



ASX Announcement

12 March 2024

Sihayo Underground Mining Study - Clarification

Sihayo Gold Limited is retracting its forward-looking statements from the 4 March 2024 announcement 'Underground Mining Study Demonstrates Potential to Add Value' as it is not currently able to report in accordance with ASX Listing Rules 5.16 and 5.17 on those matters. Investors should not rely on those previous statements. The Company will update the market once it is able to provide all the relevant disclosure.

Highlights:

- **Underground mining study targeting high-grade (+3.0 g/t Au) zones of the Sihayo Mineral Resource completed by Mining One.**
 - **Results demonstrate that based on current knowledge a drift-and-fill mining method may be technically feasible and offers potential to add value.**
 - **A trade-off study is now required to determine the optimum combination of open pit and underground mining to take the project forward.**
 - **Considerable growth potential exists as mineralisation remains demonstrably open and untested at depth and to the south of the known deposit.**
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Sihayo Gold Limited (**ASX:SIH** – “Sihayo” or the “Company”) is pleased to report on an encouraging outcome returned by Underground Mining Study of the potential for a viable underground mining operation on the Sihayo gold deposit, located in the north block of the PT Sorikmas Mining Contract of Work ('CoW') in North Sumatra, Republic of Indonesia.

Sihayo's Executive Chairman, Colin Moorhead commented on this recent report:

“The Feasibility Study Update (FSU¹) completed last year defined an open pit only operation that leaves a significant portion of the Mineral Resource unmined. The mining study completed by our consultants at Mining One demonstrates “Drift and Fill” may be a viable mining method to access and extract higher-grade (+3.0g/t Au) zones from the resource. This information will be used to determine the optimum combination of open pit and underground mining at Sihayo”.

Background

Encouraged by metallurgical test-work that demonstrated significant improvements in gold recoveries from deeper primary sulphide mineralisation ('caustic leaching')^{2,3}, the Company conducted two drilling programs at Sihayo from mid-2022 to early 2023, targeting additional high-

¹ Refer to ASX announcement (SIH:ASX) titled “Ore Reserve and Economic Update for Sihayo Starter Project” dated 23 May 2023.

² Refer to ASX announcement (SIH:ASX) titled “Significant Results from High pH Leaching Test Work” dated 31 January 2022.

³ Refer to ASX announcement (SIH:ASX) titled “Final Results Received from High pH Pre-leaching Test Work” dated 5 July 2022.

grade zones under the planned 2022 FSU pit, and to collect geotechnical data to inform design of a potential underground operation.

The drilling successfully identified significant extensions to the 'below-pit' gold mineralisation and resulted in an updated MRE⁴ for the Sihayo gold deposit totalling 24.8 Mt at 2.0 g/t Au for 1,570 koz contained gold (Table 1). The updated MRE showed an increase in the higher-grade primary gold resource to approximately 4.5 Mt at 4.7 g/t Au (at a 3.0 g/t Au cut-off grade) for approximately 680 koz contained gold in 27% Measured, 52% Indicated and 21% Inferred Mineral Resource categories. This represented an increase of approximately 22% compared with the total 2022 MRE, and a 67% increase in the below-pit MRE for 2.0 Mt at 4.8 g/t Au containing 300 koz of gold.

Table 1: Updated Mineral Resource Estimate

Deposit	Category	Dry tonnes (kt)	Gold grade (g/t)	Au (koz)
Sihayo	Measured	5,490	2.2	384
	Indicated	12,900	2.0	828
	Inferred	6,380	1.7	358
	Subtotal	24,800	2.0	1,570

The Company subsequently engaged specialist consultant, Mining One, to evaluate the potential feasibility of underground mining at Sihayo, either as a supplement to the proposed open pit in the 2022 Updated Feasibility Study, or as a stand-alone operation. Their initial assessment suggested that an underground drift-and-fill operation might be technically and economically viable. Figure 1 below illustrates the FSU pit design against the Mineral Resource model at the notional open pit and underground cut off grades of 0.4 and 3.0 g/t Au respectively.

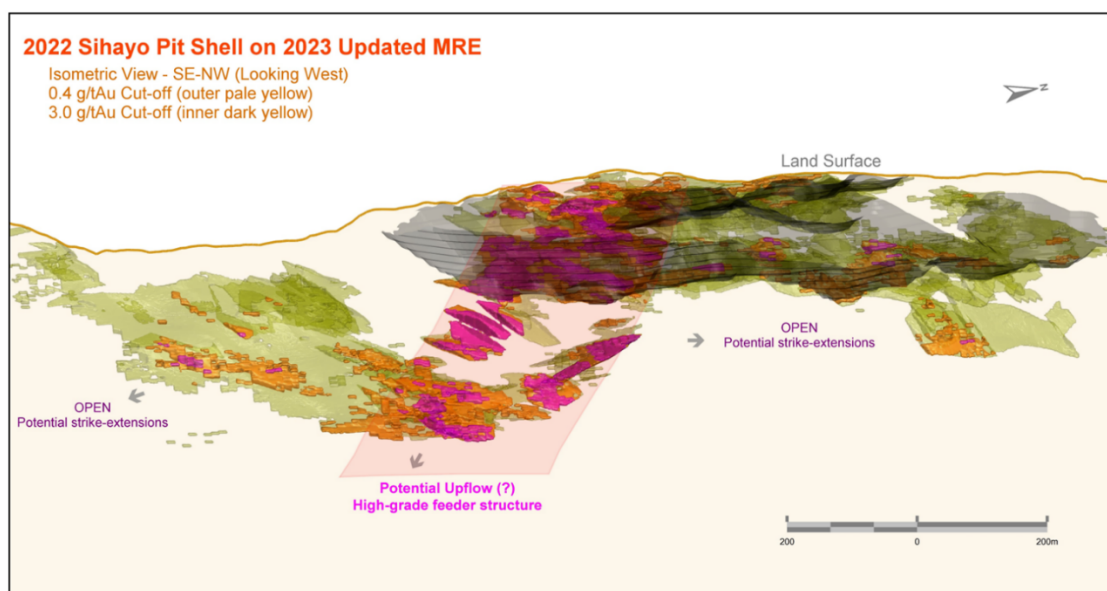


Figure 1: Sihayo 2022 Updated Feasibility Study pit shell on 2023 Update MRE

⁴ Refer to ASX announcement (SIH:ASX) titled "Sihayo Mineral Resource Estimate Update results in increased grade and contained gold" dated 11 July 2023. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimate of Mineral Resources, that all material assumptions and technical parameters underpinning the estimate in the relevant market announcement continue to apply and have not materially changed.

Underground Mining Study

Mining One considered an underground mining scenario that takes advantage of the topography and uses a twin adit access concept, which offers several benefits including but not limited to allowing early access to production, provision of a second egress for safety, provision of underground platforms for diamond drilling and facilitating simple dewatering and ventilation requirements. Figure 2 below illustrates the notional layout of this scenario.

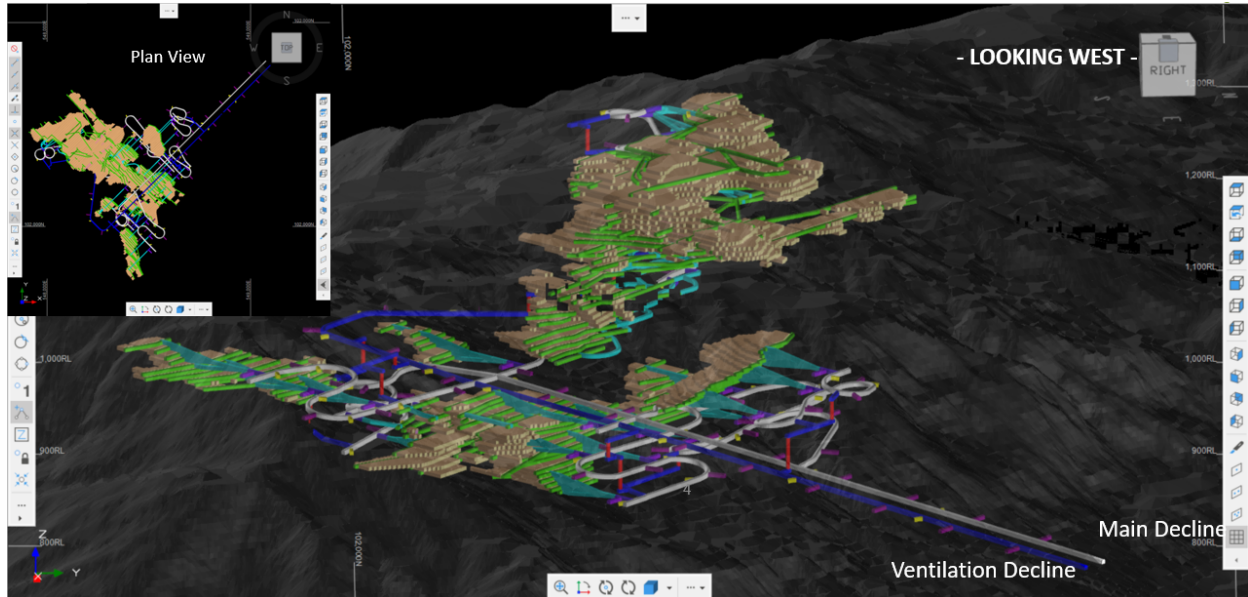


Figure 2: Looking west Sihayo underground mining layout.

The mining method considered in this design combines overhand drift-and-fill and drift-and-fill in the wider ore zones. The mining sequence progresses from the bottom-up, with cut heights of 4.5 m and drift widths of 4.5 m. This method involves developing sill drive headings along the footwall from which the ore drives would be developed across the orebody. The first ore drive is developed in the ore and is backfilled using consolidated fill. The second ore drive is driven adjacent to the first ore drive. This continues until the ore zone is completely mined out to full width and once filled, the second lift is started working above the first lift. The mining process uses drilling, blasting, loading, and transportation of ore to the surface by trucks. Figure 3 below illustrates the mining method considered.

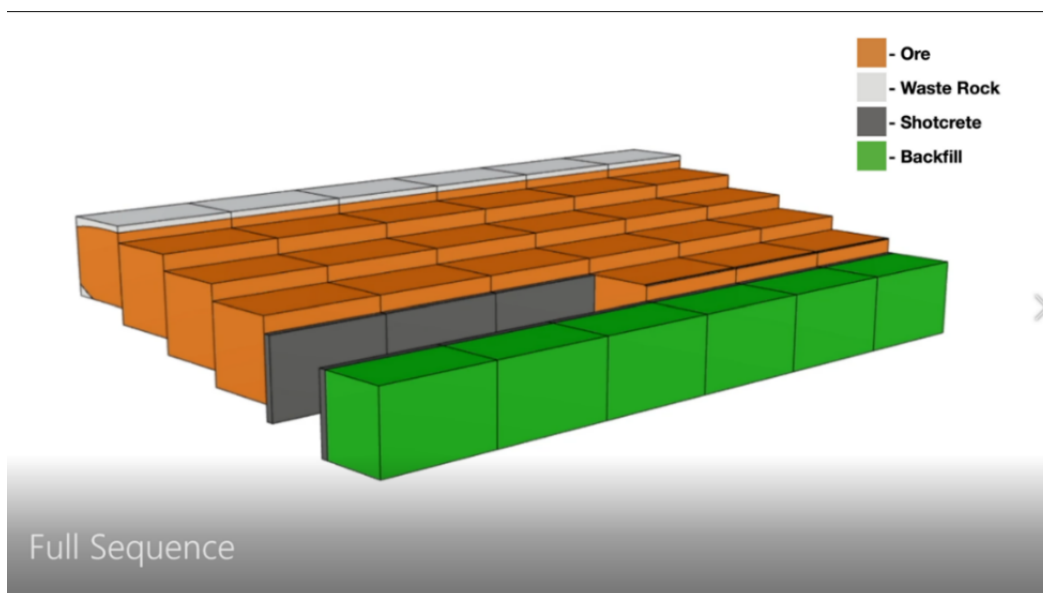


Figure 3: Proposed Conceptual Mining Method

A cut-off grade of 2.9 g/t Au was calculated by Mining One using USD\$1,700 per ounce gold price and assumptions sourced from the FSU and/or benchmarked against similar mining operations in Indonesia.

Using available rock mass and other geotechnical information, along with orebody shape and size, Mining One applied a Mining Shape Optimisation (MSO) process to define stoping areas and associated capital development.

The outcome of this study is that underground mining using a drift and fill method is worthy of consideration for mining all or part of the Mineral Resource above cut-off at Sihayo. More work is required to upgrade this to a Production Target and ultimately into an Ore Reserve. This work includes but is not limited to the following.

- Infill drilling to upgrade Inferred Resource components to Indicated Classification
- Update the geometallurgical model to inform minor gaps in recovery information.
- Targeted geotechnical work to better inform and to optimize the mining method and backfill strategy.
- Detailed hydro-geological study to identify and manage risks and to optimize dewatering systems.
- Development of a tactical mine plan to ensure production rates are achievable and constraints such as ventilation are fully understood.

Strategic Consideration

The base case development scenario for Sihayo is described in detail in the 2022 Feasibility Study Update. This scenario is relatively high capital, has a significant footprint and leaves a substantial part of the Mineral Resource unmined.

The Mining One study demonstrates that underground mining of the higher-grade zones within the Mineral Resource is worthy of serious consideration either to augment the open pit operation and as a lower risk lower capex start up option.

A trade off study will be undertaken to determine the optimum combination of open pit and underground mining at Sihayo. Due to the complexity of the site each of these scenarios needs to consider throughput rate, waste, and tailings management. Common to all scenarios is the need for site access and non-processing infrastructure.

Mineralisation at Sihayo remains open at depth and to the south of the known deposit. Based on industry analogues of similar deposits The Company believes that further drilling has good potential to grow the underground resource.

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Competent Person's Statement

Exploration Results

The information in this report which relates to Exploration Results is based on, and fairly represents, information compiled by Mr. Bradley Wake (BSc Hons. (Applied Geology)), who is a contract employee of the Company. Mr. Wake does not hold any shares in the company, either directly or indirectly. Mr. Wake is a member of the Australian Institute of Geoscientists (AIG ID: 3339) and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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. Wake consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

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