

# Vertex Hill End Gold Plant update

ASX ANNOUNCEMENT 6<sup>th</sup> September 2023

## HIGHLIGHTS:

- Commissioning commenced on a four-day week basis (dayshift only), on limited throughput.
- Gold concentrate has been produced ready for on-site refining and smelting to a doré.
- A new Wilfley gold table is arriving this week to replace the undersized existing wave table.
- Gold refining Agreement with ABC Bullion Sydney has been executed.
- New 25-tonne Caterpillar excavator delivered to site last month – for stockpile management.
- Extensive refurbishments completed to expand plant capacity for future mine operations.
- Production ramp up will occur over September, as personnel and equipment are positioned.

**Vertex Minerals Limited (ASX:VTX) ('Vertex' or the 'Company')** is pleased to provide an update on start-up operations of the Reward Gold Mine at Hill End.

The Company has been refurbishing the Reward Processing Plant and commissioning works are nearing completion to support the processing of stockpiled material adjacent to the plant site. This work forms part of ongoing preparations for mine operations, following the recent completion of a JORC-2012 compliant Mineral Resource Estimate (MRE) for the Reward Gold Mine by independent consultants HGS Australia (*refer ASX Announcement 6 July 2023*).

This commissioning process provided the first gold in concentrate in August (*refer ASX Announcement 4 August 2023*). Commissioning is currently focussed on achieving the optimal water balance through each step of the concentration process, aiming to maximise gold recovery while achieving high material throughput and plant availability.

Once sufficient concentrate has been produced, the gold concentrates will be refined on-site and smelted to a doré bar. The doré produced will then be sent to the ABC Refinery in Sydney ('ABC Refinery'), which has signed an agreement with Vertex following an extensive due diligence period. The Agreement with ABC Refinery provides the Company with an effective downstream processing opportunity in close proximity to its mine operations at Hill End, and marks a key step forward in Vertex's long-term development strategy.

In preparation for the ramp-up of operations at Hill End, the Company has acquired a new Wilfley gold table to replace the existing wave table which is too small to manage the pending increase in capacity requirements. A Caterpillar excavator with 25-tonne capacity was also delivered on-site last month to manage stockpile movements.

The Vertex management team has also successfully completed an extensive list of on-site upgrades, including an upgraded Knelson concentrator, full CCTV security monitoring and the installation of a satellite communications system. Further operational updates will be provided by the Company in September as production ramps up.

**Executive Chairman, Roger Jackson commented:** “The staged commencement of processing stockpiles at the Hill End Gravity Gold plant is strategic, as it allows us to upgrade the plant, build critical infrastructure, develop safety, operating and environmental systems, and on-board personnel, while we undertake a Pre-Feasibility Study on the high-grade Reward underground mine. The plant and infrastructure that has been acquired or refurbished in this exercise will be utilised in the expanded capacity plant, which will be key to producing low cost ounces when we commence underground mining next year. ”

Set out below is a table summarising the upgrades that have been carried out on the Reward Processing Plant in preparation for expanding production capacity.

Knelson concentrator replaced, with new electrics	Caterpillar loader
Horizontal impact crusher	Safety stops and guarding
Screens	Full CCTV security system
Cyclones	Gold room security upgrade
Regrind Ball Mill	New LED lighting
Pumps	StarLink satellite installed
Tails line	Ablution room
Return tails pump	Crib room and change rooms
Water reticulation and reuse infrastructure	

Hill End Project Mineral Resource Estimate				
Deposit	Classification	Tonnes (kt)	Grade Au (g/t)	Contained Au (koz)
Reward Gold Mine	Indicated	141	15.5	71
	Inferred	278	17.3	155
<b>Sub Total</b>		<b>419</b>	<b>16.7</b>	<b>225</b>
Hargraves Project	Indicated	1,109	2.7	97
	Inferred	1,210	2.1	80
<b>Sub Total</b>		<b>2,319</b>	<b>2.4</b>	<b>178</b>
Red Hill Project	Indicated	413	1.4	19
	Inferred	1,063	1.8	61
<b>Sub Total</b>		<b>1,476</b>	<b>1.7</b>	<b>80</b>
<b>Project Total</b>	Indicated	1,663	3.5	187
	Inferred	2,551	3.6	296
<b>Grand Total</b>		<b>4,214</b>	<b>3.6</b>	<b>483</b>

**Table 1: Global Mineral Resource estimate for the Hill End & Hargraves Gold Project**

Hill End Reward/Fosters Exploration Target				
Deposit	Grade Range	Tonnes (kt)	Grade Au (g/t)	Contained Au (koz)
Fosters Gold Mine Along strike of Reward	Lower Range	524	12.5	211
	Upper Range	524	19.0	320

**Table 2 Fosters Exploration Target**

**This announcement has been approved by the Board of Vertex Minerals Limited.**

**Further Information:**

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## **About Vertex Minerals Limited**

Vertex Minerals Limited (ASX: VTX) is an Australian based gold exploration company developing its advanced Hargraves and Hill End gold projects located in the highly prospective Eastern Lachlan Fold Belt of Central West NSW. Other Company assets include the Pride of Elvire gold project and Taylors Rock gold/nickel/lithium project both located in the Eastern Goldfields of WA. The focus of Vertex Minerals is to advance the commercial production of gold from its NSW projects embracing an ethical and environmentally sustainable approach:

- **Gravity Separation:** The deportment of gold at the Hill End Project allows high recovery to a concentrate produced using gravity separation techniques.
- **Direct Smelting:** The use of direct smelting of a gold concentrate that eliminates the need to use cyanide as a solvent.
- **Contrast in Density:** These separation techniques take advantage of the contrast in density of gold ( $\rho=19.3$ ) relative to quartz ( $\rho=2.65$ ).
- **Renewable Energy Potential:** The unique landscape and infrastructure makes Hill End ideal for the establishment of renewable sources of power. The Crudine Ridge Windfarm is only 30km from the project site and Vertex plans to examine a pumped hydro-electricity scheme as an integral part of any proposed development. The topography and existing mine workings including shafts and adits make the establishment of a pumped hydro scheme achievable at modest expense.
- **Benign Tailings:** The tailings will essentially be quartz with little to no sulphide minerals.

### **Hargraves Gold Project (NSW)**

- Hargraves Gold project is located approximately 2.5 km south of the town of Mudgee.
- The goldfield is 4 x 10 km with numerous mineralised structures with little modern exploration.
- An updated mineral resource in accordance with JORC 2012 Code was completed by SRK Consulting (Australasia) Pty Ltd (SRK) – total of **2.3Mt at 2.38g/t Au for 177koz Au.**

### **Hill End Gold Project (NSW)**

- Consists of 10 mining leases and three Exploration Licences located in the core of the Hill End Trough on the eastern Lachlan Fold Belt.
- 14km of continuous gold lode with gold recovery rate to gravity at +90%.
- Work undertaken in 2015 by Hill End Gold Limited (HEG) culminated in a JORC 2012 resource estimate of
  - 80,000 oz Au @ 1.7 g/t to 150m depth.

### **Pride of Elvire Gold Project (WA)**

- Tenements surround the Mt. Elvire homestead approximately 210km north of Southern Cross in Western Australia
- The project has seen historical drilling with encouraging gold results achieved.

### **Taylors Rock Project (WA)**

- Located 80km WSW of Norseman in the Southern Goldfields region of Western Australia.
- The project has both Gold and Nickel potential, interesting historical intercepts have recorded encouraging mineralisation.

### **Competent Persons Statement**

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr. Roger Jackson, a Director and Shareholder of the Company, who is a 25+ year Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM), Fellow of the Australian Institute of Geoscientists (FAIG) and a Member of Australian Institute of Company Directors. Mr. Jackson has sufficient experience which is relevant to the style of mineralisation and type of deposits 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". Mr. Jackson consents to the inclusion of the data contained in relevant resource reports used for this announcement as well as the matters, form and context in which the relevant data appears.

### **JORC Compliance Statements**

Where statements in this announcement make reference to exploration results which previously been reported, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcements, and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not materially modified from the original market announcements.

### **Forward Looking Statements and Important Notice**

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Vertex Minerals' control.

Actual results and developments will almost certainly differ materially from those expressed or implied. Vertex Minerals has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Vertex Minerals makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.

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