper, which is open at depth. Metallurgical test-work has been undertaken to determine the optimal copper extraction methodology, which resulted in rapid leaching times (refer to 9 March 2020 CYM announcement, "*Copper Metal Plated*", <https://cypriummetals.com/copper-metal-plated/>).

The Nanadie Well Project is located ~650km north east of Perth and ~75km south east of Meekatharra in the Murchison District of Western Australia, within mining lease M51/887.

The Cue and Nanadie Well Copper-Gold projects are included in an ongoing scoping study, to determine the parameters required to develop a copper project in the region, which provides direction for resource expansion work.