ASX Announcement 23 May 2023

Ore Reserve and Economic Update for Sihayo Starter Project

Highlights:

- **Updated Ore Reserve estimate and project economics for the Sihayo Starter Project incorporating benefits of high pH pre-leaching (“Caustic Leaching”) together with revisions in project design, operating parameters and updates to capital and operating cost estimates to include inflation impacts and identified areas of savings**
    - **18% uplift in Life of Mine gold production compared with 2022 Feasibility Study Update[1]**
    - **48% uplift in Post-Tax Net Present Value[2]**
- **Project has significant upside exploration potential, particularly through expansion of high-grade mineralisation beneath the existing pit limits**
    - **Assays for final three holes of drilling program targeting deeper mineralisation at Sihayo to be received shortly**
    - **Update of the Sihayo Mineral Resource estimate expected in Q2 CY2023**
    - **Concept Study on underground mining opportunity at Sihayo to commence**

Sihayo Gold Limited (**ASX:SIH** – “**Sihayo**” or the “**Company**”) is pleased to provide an update on the Company’s Sihayo Starter Project (“t**he Project**”) in North Sumatra, Indonesia.

Sihayo’s Executive Chairman, Colin Moorhead commented on the Company’s updated Ore Reserve estimate and project economics for the Sihayo Starter Project:

“*This update vindicates the Company’s strategy following the completion of the Feasibility Study Update in February 2022 with significant value uplift to the Sihayo Starter Project achieved through Caustic Leaching. We believe Caustic Leaching is truly transformational for the Project given its positive impact on the economics of the open pit Ore Reserve and its potential to unlock deeper, high-grade mineralisation beneath the current planned pit shell. We now have a technically robust open pit project with attractive economics and the potential for significant upside which we are demonstrating through the outstanding results seen in our latest drilling program targeting beneath pit mineralisation.”*

[1] Refer to SIH announcement “*Project Update and Launch of Strategic Review Process*” date 17 February 2022

[2] Assumes USD1,900/oz gold price and 5% discount rate

Sihayo Starter Project Economic Update

Background

Sihayo completed a consolidation and update of the Company's previous study work on the Sihayo Gold Project in February 2022, culminating in the 2022 Feasibility Study Update ("**2022 FSU**") (refer to ASX:SIH announcement "*Project Update and Launch of Strategic Review Process*" dated 17 February 2022).

The mineralisation types included in the mine plan for the 2022 FSU have been classified into three categories according to the oxidisation state of the material – oxide, transitional and fresh material. Standard carbon-in-leach ("**CIL**") metallurgical recoveries within the oxide mineralisation are relatively uniform and consistently greater than 80% while the more refractory transitional and fresh material have highly variable metallurgical recoveries ranging from less than 10% to 90%. The 2022 FSU estimated an average life-of-mine ("**LOM**") metallurgical recovery of 71.2% based on historical CIL test work which underpinned the processing plant design criteria.

Sihayo has seen these relatively low metallurgical recoveries as an area of opportunity to significantly improve project economics. During the 2022 FSU studies the Company identified the opportunity to increase metallurgical recoveries for the transitional and fresh mineralisation using sodium hydroxide (NaOH or caustic soda) at a high pH (pH 13) prior to CIL gold recovery in the processing flow sheet. Subsequent to the completion of the 2022 FSU, the Company completed an extensive metallurgical test work program to further assess the high pH pre-leaching phase ("**Caustic Leaching**") opportunity.

Additional test work was conducted over the course of 2022 to further quantify the potential impact of a Caustic Leaching phase on the metallurgical recovery of transitional and fresh material from the Sihayo and Sambung deposits. Sihayo reported the results of this test work (refer to ASX:SIH announcements *Significant Results from High pH Leaching Test Work* dated 31 January 2022 and *Final Results Received from High pH Pre-leaching Test Work* date 5 July 2022). Following completion of this test work, the Company engaged AMC Consultants Pty Ltd ("**AMC**") to update the metallurgical recovery algorithm employed in mine optimisation and scheduling underpinning the production forecast for the project.

The Company has since updated the Ore Reserves Estimate, mining and processing schedules as well as updated capital and operating cost estimates culminating in an updated economic analysis of the Project incorporated into an addendum to the 2022 FSU ("**2023 FSUA**").

Key findings

Metallurgical test work indicates that incorporating Caustic Leaching into the Project should result in a significant uplift in metallurgical recoveries, with an estimated increase in LOM average recovery from the 71.2% assumed in the 2022 FSU to 83.6% as estimated in the 2023 FSUA.

In updating the Ore Reserves Estimate, the increase in estimated metallurgical recoveries was partially offset by higher mining costs (due mainly to higher assumed fuel costs). This resulted in no change in pit shell limits and a 1% increase in contained gold in the Ore Reserve to 747 koz gold (refer to Table 3). However, the production schedule underpinning the 2023 FSUA delivers 18.4% higher LOM gold production relative to the 2022 FSU due to the increase in recoveries.

The review of capital costs identified a number of opportunities to reduce the upfront capital requirements adopted for the Project estimates in the 2022 FSU, most notably the use of leased, rather than purchased, mobile equipment fleet. This has resulted in a 9% reduction in upfront capital requirements.

Updated operating costs have also been incorporated into the 2023 FSUA. This incorporates additional costs associated with Caustic Leaching as well as other updated cost of inputs. This has resulted in a 29% increase in mining costs, largely as a result of higher fuel and maintenance costs. This is consistent with cost inflation across the mining industry in the period since the 2022 FSU studies were undertaken.

The combined changes to the economic assessment in the 2023 FSUA have resulted in a significant uplift in value for the Sihayo Starter Project with a 48% increase in post-tax Net Present Value ("**NPV**")[3]. A comparison of the 2022 FSU and 2023 FSUA key metrics are shown in Table 1.

Table 1: Comparison of 2023 FSUA and 2022 FSU Outputs (USD1,900/oz gold price)

Metric	Unit	2023 FSUA	2022 FSU
LOM tonnes processed	kt	12,303	12,070
LOM strip ratio	waste:ore	4.5x	4.6x
Average gold head grade	g/t Au	1.97	2.00
Contained gold ounces processed	koz	781	774
Average metallurgical recoveries	%	83.6%	71.2%
Total gold produced	koz	653	551
Total site operating costs (incl. royalties)	USD/t	43.6	37.0
Total upfront capital[4]	USD million	221	243
All-In Sustaining Cost ("AISC")	USD/oz	1,007	972
Pre-tax LOM cash flow	USD million	353	258
Post-tax LOM cash flow	USD million	277	202
Post-tax NPV (at 5% discount rate)	USD million	169	114
Internal Rate of Return ("IRR")	%	20.4%	16.2%
Payback period	years	3.75	4.00

Geological Model and Mineral Resources

The Mineral Resource estimate for the Sihayo and Sambung deposits has not been updated since the 2022 FSU, however, work is underway to incorporate results from the latest drilling targeting the underground potential at Sihayo into an updated Mineral Resource estimate.

Table 2 shows the Mineral Resource estimate prepared by Spiers Geological Consulting ("SGC") in during the June 2023 quarter.

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[3] Assumes USD1,900/oz gold price and 5% discount rate

[4] Total Upfront Capital includes site capital expenditure, contingency, mobile fleet (under lease arrangement), pre-stripping, pre-production operating costs and working capital required. Full breakdown of upfront capital expenditure and upfront capital required shown in Table 6.

Table 2: Mineral Resource estimate for Sihayo and Sambung deposits reported at 0.4 g/t Au cut-off

Deposit	Category	Tonnes (kt)	Grade Au (g/t)	Au (koz)
Sihayo	Measured	5,391	2.11	366
	Indicated	12,611	1.79	726
	Inferred	6,798	1.5	335
	Subtotal	24,800	1.8	1,427
Sambung	Measured	1,793	1.42	82
	Indicated	911	1.55	45
	Inferred	269	1.3	11
	Subtotal	2,973	1.4	138
Total	Measured	7,184	1.94	448
	Indicated	13,522	1.77	771
	Inferred	7,067	1.5	346
	Total	27,773	1.8	1,565
Notes: Figures may not sum due to rounding Significant figures do not imply an added level of precision				

Results from the most recent drilling program at Sihayo, which targets beneath pit mineralisation, has not yet been incorporated into the Mineral Resource estimate presented in Table 2. Final results from the program are expected shortly and an updated Mineral Resource estimate will follow.

Mine Plan and Ore Reserve Estimate

A LOM mine plan was prepared by AMC to develop an updated Ore Reserve estimate and underpin the economic model for the Project. The revised mine plan is based on a six-year open pit operation producing 653 koz of gold from 781 koz contained gold over the LOM. This mine plan comprises the Ore Reserve estimate of 11.7 Mt at 1.98g/t Au for 747 koz of gold (refer to Table 3).

Inferred Mineral Resource within the open pit design above the economic break-even cut-off grade was included in the LOM processing schedule. This represents 4.7% of the total process plant feed by tonnage and 4.3% by contained gold. The economic viability of the Sihayo Starter Project is not sensitive to the inclusion of Inferred Resource in the processing schedule, however the Inferred Resource material in the mine plan is not included in the Ore Reserve estimate.

Table 3: Updated Ore Reserves estimate for Sihayo and Sambung deposits[5]

Deposit	Proved			Probable			Total		
	Tonnes (kt)	Gold (g/t)	Gold (koz)	Tonnes (kt)	Gold (g/t)	Gold (koz)	Tonnes (kt)	Gold (g/t)	Gold (koz)
Sihayo	4,454	2.12	304	5,636	1.96	356	10,090	2.03	660
Sambung	1,075	1.72	59	562	1.58	29	1,638	1.67	88
Total	5,529	2.04	363	6,198	1.93	384	11,727	1.98	747

Notes:

- All tonnages are dry metric tonnes.
- Ore Reserves are reported inclusive of Mineral Resources.
- Sihayo Ore Reserves reported at a Net Smelter Return ("**NSR**") cut-off grade of USD 22.18 per tonne of oxide, USD 22.40 per tonne of transitional, and USD 22.99 per tonne of fresh ore.
- Sambung Ore Reserves reported at a NSR cut-off grade of USD 22.24 per tonne of oxide, USD 22.88 per tonne of transitional, and USD 23.48 per tonne of fresh ore.
- Ore loss and dilution applied using a 5 m x 5 m x 5 m selective mining unit.
- Numbers have been reported to significant figures and may not add due to rounding.

The updated Ore Reserve estimate and LOM plan are similar to the estimates underpinning the 2022 FSU. The increased metallurgical recovery estimates used in the pit optimisations have been partially offset by the higher mining costs resulting in no change to the pit size. A comparison of the 2023 FSUA and 2022 FSU Ore Reserve metrics are shown in Table 4.

Table 4: Comparison of 2023 FSUA and 2022 FSU Ore Reserves and mine plan

Metric	Unit	2023 FSUA	2022 FSU
Ore Reserve tonnes	Mt	11.7	11.5
Ore Reserve grade	g/t Au	1.98	2.00
Ore Reserve contained ounces	koz	747	741

Figure 1 shows the 2023 FSUA LOM mining profile.

[5] The Sihayo Starter Project Ore Reserve estimate is classified and reported in accordance with the JORC Code 2012.

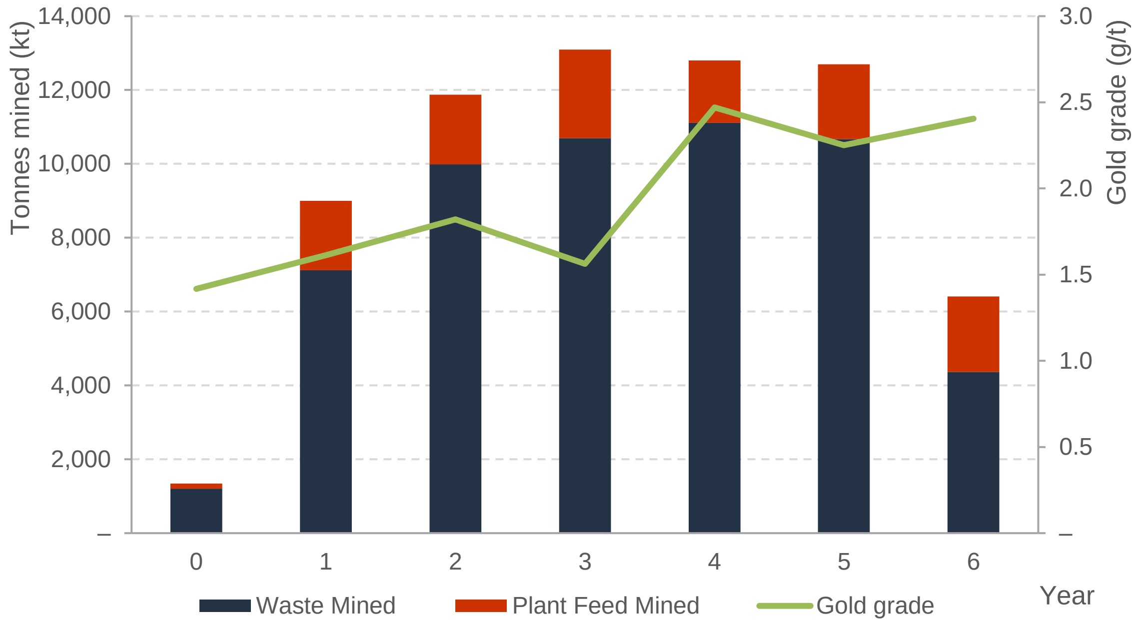

Figure 1: Mining profile underpinning the 2023 FSUA

Processing

The Sihayo process plant has been designed to treat the expected range of mineralisation types to be delivered during the LOM mining schedule. The mineralisation was characterised into seven categories based on rock type (regolith, jasperoid and clay-sulphide) and oxidation state (oxide, transitional and fresh).

The processing plant flowsheet was updated during the 2023 FSUA to incorporate the high pH pre-leaching phase. Incorporating caustic pre-leaching requires only minor changes to the 2022 FSU processing plant design. These include the addition of two new agitated leach tanks, a bulk storage tank for liquid caustic and a silo for bulk ferric sulphate deliveries.

Figure 2 shows the processing flow sheet incorporating these changes.

It is envisaged that the plant feed will be batch-treated, with only certain transitional and fresh material being processed using the high pH pre-leaching step. Figure 3 shows the annual processing throughput broken down by mineralisation oxidisation type (oxide, transitional and fresh) and standard CIL or Caustic ("CAL") for transitional and fresh material. Over the LOM, approximately 70% of transitional material is processed using high pH pre-leaching, while 63% of fresh material is processed using high pH pre-leaching. The remainder is processed using the standard CIL route along with all oxide material.

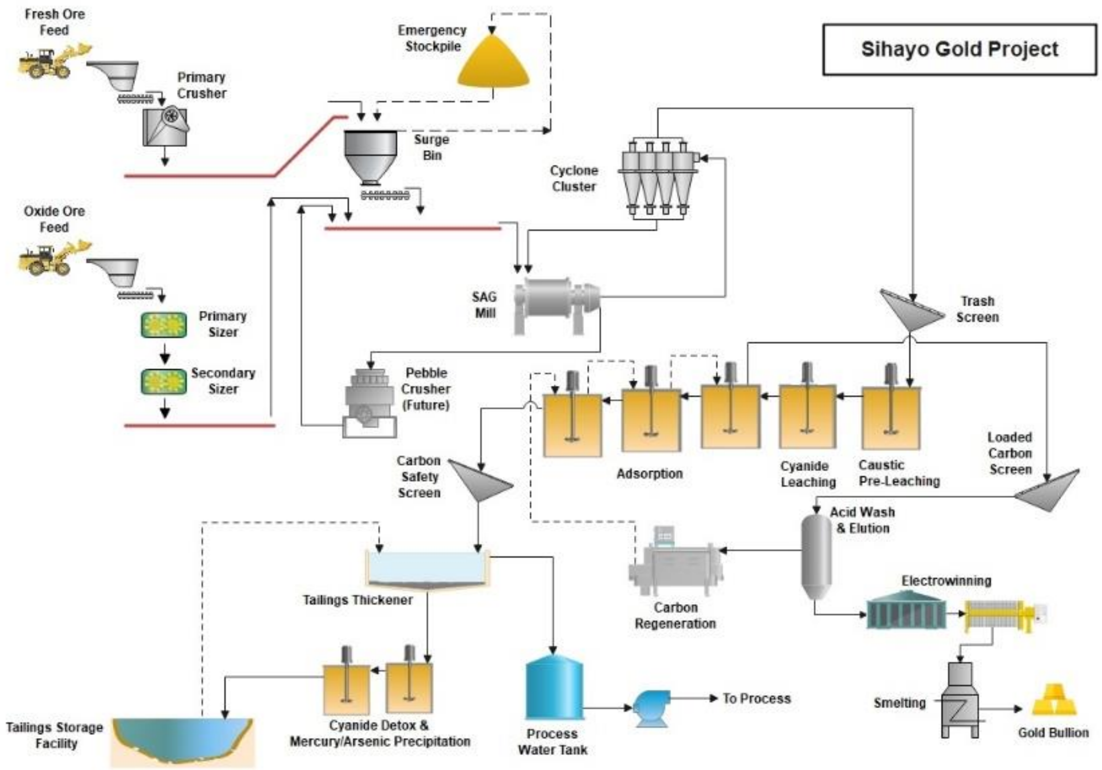

Figure 2: Updated processing flow sheet for the Sihayo Starter Project

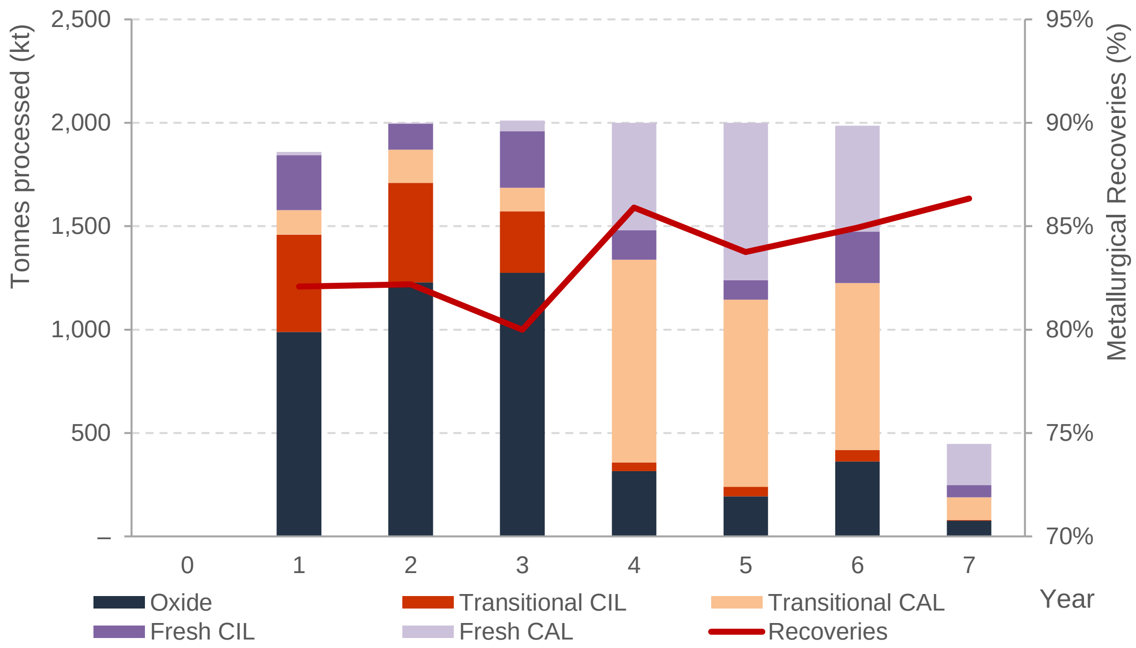

Figure 3: Processing schedule by mineralisation type and processing route

Figure 4 shows the gold production profile over the LOM.

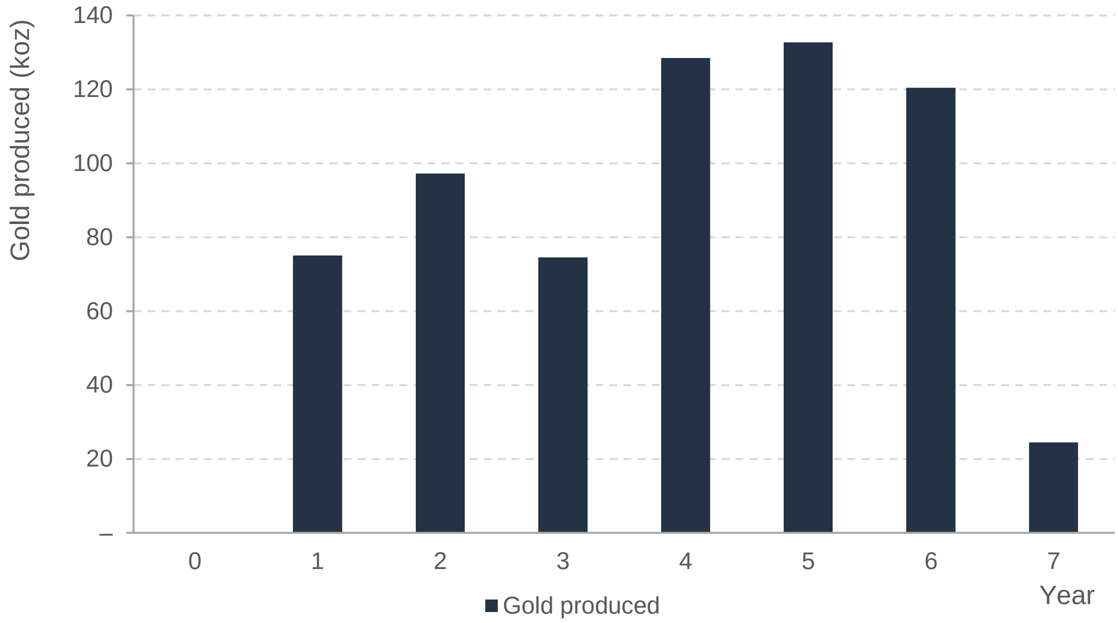

Figure 4: Gold production profile for the 2022 FSU

Infrastructure and site layout

The site layout and infrastructure for the Sihayo Starter Project has not undergone any significant changes in the 2023 FSU Addendum given the largely similar mine plan and limited changes to the processing plant required to incorporate the caustic pre-leaching step. The site layout is shown in Figure 5.

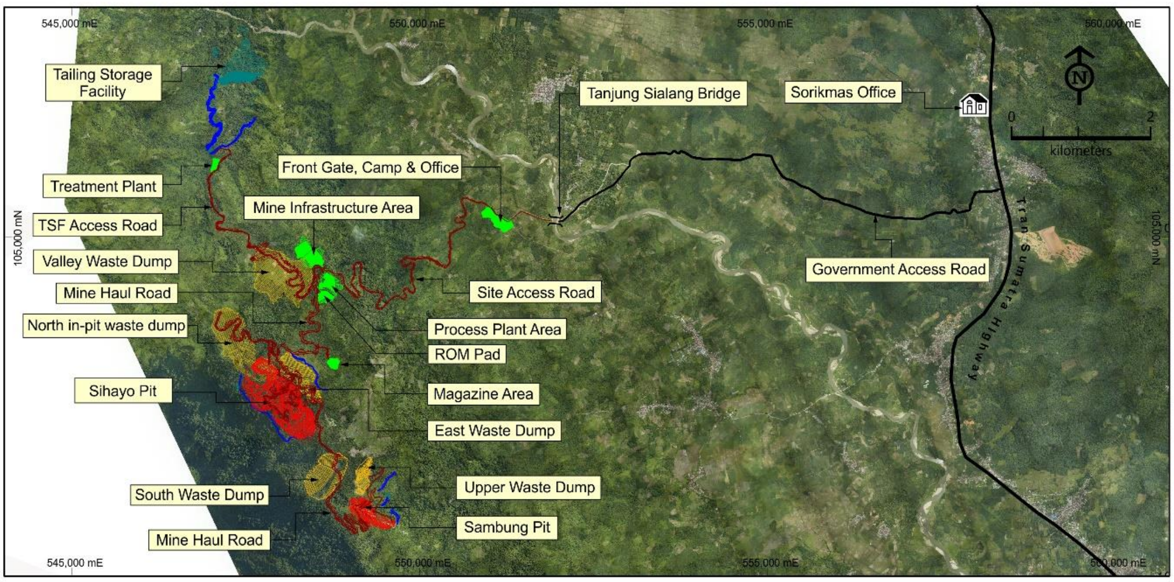

Figure 5: Site layout for the Sihayo Starter Project

Operating cost estimates

Sihayo reviewed the operating cost estimates in the 2022 FSU to incorporate both the significant cost inflation that has occurred across the industry since the 2022 FSU was completed, and changes to the project resulting from the incorporation of the high pH pre-leaching into the processing flow sheet. A summary of the operating costs is shown in Table 5.

Mining costs have increased by 29% from the 2022 FSU to the 2023 FSUA, driven primarily by a 31% increase in the fuel price assumption from USD0.65/L to USD0.85/L.

Processing costs have increased due to the increased reagent cost associated with Caustic Leaching compared with standard CIL processing. The additional cost of reagents compared to standard CIL is estimated at approximately USD8.4/t for transitional and fresh material.

Table 5: Comparison of 2023 FSUA and 2022 FSU site operating costs

Metric	Unit	2023 FSUA	2022 FSU
Mining cost	USD/t material	3.41	2.65
Processing cost	USD/t ore	13.9	12.2
General and Administrative cost	USD/t ore	6.0	5.7
Total site cost (excl. royalties)	USD/t ore	38.5	32.7
Total site cost (incl. royalties)	USD/t ore	43.6	37.0

Mining costs are inclusive of mine planning, survey, grade control, drilling, assaying, blasting, loading and hauling, pumping and drainage, mining equipment maintenance and waste dump construction expenses. Mining costs also included the effects of different ore type attributes (oxide, transitional and fresh) on equipment productivities. A benchmarking exercise against comparable mines was conducted to verify the mining cost estimates.

Processing cost estimates were derived from estimates of reagent use, power demand as well as labour and maintenance costs based on the metallurgical test work and processing plant design. Processing costs also incorporate the impacts of oxide, transitional and fresh ore on plant throughput rates and grinding media consumption, given the different levels of hardness for the mineralisation types. Processing operating costs include cyanide detoxification, tailings disposal into the Tailings Storage Facility ("**TSF**") and water treatment costs.

G&A costs were estimated by the Company from first principals and benchmarked against other Indonesian operations and industry standards.

Capital cost estimates

The Company has completed a thorough review of the capital cost estimate from the 2022 FSU to identify opportunities for savings. Capital cost estimates have been updated to reflect the savings identified as well as updated input costs and changes to project design to incorporate the caustic pre-leaching. The largest reduction in upfront capital has been the assumption of a leased, rather than purchased mobile equipment fleet. Lease terms are based on current market rates, with lease costs incorporated into the future cash flows of the Project once in operation.

A comparison of the upfront capital cost estimates for the 2023 FSUA and 2022 FSU are shown in Table 6.

Table 6: Comparison of 2023 FSUA and 2022 FSU upfront capital cost estimates

Capital Cost (USD million)	2023 FSUA	2022 FSU
Project General	9	10
Open Pit Mining Infrastructure	12	12
Processing Plant	50	52
TSF	29	31
Infrastructure	18	20
Site Support Facilities	8	8
Temporary Construction Facilities	1	1
Owner's Costs	40	39
Total Capital Expenditure	168	173
Mobile Equipment	7	23
Establishment of Ops Team During Construction	11	10
Pre-production Mining Costs	11	8
Working Capital	2	3
Total Upfront Capital (excl. Contingency)	199	218
Contingency	22	25
Total Upfront Capital (incl. Contingency)	221	243

Sources of Estimates

Sihayo engaged the same consultants to update the relevant parts of the 2023 FSUA as well as the 2022 FSU. Table 7 shows the consultants engaged to compile the capital and operating costs for the 2023 FSUA.

Table 7: Consultants engaged for the 2022 FSU

Consultant	Scope of work
AMC Mining Consultants (AMC)	Mine optimisations, mine design and scheduling, operating and capital cost estimates for mining activities and equipment
Primero Group	Updated process plant design, estimation of processing consumables to derive operating cost estimates
Merdeka Mining Services (MMS)	Earthworks, roadworks, civil works, building design and associated cost estimates

Financial Model Outputs

Table 8 shows the key financial metrics of the 2023 FSUA versus the 2022 FSU. The changes to the Project have resulted in a 48% uplift in NPV from USD114 million to USD169 million (at a USD1,900/oz gold price and 5% discount rate). This is driven by the higher metallurgical recoveries, increased gold production and consequent higher revenue resulting from the incorporation of Caustic Leaching into the project design.

Table 8: Financial outputs for the 2022 FSU assuming USD1,900/oz gold price

Metric	Unit	2023 FSUA	2022 FSU
LOM Net Revenue[6]	USD million	1,233	1,041
LOM Operating Costs (incl. royalties)[7]	USD million	536	446
LOM Capital Costs (incl. contingency)[8]	USD million	323	315
Closure costs	USD million	22	22
Pre-tax LOM cash flow	USD million	353	258
Post-tax LOM cash flow	USD million	277	202
NPV (post-tax, 5% discount rate)	**USD million**	**169**	**114**
IRR (post-tax)	**%**	**20.4%**	**16.2%**

Valuation Sensitivities

Valuation for the Sihayo Starter Project is most sensitive to the revenue drivers, being gold price, metallurgical recoveries and head grade. A 10% reduction of gold price, recovery or head grade reduces NPV by approximately 43%. Increasing the gold price, recovery or head grade by 10% increases NPV by approximately 43%. Increasing or decreasing the capital expenditure 10% decreases and increases the NPV by approximately 10%. Increasing or decreasing the operating expenditure by 10% decreases and increases the NPV by approximately 18%. Figure 6 shows the valuation sensitivities for revenue drivers (gold price, metallurgical recoveries and head grade have similar sensitivities), capex and opex.

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[6] Gross revenues less realization costs (doré transport and refining)

[7] Includes all pre-production mining costs and working capital

[8] Includes LOM sustaining capital costs and excludes pre-production mining costs and working capital

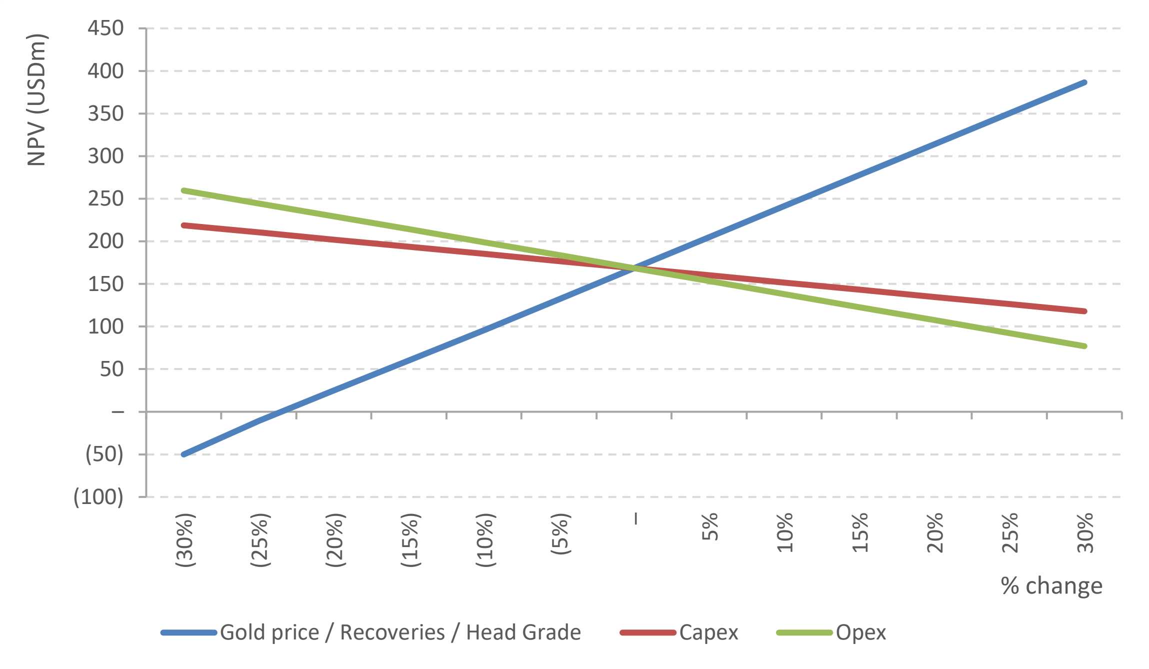

Figure 6: Key valuation sensitivities for the 2023 FSUA (5% discount rate, USD1,900/oz gold price)

Further Opportunities

The Caustic Leaching opportunity is transformational for the Sihayo Starter Project. It not only results in higher gold production from the existing open pit, but it also has the potential to unlock additional high-grade mineralisation beneath the base of the pit. This mineralisation was previously considered uneconomic due to its low predicted recoveries however, Caustic Leaching presents an opportunity for economic extraction of this material.

With higher estimated recoveries for the deeper, higher grade, mineralisation below the Sihayo pit due to Caustic Leaching, the Company believes there is now potential to develop an underground mine at Sihayo. This may be either in conjunction with the open pit or as a standalone operation. The Company has therefore focused on increasing the known high-grade mineralisation beneath the pit in order to provide sufficient material to support a viable underground mining operation.

Sihayo Beneath Pit Drilling and Underground Mining

The Company recently completed Stage 2 of a drilling program targeting below pit mineralisation at the Sihayo Starter Project. This follows the Stage 1 drilling program completed in 2022. These drilling programs have tested for extensions to deeper, higher-grade gold mineralisation located beneath the southern end of the planned pit limits of the Sihayo Starter Project.

The Company has reported exciting intercepts from the recent Sihayo drilling programs (refer to ASX:SIH announcements on 25 October 2022, 9 May 2023, 24 March 2023 and 9 March 2023). The results indicate extensions to existing known high-grade mineralisation beneath the Sihayo pit shell and validate the Company's exploration model for the deposit.

These intercepts enhance the potential to develop an underground mine at Sihayo. Importantly, due to favourable topography, initial studies indicate that if an underground mine is shown to be feasible, it could be scheduled early in the mine life and produce in parallel with (rather than after) the open pit. Such an operation would therefore provide an opportunity to increase gold production early in the mine life by displacing lower grade open pit mill feed with higher grade underground material early in the production schedule and increase mine life. The current constraint on total project production is the capacity of the TSF which is nominally limited to 14 million tonnes and expandable to approximately 16 million tonnes if necessary. The Company has therefore initiated preliminary studies to assess the technical and economic viability of underground mining methods.

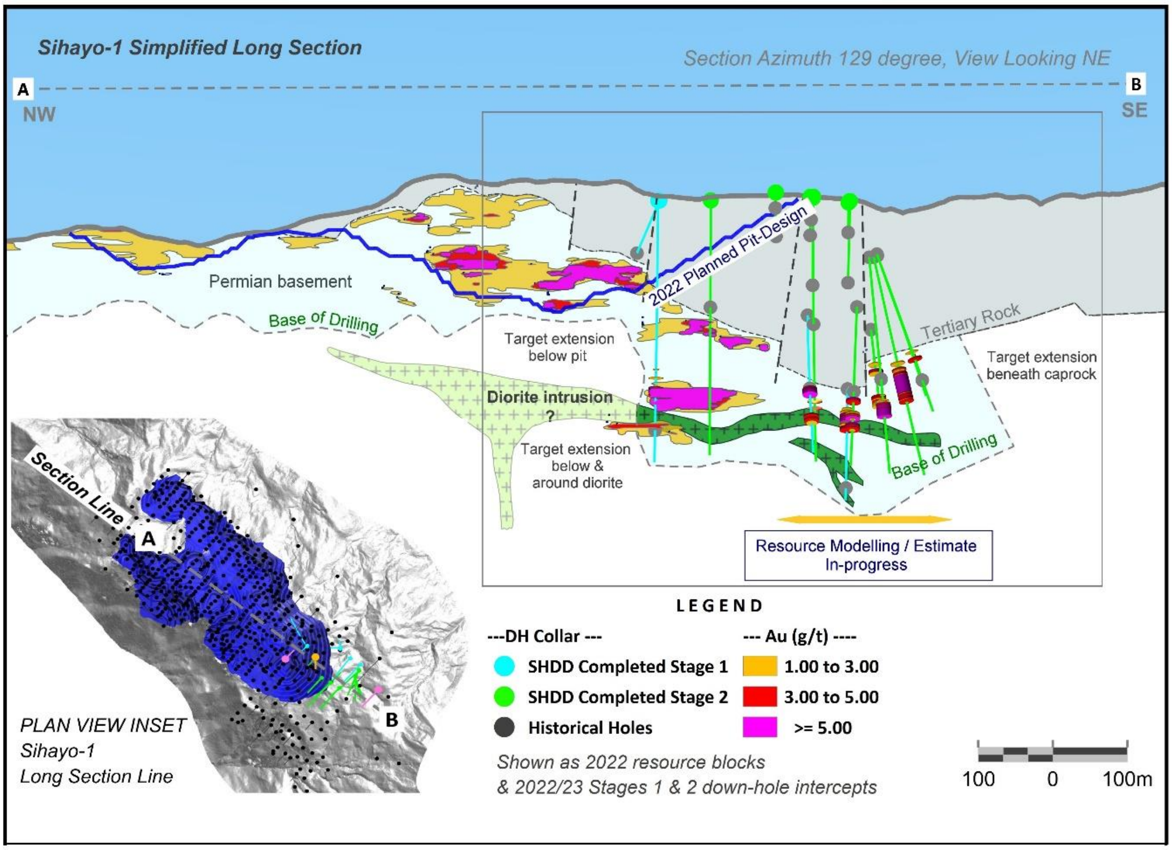

Figure 7: Long section of Sihayo pit showing beneath pit mineralisation and intercepts from the recent Stage 2 drilling program[9]

The Company has also commenced an update to the resource model to incorporate the latest drilling results and expects that an updated Mineral Resource estimate will be completed during Q2 CY2023. Following this, the Company will undertake a full Concept Study on the underground mining opportunity which will include a trade-off assessment of open pit mining versus underground mining throughout the Sihayo deposit.

Further Exploration

The Sihayo development project occurs in a large block of highly prospective exploration ground secured under long-term tenure. Multiple gold and polymetallic prospects have been defined by historic exploration. These prospects offer excellent near-mine and regional exploration upside to discover additional gold resources with potential to enhance the value of the project. Two prospects showing significant potential for 'stand-alone' gold discoveries, Hutabargot Julu and Tambang Tinggi, have been investigated by the Company over the past two years. These are briefly described below.

The Company has conducted significant exploration on the Hutabargot Julu prospect, which is located approximately 6 km south of the planned Sihayo Starter Project. The Company

[9] Refer to ASX:SIH announcement "*Further Exciting Intercepts from Sihayo Drilling*" dated 9 May 2023

believes that there is potential for a number of satellite deposits to be developed at Hutabargot Julu.

Sihorbo South and Penatapan are epithermal gold-silver vein targets within Hutabargot Julu. Scout drilling programs conducted on both targets during 2021 produced highly encouraging results. These confirmed the presence of a large epithermal vein field on the Hutabargot Julu project containing multiple centres of gold-silver mineralisation hosted in volcanic rocks. Significant gold-silver intercepts returned on both targets show potential for shallow gold-silver resources with discrete zones of high-grade mineralisation. A maiden Mineral Resource estimate for the Sihorbo South was released in September 2022 (refer to ASX:SIH announcement "*Sihorbo South Maiden Mineral Resource - Updated*" dated 7 September 2022). The Company believes there is potential for deposits at Hutabargot Julu to be satellite open pit operations for the Sihayo Starter Project.

Further afield, in the south block of the Sihayo-Pungkut 7th Generation Contract of Work ("CoW"), target generative sampling work over the past six months has been on-ground exploration work including prospecting and surface sampling in the northeast corner of the block. This area contains multiple gold and base metal prospects highlighted by historical Dutch and more recent local artisanal mine workings. Regional stream sediment sampling completed during the late 1990s highlighted widespread gold and associated base metal anomalies along the *Tambang Tinggi mineral belt* which extends to the northwest and joins the *Sihayo gold belt*. The Tambang Tinggi mineral belt features a complex zone of elevated regional magnetics and associated diorite and granodiorite intrusions into volcanic and limestone basement rocks, which are overlain by dacitic volcanic cover rocks. These rocks are cut by multiple fault strands within the Trans Sumatran Fault Zone.

Tambang Tinggi contains the historical *Pagaran Siayu* mine (or *Tambang Ubi*) located in the Muara Sipongi subdistrict. The results from recent sampling at Tambang Ubi have confirmed the presence of high-grade gold-copper skarn mineralisation (refer to ASX:SIH announcement on 9 May 2023). Earlier encouraging results from prospecting and sampling at Tambang Ubi and elsewhere at Tambang Tinggi have previously been reported (Refer to SIH:ASX announcements dated 25 January 2022 and 6 April 2022). The large distribution of local artisanal workings and consistency of gold and copper anomalies detected in surface rock chips collected to-date are encouraging and show potential for significant gold-copper discoveries along the *Tambang Tinggi mineral belt*.

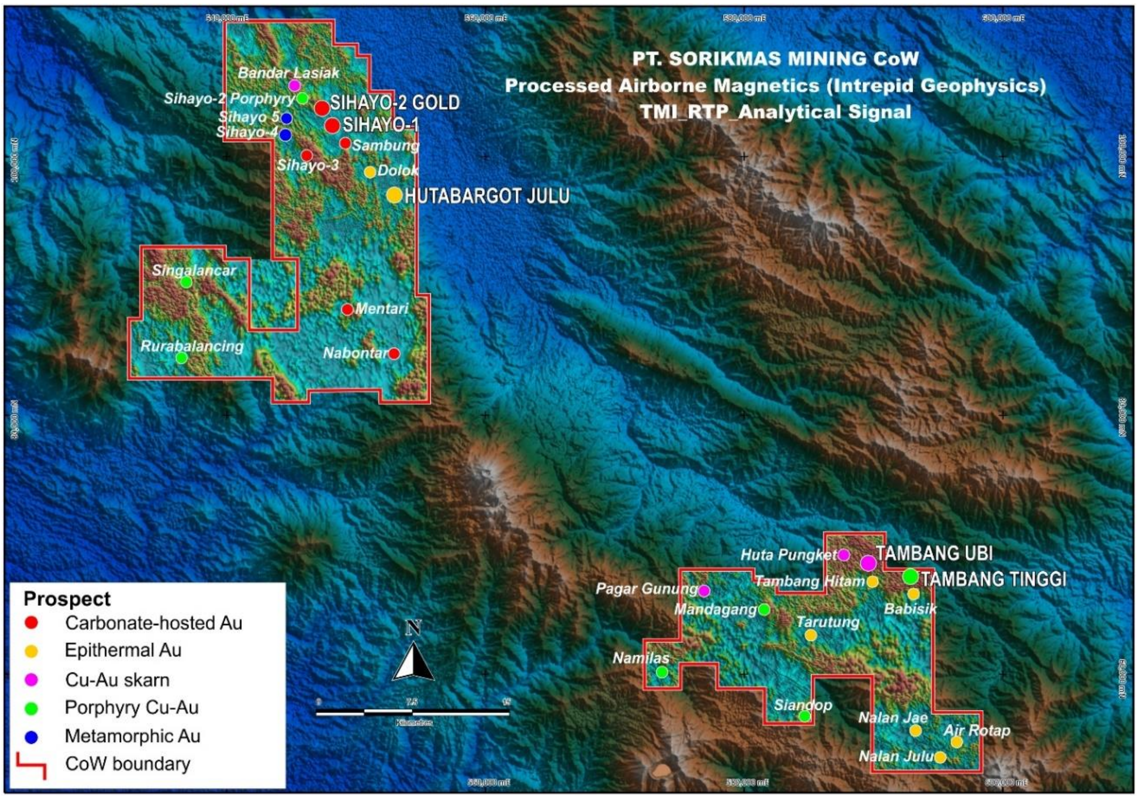

Figure 8: Airborne magnetics of CoW showing exploration targets

This announcement has been authorised by Sihayo's Board of Directors.

For further information, please contact:

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Chief Financial Officer

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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.

Metallurgy and Process Engineering Design Results

The information in this report which relates to Metallurgy and Process Engineering Design Results is based on, and fairly represents, information compiled by Mr Graham Brock (BSc Eng, ARSM), who is a contract employee of the Company. Mr Brock does not hold any shares in the company, either directly or indirectly. Mr Brock is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the processing of 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 Brock consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

Mineral Resources

The information in this report which relates to Mineral Resources is based on, and fairly represents, information and supporting documentation compiled by Mr Robert Spiers (BSc Hons.) for Spiers Geological Consultants (SGC, Pty. Ltd.). Mr Spiers is the principal Consultant and Director of SGC.

Mr Spiers is a member of the Australian Institute of Geoscientists (AIG ID: 3027) 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 Spiers consents to the inclusion in the report of the matters based on this information in the form and context in which it appears. Mr Spiers holds 1,668,908 shares in the Company. These were purchased in accordance with SIH's Securities Trading Policy (ASX Guidance Note 27 Trading Policies). The aforementioned shareholding does not constitute a material holding in the Company.

Ore Reserves

The information in this Statement that relates to the Sihayo Starter Project Ore Reserve estimate is based on information compiled and reviewed by Mr Graham Brock, Mr Brett Stevenson, and Mr Mark Flanagan, Competent Persons as defined in the JORC Code 2012.

Mr Brock is a contract employee of the Company and is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Brock is the Competent Person responsible for the metallurgical modifying factors of the Ore Reserve estimate.

Mr Stevenson is a full-time employee of Knight Piésold Pty Ltd and is a Member of The Australasian Institute of Mining and Metallurgy. Mr Stevenson is the Competent Person responsible for the tailings modifying factors (deposition and storage facility design) of the Ore Reserve estimate.

Mr Flanagan is a full-time employee of AMC Consultants Pty Ltd and is a Chartered Professional Member of The Australasian Institute of Mining and Metallurgy. Except for metallurgical and tailings modifying factors, Mr Flanagan is responsible for the remaining modifying factors informing the Ore Reserve estimate.

Mr Brock, Mr Stevenson, and Mr Flanagan have sufficient experience that is relevant to the Sihayo Starter Project style of mineralisation and or 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'.

The Competent Persons have not undertaken a site visit due to COVID-19 Pandemic travel restrictions. The Competent Persons have reviewed core pictures, virtually toured the core shed, and discussed the expected site operating conditions with Sihayo personnel that have been to the Project site.

The information compiled by the Competent Persons was prepared by technical specialists under direction of the suitably qualified personnel that provided physical, technical, and financial inputs to the Sihayo Starter Project 2022 FSU report and Ore Reserve estimate.

The Competent Persons are satisfied that the work of the technical specialists is acceptable for the purposes of Ore Reserve estimation. Each person has provided consent statements for this report in their area of expertise confirming that the modifying factors are suitable for the estimation of an Ore Reserve according to the JORC Code 2012.

In undertaking the work related to the Sihayo Starter Project; the Competent Persons have acted as an independent party, have no interest in the outcome of the project, and have no business relationship with Sihayo or any of the joint venture companies other than undertaking those individual technical consulting assignments as engaged, and being paid according to standard per diem rates with reimbursement for out-of-pocket expenses. Therefore, the Competent Persons believe that there is no conflict of interest in undertaking the assignments which are the subject of this report.

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This announcement may or may not contain certain "forward-looking statements". All statements, other than statements of historical fact, which address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future, are forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "believe", "plan", "estimate", "targeting", "expect", and "intend" and statements that an event or result "may", "will", "can", "should", "could", or "might" occur or be achieved and other similar expressions. These forward-looking statements, including those with respect to permitting and development timetables, mineral grades, metallurgical recoveries, potential production reflect the current internal projections, expectations or beliefs of the Company based on information currently available to the Company. Statements in this document that are forward-looking and involve numerous risks and uncertainties that could cause actual results to differ materially from expected results are based on the Company's current beliefs and assumptions regarding a large number of factors affecting its business. Actual results may differ materially from expected results. There can be no assurance that (i) the Company has correctly measured or identified all of the factors affecting its business or the extent of their likely impact, (ii) the publicly available information with respect to these factors on which the Company's analysis is based is complete or accurate, (iii) the Company's analysis is correct or (iv) the Company's strategy, which is based in part on this analysis, will be successful. The Company expressly disclaims any obligation to update or revise any such forward-looking statements.

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Appendix 1: Feasibility Study Update Addendum – Summary

Background

The Sihayo Starter Project 2022 Feasibility Study Update ("**2022 FSU**") was published in February 2022[10]. This study update was preceded by the 2020 Definitive Feasibility Study (2020 DFS). The scope and scale of the project described in the 2020 DFS encompassed the development of the Sihayo and Sambung gold deposits as conventional open pit mines, with an ore processing plant using conventional carbon-in-leach ("**CIL**") gold extraction, and a valley-fill tailings storage facility ("**TSF**").

The 2022 FSU provided an updated Mineral Resource and Ore Reserve estimate and projected 6.25-year mine life and a plant throughput rate of up to 2.0 Mtpa.

During the 2022 FSU studies the Company identified the opportunity to increase metallurgical recoveries at the Sihayo Starter Project using sodium hydroxide (NaOH or caustic soda) at a high pH (pH 13) prior to CIL gold recovery in the processing flow sheet. Subsequent to the completion of the 2022 FSU, the Company completed an extensive metallurgical test work program to further assess the high pH pre-leaching phase ("**Caustic Leaching**") opportunity.

Basis of Feasibility Study Update Addendum

The primary objective of the 2023 Feasibility Study Update Addendum ("**2023 FSUA**") is to incorporate the Caustic Leaching into the design for the Sihayo Starter Project. This involved using the results of the metallurgical test work to update the metallurgical recovery function employed in the Mineral Resource model. The updated metallurgical recovery function was then used to update mine optimisations to generate new pit shells, and mining and processing schedules for the Project.

Minimal changes to the site infrastructure were required to incorporate the Caustic Leaching, requiring the addition of two new agitated leach tanks, a bulk storage tank for liquid caustic and a silo for bulk ferric sulphate deliveries. All other site infrastructure remained the same as for the 2022 FSU. The Company undertook an extensive review of the Project's capital expenditure estimates to identify opportunities to reduce the capital requirements for the Project as well as incorporating the changes to the processing plant into the capital estimate.

Updates to the operating cost estimates were also undertaken to both incorporate the Caustic Leaching and reflect the most recent industry benchmarks.

Location

The Sihayo Starter Project is located within the Sihayo-Pungkut 7th Generation Contract of Work ("CoW") held by PT Sorikmas Mining ("**PTSM**"). The CoW is located in Mandailing Natal Regency of the North Sumatra Province on the island of Sumatra, Republic of Indonesia (Figure A - 1). The Sihayo and Sambung gold resources are contained within the northern block of the CoW on the upper portion of a north-west striking mountain range controlled by the Trans-Sumatran Fault Zone (TSFZ). Elevations of surface expressions of the resource are between 985–1,300 metres above mean sea level (AMSL).

[10] ASX Market Release – 17 February 2022, "*Project Update and Launch of Strategic Review*"

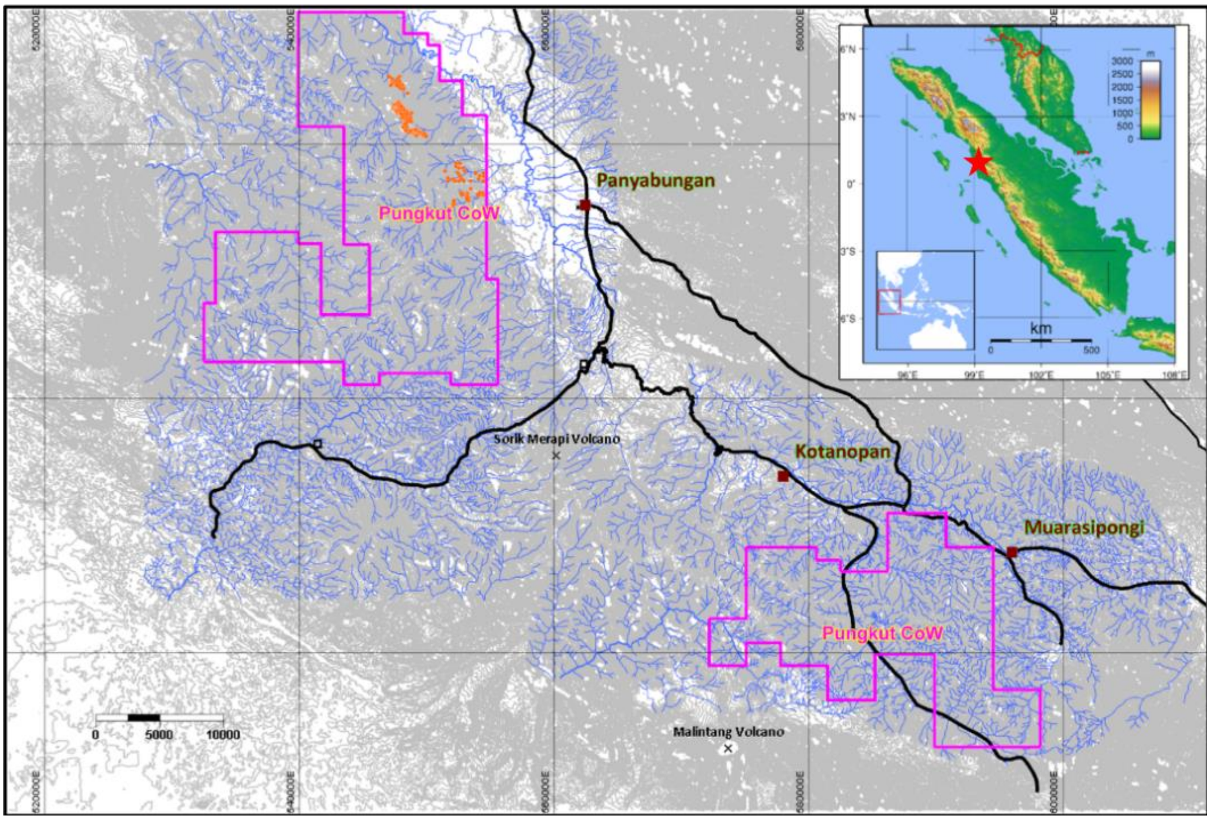


Figure A - 1: Sihayo Pungkut CoW location

The project area is bounded by the Batang Gadis National Forest, Sihayo River and Aek Tombang River to the west and the Batang Gadis river to the east. The eastern bank of the Batang Gadis River is predominantly farmland interspersed with small villages. The Regency captial Panyambungan lies further south and to the east of the river along the Trans-Sumatran Highway. The western bank is less developed and hosts several small villages. The Trans-Sumatran Highway provides access to Dr Ferdinand Lumban Tobing Airport, to the north in Sibolga. The airport provides regular flights to major Indonesian cities, including Jakarta.

Access to the Project is along an existing Government Access Road (GAR), off the Trans-Sumatra Highway in Bukit Malintang sub-district located approximately 120 km south of Pinangsori airport and 25 km north of Panyabungan. The 6.3 km access road to the front gate will comprise upgrading the existing GAR and constructing a new road on procured land. A 100 m bridge with 100 m causeway will be constructed to span the Batan Gadis River and flood plain.

Development of the project will provide the North Sumatra Province with its second significant gold mining and processing operation. PT Agincourt Resources (PTAR) established and commenced production of the Martabe gold mine in 2012. Martabe is approximately 100 km north-west along the Trans-Sumatran Highway from Sihayo, in the district of South Tapanuli. PTAR has a workforce comprising more than 3,000 employees and contractors, over 99% of whom are Indonesian nationals, and more than 70% of whom have been recruited from residents of districts adjacent to the mine. The establishment history and operating model for Martabe provides PTSM with useful reference and benchmark for the development of Sihayo.

Tenure

PTSM is an Indonesian company owned under a joint venture arrangement between Aberfoyle Pungkut Investments Pte Ltd (API) (75%) and PT Aneka Tambang (Antam) (25%). API is a wholly owned subsidiary of the Australian Stock Exchange listed Sihayo Gold Limited (ASX:SIH). Antam undertakes exploration, excavation, processing and marketing of nickel, ferronickel, gold, silver, bauxite and coal.

The CoW covers an area of 66,200 ha (refer to Figure A - 1). The CoW was converted into operation-production phase on 7 December 2017, which runs until 6 October 2049. At the end of this phase, PTSM has the right to two 10-year extensions under prevailing Indonesian mining law.

Geology, Mineral Resources and Exploration

Geology – Sihayo and Sambung Deposits

The Sihayo gold belt, which hosts the Sihayo and Sambung gold deposits, is a 15 km long NW-SW trending corridor of Permian calcareous volcano-sedimentary rocks and associated intrusions. These rocks are highly prospective for sediment-hosted gold, epithermal gold-silver veins, and porphyry-related gold and copper mineralisation. The Sihayo gold belt CoW is located on fault strands from the western margin of the dextral transtensional jog in the TSFZ (Figure A - 2).

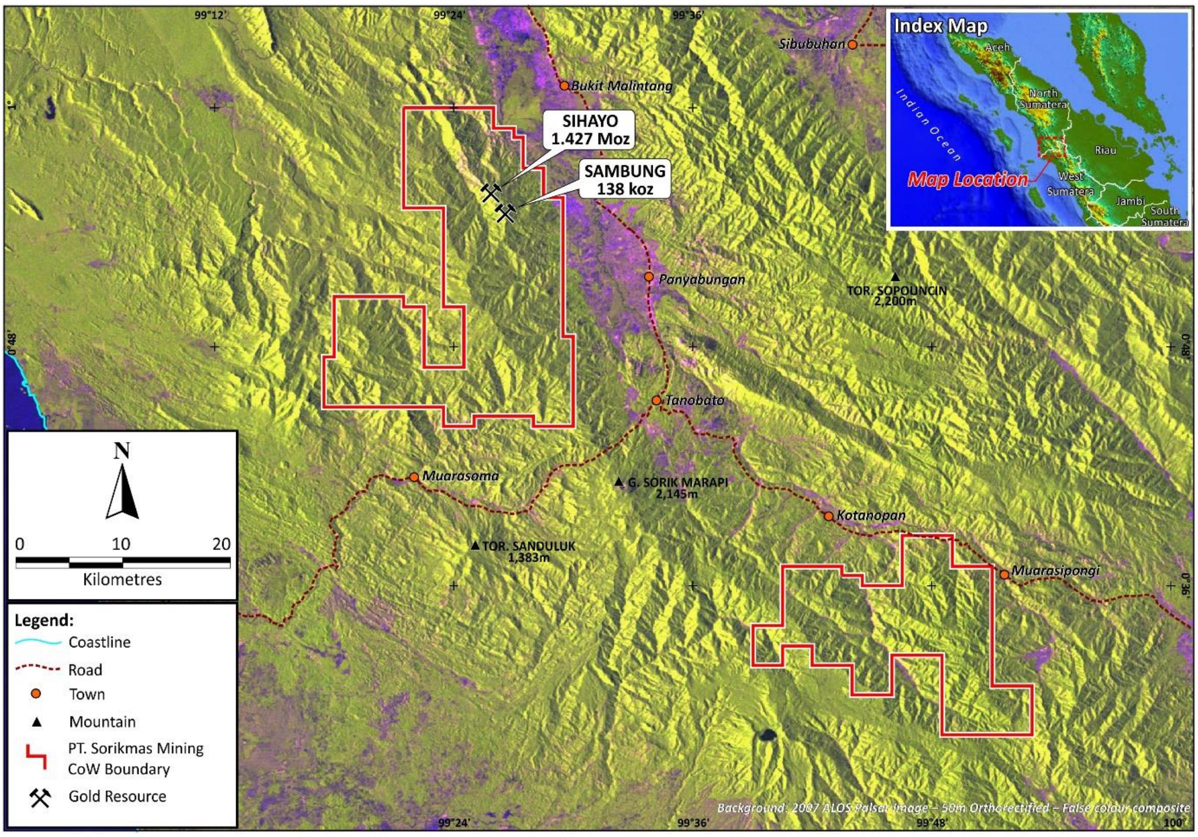


Figure A - 2: Sihayo Starter Project – CoW boundary map with location of Sihayo and Sambung Mineral Resources

The stratigraphic and structural architecture of the Sihayo and Sambung gold deposits is complex due to the interaction of inter-fingering carbonate and volcano-sedimentary rock types, multiple overprinting alteration and mineralisation events, structural complexity associated with the evolution of the TSFZ, and a complex karstification, erosional, and regolith history.

The bulk of the gold mineralisation at Sihayo and Sambung is hosted by a NW-SW striking, moderately NE-dipping package of Permian shallow marine fossiliferous limestones. The gold is generally submicron size and, unless weathered (oxidised), it is locked in disseminated fine-grained arsenian pyrite mineralisation in multiple stratabound replacement-style jasperoid lenses and discordant bodies within the karstified, hydrobrecciated and tectonised host rocks. The mineralisation is classified as sediment-hosted gold (SHG) and shows strong affinities with Carlin-style gold mineralisation in Nevada.

Metallurgical test work and minerographic studies have confirmed the tendency toward the refractory nature of the primary gold mineralisation at Sihayo and Sambung. These instances form two main groups where:

1) Gold is locked up primarily within pyrite/arsenian pyrite and lesser silica/silicate minerals.

2) The mineralisation contains minor carbonaceous materials (generally <0.25-1% active carbon) which are potentially "preg-robbing".

The percentage recoveries of gold by cyanidation are dependent upon the distribution and degree of weathering and oxidation across both deposits and locally. The effect of "preg-robbing" of gold is likely to be only locally significant where higher concentrations of carbonaceous materials (activated carbon) occur; these are difficult to visually recognised within some of the darker opaque jasperoid but are recognisable in the pale coloured jasperoids and decalcified silica-clay ores.

Leachwell analyses for cyanide extractible gold from core samples taken across both deposits have been used as a proxy to model 'the predicted gold recoveries' for each ore domain in the resource models.

The intensity of weathering / oxidation state (completely oxidised, partly or transitional oxidised and fresh-unoxidised) has been visually logged and registered by domain in the resource model for both deposits.

Mineral Resources estimates

The Mineral Resources for the near surface oxide and deeper transitional to fresh mineralisation were estimated using Ordinary Kriging (OK) with sectional interpretations provided by the PTSM geologists. The estimates were prepared and reported by Spiers Geological Consultants (SGC) in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves - the JORC Code - 2012 edition.

The combined Mineral Resource estimates for the Sihayo and Sambung gold deposits are set out in Table A - 1. The estimates were updated following the consolidation of the results from the 2019 infill drilling program at Sihayo and a comprehensive revision of the geology and mineralisation models for both deposits. This Mineral Resource estimate reported in June 2020[11] was at a 0.6 g/t Au cut-off grade.

In response to project economic analysis undertaken during 2021 in relation to the development of the definitive Study, SGC were informed by the Client that the economic lower cut-off grade of 0.4 g/t Au was to be adopted for the reporting of the Mineral Resource estimates moving forward for both the Sihayo and Sambung project areas.

[11] ASX Market Release – 23 June 2020, "*Results of Feasibility Study*"

Table A - 1: Mineral Resource estimate for Sihayo and Sambung deposits at 0.4 g/t Au cut-off

Deposit	Category	Tonnes (kt)	Grade Au (g/t)	Au (koz)
Sihayo	Measured	5,391	2.11	366
	Indicated	12,611	1.79	726
	Inferred	6,798	1.5	335
	Subtotal	24,800	1.8	1,427
Sambung	Measured	1,793	1.42	82
	Indicated	911	1.55	45
	Inferred	269	1.3	11
	Subtotal	2,973	1.4	138
Total	Measured	7,184	1.94	448
	Indicated	13,522	1.77	771
	Inferred	7,067	1.5	346
	Total	27,773	1.8	1,565

Notes:

Figures may not sum due to rounding. Significant figures do not imply an added level of precision

Mining and Ore Reserves

AMC Consultants Pty Ltd (AMC) has completed pit optimisation, mine design and scheduling for the two deposits, Sihayo and Sambung (Figure A - 3).

Based on the Measured and Indicated Mineral Resources outlined in Table A - 1, a life-of-mine plan has been prepared to develop an updated Ore Reserve estimate. This estimate contains 11.7 Mt at 1.98 g/t Au for 747 thousand ounces of gold at a net smelter return (NSR) cut-off grade of USD 22.18/t for oxide ore, USD 22.40/t for transitional ore, and USD 22.90/t fresh ore (Table A - 2). Inferred Resource within the open pit design above the economic break-even cut-off grade was included in the life-of-mine processing schedule and represents 4.7% of the total process plant feed by tonnage and 4.3% of the contained gold. The economic viability of the Sihayo Starter Project is not sensitive to the inclusion of Inferred Resource in the processing schedule.

Table A - 2: Ore Reserve estimate for Sihayo and Sambung pits

Deposit	Proved			Probable			Total		
	Tonnes (kt)	Gold (g/t)	Gold (koz)	Tonnes (kt)	Gold (g/t)	Gold (koz)	Tonnes (kt)	Gold (g/t)	Gold (koz)
Sihayo	4,454	2.12	304	5,636	1.96	356	10,090	2.03	660
Sambung	1,075	1.72	59	562	1.58	29	1,638	1.67	88
Total	5,529	2.04	363	6,198	1.93	384	11,727	1.98	747

Notes:

- All tonnages are dry metric tonnes.
- Ore Reserves are reported inclusive of Mineral Resources.
- Sihayo Ore Reserves reported at a NSR cut-off grade of USD 22.18 per tonne of oxide, USD 22.40 per tonne of transitional, and USD 22.99 per tonne of fresh ore.
- Sambung Ore Reserves reported at a NSR cut-off grade of USD 22.24 per tonne of oxide, USD 22.88 per tonne of transitional, and USD 23.48 per tonne of fresh ore.
- Ore loss and dilution applied using a 5 m x 5 m x 5 m selective mining unit.
- Numbers have been reported to significant figures and may not add due to rounding.

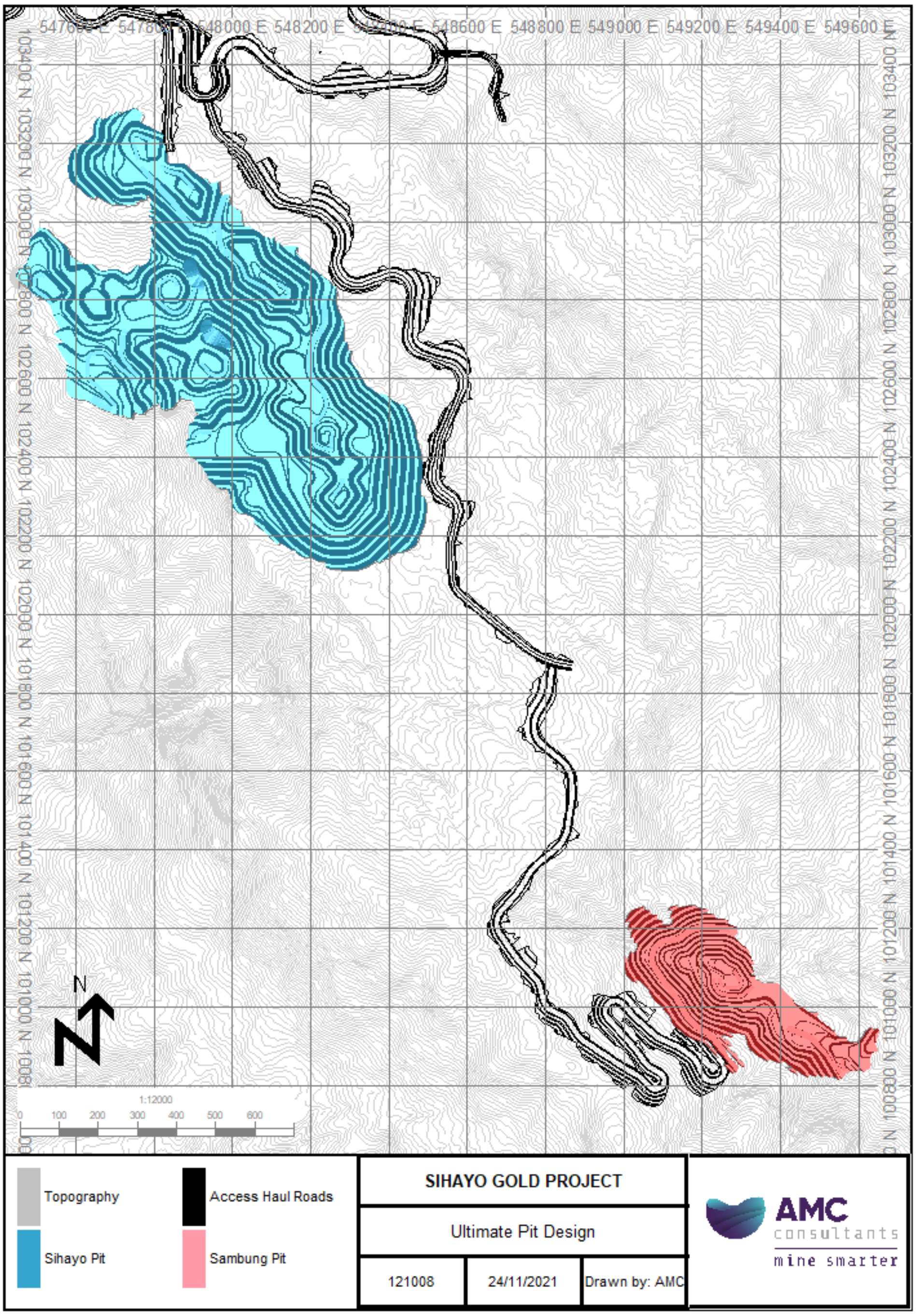


Figure A - 3: Sihayo and Sambung Pits

Mining Method

The mining method adopted for the 2022 FSU is conventional open pit mining using diesel-hydraulic excavators and diesel articulated dump trucks (ADT).

Based on the mineralisation and karst zones of the Sihayo Starter Project, selective open pit flitch-mining using hydraulic excavators in backhoe configuration is proposed for both ore and waste. Mining activities will include:

- Clearing and grubbing of trees and vegetation for areas planned to be disturbed.
- Excavation and stockpiling of topsoil and subsoil for future use in rehabilitation.

- Development of access roads and establishment of benches (pioneering).
- Ore grade control.
- Drill-and-blast. AMC completed a drill-and-blast study developing parameters consistent with expected rock-mass conditions, with the objective of fragmenting material to a top-size less than 700 mm. The 2022 FSU has estimated material that can be free-dug, or requires drilling and blasting, according to rock quality designation (RQD) and / or intact rock strength (IRS). RQD and IRS have been estimated in the geological block model based on implicit strength models derived from geotechnical logging.
- Ore and waste mining. Benches will be blasted 5 m high and mined in two 2.5 m flitches.
- Ore will be hauled to designated destinations; direct feed to the plant, stockpiled, or reclaimed from stockpiles.
- Waste will be hauled to ex-pit and in-pit waste dumps depending on dump availability, waste material composition, and dump design requirements.
- Progressive rehabilitation with contouring of mining landforms. Subsoil and topsoil will be reclaimed and dumped, and then spread on contoured landforms using track dozers and graders.
- Seeding and re-vegetation of contoured landforms.

The Sihayo and Sambung geological block models were re-blocked to a 5.0 mX x 5.0 mY x 5.0 mZ selective mining unit (SMU) diluted mining block model to account for mining dilution and recovery (ore loss). The combined Sihayo and Sambung diluted mining block models show a 24% increase in tonnes and a 20% reduction in gold grade for a resultant 1% reduction of contained gold (gold cut-off grade of 0.40 g/t). With good selective mining practices and improved knowledge as the project advances there is recognised upside potential to reduce dilution and ore loss.

Pit Design

Table A - 3 outlines the mine design criteria for the Sihayo and Sambung pits. The Sihayo deposit open pit will be developed in stages to provide early access to higher value ore and to manage waste and total material movements.

Table A - 3: Mine design criteria

Criteria	Units	Base Case	Source
Ore Throughput	Mtpa	2.0	Initial study optimisation
Mining method		Conventional truck and excavator	Assumed/typical
Drill and blast		5.0 m benches with 115 mm diameter holes.	Assumed/typical

Criteria	Units	Base Case	Source
Major equipment		4.4 m^3 bucket primary loading excavators 40 t payload articulated dump trucks 115 mm diameter blast hole drill rigs 6.4 m^3 bucket primary front end loaders 40 t and 19 t track dozers 25 t graders Supporting equipment RC grade control drills	Site specific requirements
Physical Characteristics			
Material Processed	Mt	12.3	Diluted block model report in the pit design
Waste mined	Mt	54.9	
Total material mined	Mt	67.2	
Strip ratio	t:t	4.5	
Maximum mining rate	Mtpa	13.1	Estimated
Mine life	years	6.5 including pre-stripping	Estimated
Operating costs			
Mine operating cost	USD/t	3.41	Estimated

Mining equipment for the Sihayo Starter Project is proposed to be owner-operated, with fleet purchased according to the life-of-mine schedule requirements. Mining costs are estimated inclusive of the PTSM's technical and management team, ongoing access development and access road maintenance and assumes owner mining. Quarry rock to support mining operations is proposed to be sourced from a quarry identified on the project site.

Life-of-Mine Schedule

Mine development allows for a 12-month pre-production period comprising six months of access development and six months of combined development and pre-strip mining where access via pioneered haul roads is developed to the Sihayo pit to expose ore feed for subsequent processing, including process plant commissioning, and gold production. At the completion of pre-stripping (Year 0), mining is planned to be undertaken from the Sihayo and Sambung pits for a period of six years, shown in Figure A - 4.

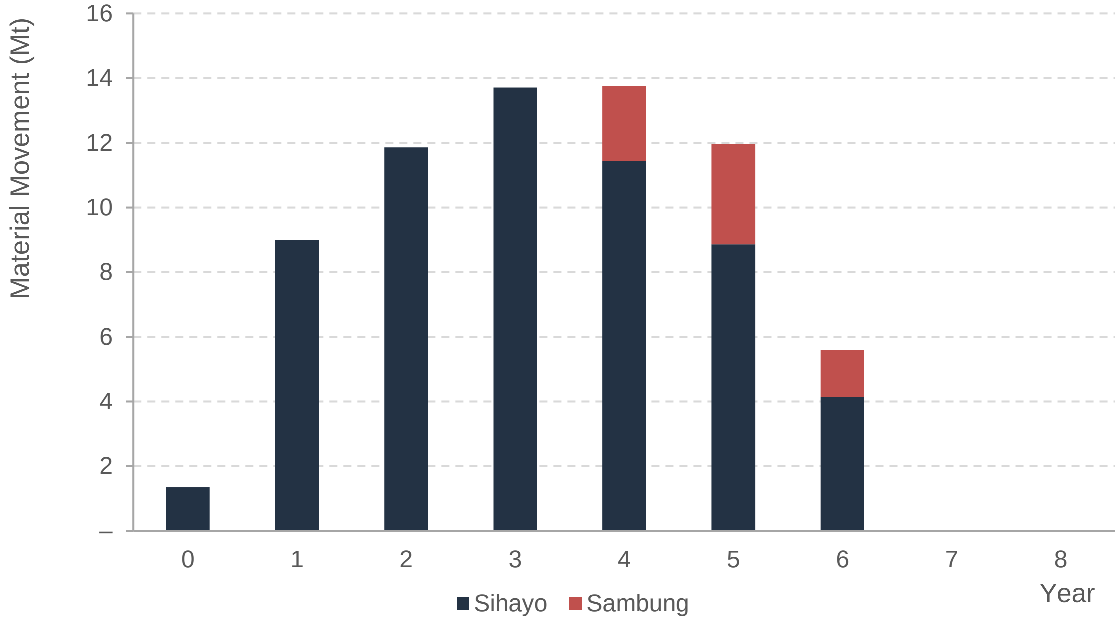


Figure A - 4: Project material movement schedule by deposit

The production (process plant) feed schedule selected for the project is presented in Figure A - 5. The production schedule targets a throughput of 2.0 Mtpa with approximately 4.7% of the life-of-mine feed tonnes being Inferred Mineral Resource above the cut-off grade.

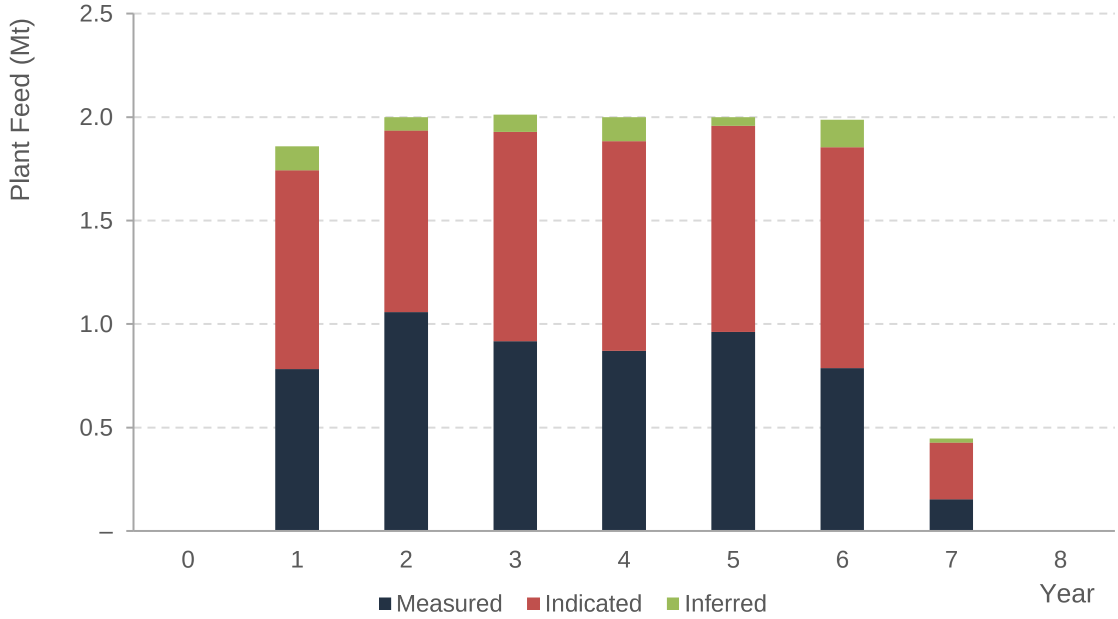


Figure A - 5: Process plant throughput schedule

12.3 Mt of material is processed at a life-of-mine average head grade of 1.98 g/t Au, producing 653 koz of recovered gold over the mine life at an average rate of 104 koz per annum. This is shown in Figure A - 6.

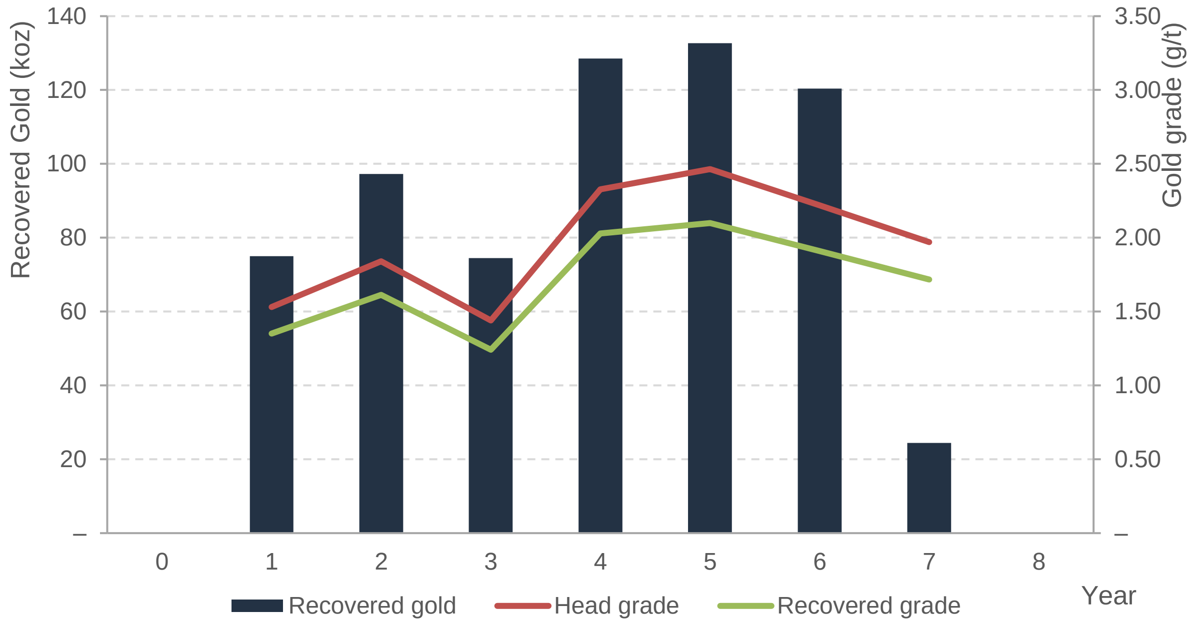


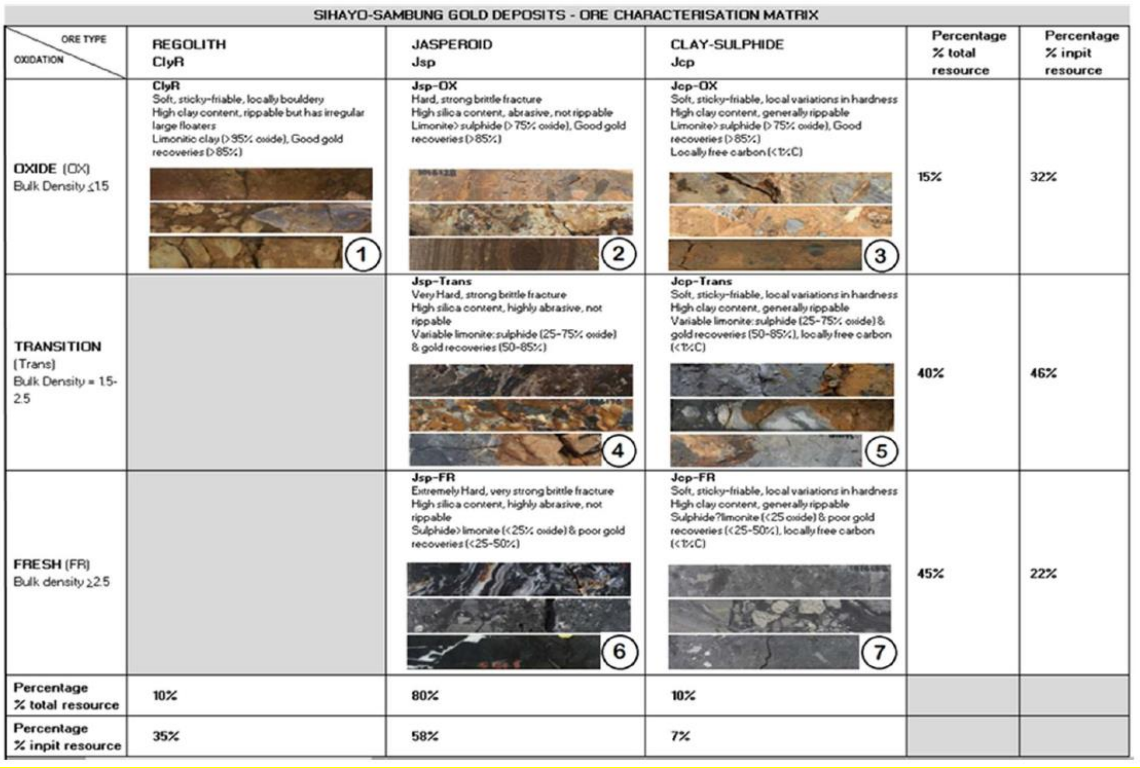
Figure A - 6: Annual head grade, recovered grade and recovered ounces

Metallurgy and Processing

Ore characterisation

The ore characterisation over the Sihayo-Sambung deposits is integrated into the resource block model on a block-by-block basis for subsequent use in mine planning. Scheduling is subdivided into ore-types based on three recognisable mineralisation / alteration characteristics and oxidation state. Figure A - 7 shows the three main ore types on the right-hand side with the effect of oxidation increasing towards the left.

The Sihayo ore types range from a friable, high moisture, highly oxidised material to a competent fresh rock. All ore types are expected to have a high abrasion index.



SIHAYO-SAMBUNG GOLD DEPOSITS - ORE CHARACTERISATION MATRIX

ORE TYPE / OXIDATION	REGOLITH ClyR	JASPEROID Jsp	CLAY-SULPHIDE Jcp	Percentage % total resource	Percentage % inpit resource
OXIDE (OX) Bulk Density ≤1.5	**ClyR** Soft, sticky-friable, locally bouldery High clay content, rippable but has irregular large floaters Limonitic clay (>95% oxide), Good gold recoveries (>85%) (1)	**Jsp-OX** Hard, strong brittle fracture High silica content, abrasive, not rippable Limonite> sulphide (>75% oxide), Good gold recoveries (>85%) (2)	**Jcp-OX** Soft, sticky-friable, local variations in hardness High clay content, generally rippable Limonite> sulphide (>75% oxide), Good recoveries (>85%) Locally free carbon (<1%C) (3)	15%	32%
TRANSITION (Trans) Bulk Density = 1.5-2.5		**Jsp-Trans** Very Hard, strong brittle fracture High silica content, highly abrasive, not rippable Variable limonite:sulphide (25-75% oxide) & gold recoveries (50-85%) (4)	**Jcp-Trans** Soft, sticky-friable, local variations in hardness High clay content, generally rippable Variable limonite:sulphide (25-75% oxide) & gold recoveries (50-85%), locally free carbon (<1%C) (5)	40%	46%
FRESH (FR) Bulk density ≥2.5		**Jsp-FR** Extremely Hard, very strong brittle fracture High silica content, highly abrasive, not rippable Sulphide> limonite (<25% oxide) & poor gold recoveries (<25-50%) (6)	**Jcp-FR** Soft, sticky-friable, local variations in hardness High clay content, generally rippable Sulphide?limonite (<25 oxide) & poor gold recoveries (<25-50%), locally free carbon (<1%C) (7)	45%	22%
Percentage % total resource	10%	80%	10%		
Percentage % inpit resource	35%	58%	7%		

Figure A - 7: Ore type classification

Metallurgical test work

Extensive metallurgical and mineral processing test work has been completed for the Project, including extensive comminution test work, gravity and leach test work. As part of the 2022 FSU, further test work was completed using samples from the 2019 in-fill drilling programme. Test work was undertaken in late 2020 by PT Geoservices Laboratory in Jakarta, with further work in 2021 at ALS in Perth to complement the Geoservices works and to assist testing other flowsheet options.

Between the 2020 and 2021 test work, samples were also provided to the University of Tasmania (UTas) for detailed mineralogy analysis. The results of this analysis were used to inform some of the approaches followed up by ALS.

During and following completion of the 2022 FSU, the Company completed a comprehensive metallurgical test work program to evaluate the Caustic Leaching opportunity.

2020 test work

The 2020 test work was performed on composite samples that represented oxidation states from totally oxidised (two samples), transitional (three samples), and fresh (one sample) and conducted in two phases. The first of these was direct cyanidation and carbon-in-leach cyanidation to investigate the link between oxidation and leach recovery. Testing established that less oxidised and fresh samples gave lower Au recoveries than the more fully oxidised samples. The second phase comprised:

- A series of CIL tests conducted on composites of the two totally Oxidised samples and one of the transitional samples at a P80 of 150 µm, 106 µm and 75 µm to provide input to plant processing design criteria.

Recovery improvement work on the fresher samples was also performed with tests including:

- Flotation using nitrogen to replace air,
- Acid leaching of the samples with nitric acid to simulate strong oxidation
- Roasting, and
- Gravity

The maximum Au recovery for all composites was reached at P80 of 75 µm, with some increased gold recovery with decreasing particle size. The results suggest that increased plant throughput for more oxidised ores (via coarsening of the P80 particle size) will optimise gold production. This is in line with historical test work findings. For the 2022 FSU design purposes, a grind size of 80% passing 106 µm is adopted.

Flotation testing was conducted on Composite E and F (refer Table A – 4) with the addition of lead nitrate ($Pb(NO_3)_2$) as the activator and nitrogen gas in the aeration stage. Compared to the previous flotation test (air in the aeration stage), Au recovery in Composite E decreased by 4.4% but recovery increased by 1.9%. in Composite F. Neither result showed any significant benefit to continue this line of investigation.

Test results showed acid oxidation resulted in a marginal improvement of cyanide extraction, but a non-acidified phase still proved refractory. Roasting of Composite E showed little recovery improvement but a significant improvement in Composite F. Composite F gold extraction increased from 37.1% (standard CIL) to 64.7% after roasting.

Approximately 50 kg of Composite E was treated using two stages of Wilfley tabling test work. A first pass was undertaken at minus 2 mm and the second stage at minus 0.6 mm. Middlings and concentrates were combined for a cleaning stage. This was conducted by Gekko Systems to investigate the suitability of the material for processing in Gekko's proprietary in-line pressure jigs.

The results showed that gravity tailings were a similar grade to the feed so a "throw away" tailings fraction was not an option.

2022 - 2023 Test Work

A metallurgical test work program was conducted over the course of 2022 to 2023 to evaluate the benefits of high pH pre-leaching on gold extraction as detailed below.

Initially, tests were conducted on a series of composites with different oxidation states as shown in Table A - 4. Results showed that the caustic pre-leach did not improve gold recoveries on oxidised samples but showed a significant impact on mildly oxidised and unoxidized samples (Composites E and F).

Table A - 4: Composite test work results for CIL and Caustic Leaching

Composite	Oxidation State	Standard CIL Au Extraction	High pH Pre-Leach and CIL Au Extraction
B	Fully oxidised	89.1%	89.1%
C	Transition highly oxidised	82.3%	81.7%
D	Transition moderately oxidised	77.6%	80.4%
E	Transition mildly oxidised	61.2%	87.0%
F	Fresh unoxidised	37.4%	66.0%

Testing then moved to examining a large number of individual intercepts to evaluate if the recovery benefit was effective on most samples. Over multiple tests of type E material for samples that gave less than 50% Au recovery by conventional CIL the Caustic Leaching gained a further 30% recovery. For type F material recoveries improved by 45% (refer to

ASX:SIH announcement “*Final Results Received from High pH Pre-leaching Test Work*” dated 5 July 2022).

Tests were then conducted where leach tailings solution (at high pH) was recycled to the next pre-leach. This demonstrated the caustic consumption would be in the range 10-15kg/t.

The effect of the Caustic Leaching was to attack the arsenopyrite and allow the fine contained gold to be exposed to cyanide dissolution. The higher arsenic in tailings solution compared to conventional CIL was addressed by controlling pH and Fe:As ratio in the arsenic precipitation tests.

All available results were modelled to give parameters that could be used in the resource model.

Process Plant Design

The process plant is designed to treat the expected range of ore types to be delivered in accordance with the life-of-mine production feed schedule in Figure A - 8. It is envisaged that the plant feed will be batch-treated, with only certain transitional and fresh material being processed using the high pH pre-leaching step. Figure A - 8 shows the annual processing throughput broken down by mineralisation oxidisation type (oxide, transitional and fresh) and standard CIL or Caustic Leaching (“CAL”) for transitional and fresh material. Over the LOM, approximately 70% of transitional material is processed using high pH pre-leaching, while 63% of fresh material is processed using high pH pre-leaching. The remainder is processed using the standard CIL route along with all the oxide material.

Oxide is the dominant blend component for the first three years decreasing thereafter to be replaced by an increasing proportion of transitional and fresh ores. Plant production is anticipated to achieve 2.0 Mtpa during the life-of-mine.

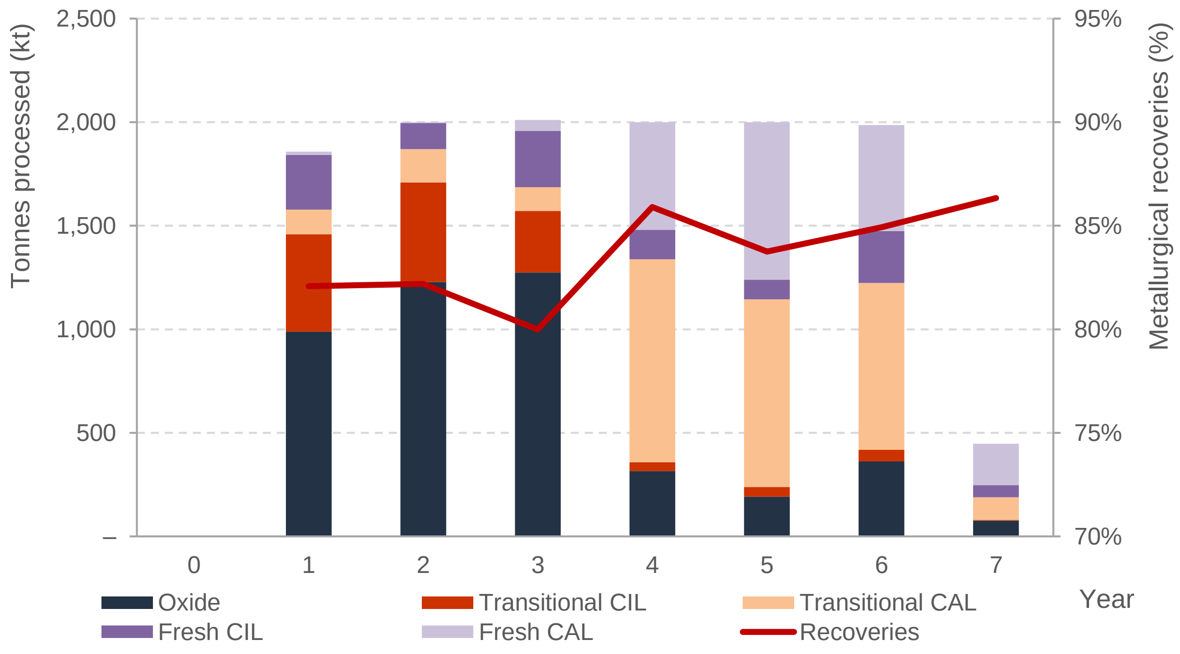


Figure A - 8: Annual processing plant throughput by ore type and head grade

Table A - 5: Process Plant Design Criteria Summary

Parameter	Unit	Value
Annual Throughput	Mt/a	1.6 – 2.0 (ore blend dependant)
Nominal Feed Grade	Au g/t	1.98
Design Feed Grade	Au g/t	2.42
Gold Recovery (Average)	%	83.6
Crushing Circuit Type		Mineral Sizer (Oxide Ore) and Jaw Crusher (Transitional/Fresh Ore)
Grinding Circuit Type		SAG
Plant Utilisation	%	91.3
Plant Treatment Rate	t/h	231 – 250 (ore blend dependant)
Grind Product Size (P_{80})	µm	106

Plant flowsheet

The plant flowsheet offers a conventional CIL process route that is proven in the gold industry and presents a low technical risk.

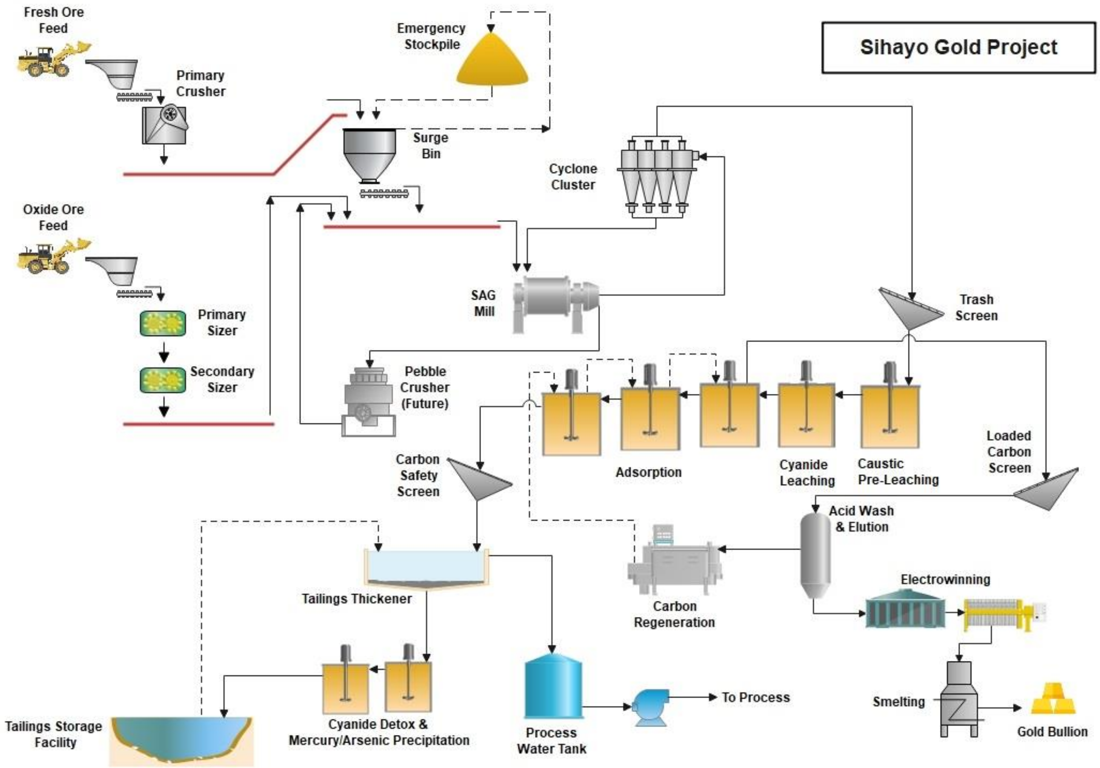


Figure A - 9: Process flow sheet

The flowsheet comprises crushing, SAG milling, cyanide carbon in leach (CIL) gold recovery and elution, reagents, air and water services. CIL tailings are dewatered and undergo cyanide destruction prior to disposal in the TSF. The process plant will produce a gold doré product.

The development of the process flow sheet considered the following factors:

- Two crushing circuits to process the expected range of ore types (oxide to fresh), maintain plant operating time and provide processing flexibility. This compares to the DFS design of a single jaw crusher direct feeding to a SAG mill.
- Crusher feed design for direct tipping from trucks or loaders.
- Decoupling of crushing and SAG mill circuits with an ore surge bin and emergency stockpile to provide surge capacity and consistent plant feed rate for optimum SAG mill operation.
- Selection of a larger SAG mill with variable speed operation to provide operational flexibility to achieve a 2.0Mtpa throughput and design grind size for processing the expected range of ore type compositions in the feed blend.
- Provision for future installation of pebble crushing for the potential processing of competent ore types.
- Caustic Leaching has been incorporated into the plant design prior to CIL.
- Cyanide detoxification of CIL tailings ahead of discharge to the TSF.
- Tailings pipeline design with pressure choke station to account for the large elevation change between the updated plant location and TSF location.
- Recovery of TSF supernatant (decant) water and returning it to the process plant for process water requirements via a new pipeline. Excess decant water above plant requirements to be treated prior to river discharge.
- Principles of the “International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold" have been considered in the design of the process flowsheet.

Tailings Storage Facility

The TSF is designed with an initial storage capacity of 2 Mt (Stage 1). The facility will be raised annually over 8 years to a final capacity of 14 Mt. There is potential to expand the ultimate capacity of the TSF to 16 Mt within the current topographical and infrastructure constraints.

The TSF will comprise a cross valley storage embankment, formed by a multi-zoned earthfill embankment built fully downstream in nominally annual stages. A low permeability cut-off trench is proposed upstream of the embankment to reduce seepage.

The TSF is situated in a narrow valley running southeast to north-northeast, approximately 5 km to the north of the proposed Process Plant Site. The TSF construction is staged with the crest elevation varying between ~RL268.4m (Stage 1) to a final elevation of RL299.1 m.

Tailings will be discharged into the TSF by sub-aerial deposition methods, using a combination of spigots located at regularly spaced intervals from the crest of the embankment to maintain the supernatant pond remote to the embankment. Water will be recycled from the TSF to the Process Plant as a process water make up supply using a barge mounted pump system.

The TSF water balance is strongly positive requiring controlled discharge from the system to maintain a negative water balance for the site. A pumped system will be used to decant supernatant from the TSF to the Water Treatment Facility for treatment, polishing and controlled release off site / downstream into the Batang Gadis River.

The tailings delivery and decant return pipelines run from the Process Plant Site to the TSF partially located within a catchment that reports directly to the TSF. A catch pond system will be established along the pipeline corridor, to provide containment in case of pipeline rupture. These will be located in catchments that do not report to the TSF.

The tailings will be deposited from multiple spigots inserted along the tailings distribution pipeline in such a way as to encourage the formation of beaches over which the slurry will flow in a laminar non-turbulent manner. Water released from the tailings mass will flow to the supernatant pond from where it will be removed from the facility by means of decant pumps.

The decant system comprising a floating barge fitted with a number of submersible pumps will be located at the south-eastern basin extent. It will be necessary to regularly relocate the barge as the tailings elevation rises so as to locate the pumps in sufficient water depth to maintain discharge water quality and reduce the volume of tailings solids likely to be pumped to the treatment and/or process plant. The decant system will pump to the process plant (make up water) or the water treatment plant (controlled discharge).

During all stages of TSF operation an emergency spillway will be constructed on the western extent of the embankment to reduce the risk of embankment overtopping in the event of an extreme storm event exceeding the storage capacity of the TSF. If the emergency spillway were to operate, uncontrolled runoff from the spillway will report to a sediment control structure prior to discharge offsite, into the Batang Gadis River.

At closure, the TSF will contain 14 Mt of tailings. A concept level closure and rehabilitation plan has been developed which includes capping of the tailings surface with selected non-acid generating material won from the adjacent borrow material and revegetation of the site. The facility is designed to be water shedding (dry cover) with a closure spillway sized to convey flows generated during a probable maximum flood (PMF). On decommissioning, the supernatant pond will be removed, the tailings beach capped with selected soils and all disturbed surfaces will be rehabilitated with selected vegetation. The final emergency spillway will be upgraded to form the closure spillway.

Operating Strategy

Operations encompasses the activities required to operate and support the Sihayo gold mine's physical assets to achieve PTSM's goals and objectives. These activities span a geographic footprint that extends from the project site to Panyambungan, the capital of Mandailing Natal, and to Jakarta.

Sihayo is a conventional open pit and carbon in leach (CIL) operation. All these components rely on proven technology that is widely applied in Indonesia. The challenges faced in operation stem largely from the remoteness of the site, its steep terrain, and equatorial location. The success of the operation will depend upon the strategies adopted and the support of PTSM's business management systems.

PTSM proposes the establishment and use of a site-centred operating model for Sihayo, maintaining a standalone operation with limited reliance on off-site support. The primary functions of operations, service, and support will be located at Sihayo. Off-site functions will be kept to a minimum with some support functions located in the operation's logistics hub and commercial support and nominal head office functions located in Jakarta.

PTSM plans to commence operation with a portion of staff on a fly-in fly-out (FIFO) work roster. PTSM aims for Sihayo to be an Indonesian-managed operation where the engagement of expatriate professionals is only by exception or to support coaching and development in specific areas. Most of the mining professional, supervision, and skilled roles are to be sourced from the national workforce pool.

PTSM's operating strategy is based on a distribution of responsibilities for operating functions between PTSM and specialist contractors and business partners. Decisions on the distribution of responsibilities will take into consideration:

- Their alignment with PTSM's ability to develop and maintain its competitive advantage through its control and exploitation of the mineral endowment associated with the CoW.
- Maintaining focus on maximising gold production through management of ore flow, grade, and recovery, rather than on the day-to-day earthmoving aspects for example. Control of selective mining, grade control, ore stockpile management and plant feed will remain with PTSM.
- Access to potential service providers with the necessary skills and competency to support operations at a competitive cost.

This operating strategy requires that PTSM is equipped to identify and select business partners with a fit-for-purpose methodology and then work with these partners to manage their work to the standards required. Implementation of PTSM's business systems is an important aspect of addressing this requirement. The success of this strategy depends on PTSM's ability attract personnel with the capacity and capability to develop and maintain the business management systems, including HSE systems, needed for its sustainability.

PTSM recognises the opportunity to exploit the extensive capabilities of Indonesian mining service providers.

Site infrastructure and Facilities

The site infrastructure and non-processing facilities proposed to support mining and processing operations includes:

- Project infrastructure
  - Site access that includes a bridge across the Batan Gadis river, a site access road from the front gate to the process plant and mine infrastructure area.
  - Water supply that includes water bores and water treatment system for potable water and decant return system for raw and process water used by the gold processing plant
  - Project power supply via a grid power connection provided by PT Perusahaan Listrik Negara (PLN) and 20 kV distribution around site
  - Information and communications technology
  - Site access control and security
  - Waste management for solids and liquids
  - Drainage and Sediment Management around the site to control surface runoff and to capture sediment. All impacted and non-impacted water will be separated from mine-impacted catchments (wherever practicable) by diverting the clean water around the disturbed mining areas. All impacted runoff from disturbed mining areas will be retained and conveyed to sediment ponds for treatment before being discharged to the environment. The retained water will also be utilised, where practical, for mine-related activities such as dust suppression and process water demand. The surface water management infrastructure will comprise; open drains, sediment ponds, and pumps.
- Non-processing facilities
  - Front gate facility area that includes main warehouse, messing and accommodation for fly-in and fly-out workforce, site support office, nursery, light vehicle workshop.

    - Mine infrastructure area that includes heavy equipment workshops, fuel storage, operations offices
    - Permanent explosives magazine
- Temporary facilities required throughout the construction period

Transport and Logistics

The Project plans to use the Medan City's Belawan Port, approximately 500 km northeast of the site along the East Sumatra Highway as its entry point for seaborne freight and logistics required by the site. The Belawan Port will house a project warehouse and logistics hub for the project due to its strategic location, good road access, and proximity to the mine. Belawan Port is one of the major ports, with road transport taking around from Belawan to Sihayo approximately 20 hours for truck/trailer and 14 hours by light vehicle. Medan is regional hub and financial centre of Sumatra, it is one of the four main central cities of Indonesia, alongside Jakarta, Surabaya, and Makassar.

FIFO personnel will be transported between Sibolga airport which has schedule air services with Jakarta and then to site by Toyota Inovas and minibuses operated by the PTSM site services team. The 145 km journey is expected to take around 4 hours.

Community and Social

Extensive social mapping have been conducted at the Project site since 2010. The Project will affect several communities in the mining area. Affected communities[12] that the mining area of PTSM covers include: seven villages in Naga Juang sub-district (Banua Simanosor, Banua Rakyat, Tambiski, Tambiski Nauli, Tarutung Panjang, Sayur Matua, and Humbang I); six villages in Siabu sub-district (Tangga Bosi I, Tangga Bosi II, Tangga Bosi III, Muara Batang Angkola, Tanjung Sialang, Hutagodang Muda); and, one village in Huta Bargot sub-district (Sayur Maincat) (see Figure A - 10).

Community risks and causes associated with project construction and operational phases are identified and prioritised. A risk assessment has identified potential causes of an adverse community and social event that are most critical during the project construction and operational phases. These include:

- Illegal miners on the Project footprint losing their source of income
- Oversubscription of local employment opportunities to local employment needs
- Strong (negative) memory of history amongst villages
- Inability to satisfy expectations of all local suppliers and contractors
- Opportunistic in-migration
- Loss of jobs post-construction
- Unresolved land acquisition process with communities
- Lack of effective community inclusivity and engagement

[12] Affected Communities are defined as ‘local communities directly affected by the project’, consistent with IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts.

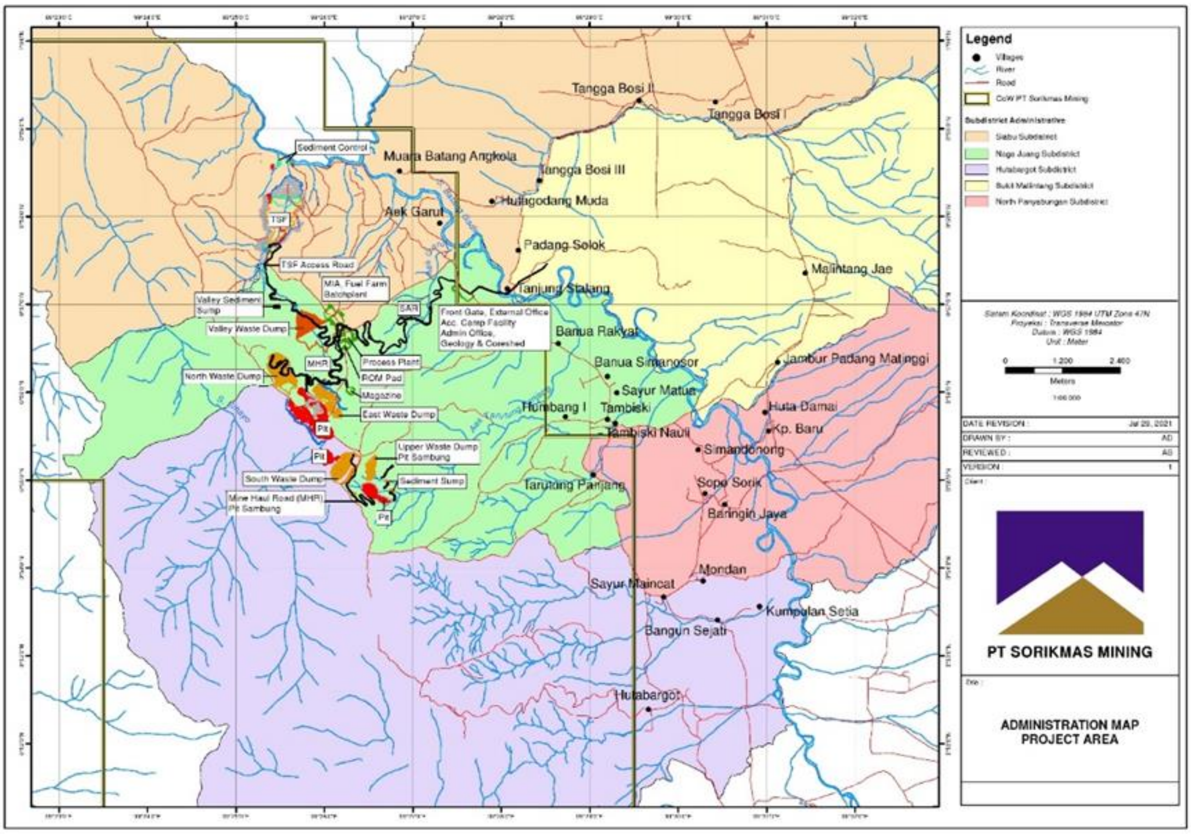


Figure A - 10: Administration Map of Sihayo Project Area

Environmental

Extensive environmental baseline studies have been conducted at the Project site between 2010 and 2021. These include meteorology, hydrology, terrestrial ecology, aquatic ecology, hydrogeology, surface water quality, stream/river sediment quality, soils, air quality and noise. Geochemical characterization test work on ore/tailings and waste rock have been completed to assess the potential for acid rock drainage/metal leaching (ARD/ML).

Key environmental impacts assessed for the development of the Project are potential impacts to soil, groundwater, surface water, biodiversity, air quality and noise.

To address and support the management of community relations, environment specific management plans will be developed to address the potential for issues arising from the causes noted above. The preparation, resourcing and implementation of these plans would commence prior to construction. These plans are intended to comply with statutory requirements for the Project and are based on prevailing Indonesian environmental and social laws and their regulations and international standards and guidelines (World Bank Group/International Finance Corporation).

Collectively, the monitoring data and stakeholder engagement input into these plans will form the basis for assessment of the efficacy of management initiatives associated the Project’s development and operations and continual improvement in the practices applied for the Sihayo Starter Project.

Mine Closure

A conceptual mine closure plan and associated cost estimate for the Sihayo Project has been developed. The conceptual mine plan assumes approximately seven years of mining and processing, after which final mine closure activities are initiated. Description of mine closure and reclamation activities include progressive reclamation during mining operations and after closure as well as closure works (decommissioning and removal of facilities and equipment) subsequent to cessation of mining and processing activities. The aim of the mine closure plan is to ensure a safe and environmentally sustainable post-mine site and a legacy of improved and sustainable socio-economic conditions in the affected communities.

All major Project approvals/permits consisting of the Environmental Permit, Government of Indonesia Feasibility Study and the Forestry Borrow-to-Use Permit, are in place. Compilation of an addendum to the Environmental and Social Impact Assessment (AMDAL) is currently underway to address recent changes documented in the 2022 FSU.

Risk Assessment

The 2022 FSU Risk Assessment process has identified a broad spectrum of risks with a total with 296 potential risk causes identified, analysed and ranked. Out of these, ten categories of 'extreme' risks are reported. These include:

- Adverse community and social incident
- Adverse safety and health incident
- Adverse environmental event
- Adverse geotechnical event
- Contracts and property dealings
- Adverse financial impact
- Adverse construction delay
- Production loss
- Criminal/ illegal conduct
- Adverse reputational impact

Comprehensive preventative and mitigation actions were identified for each of these risks as part of the 2022 FSU.

Financial Evaluation

The financial evaluation of the Project has been undertaken using discounted cash flow analysis modelling of projected cash flows (Model). All output is presented on a 100% project basis and the benefits of debt financing have not been incorporated.

The Model was developed on a quarterly basis, with the valuation date assumed to be the commencement of construction. Outputs are provided in United States dollars (USD), unless otherwise stated given the Project is outside Australia. A 5% discount rate was used for the Net Present Value ("NPV") analysis.

The objective of this evaluation is to demonstrate the economic viability of the Project support attracting equity and debt investment to advance the development of the Project.

Table A - 6: Economic assumptions used in the financial analysis

Parameter	Unit	Assumption
Gold price	USD/oz	1,900
Exchange rates	IDR:USD	15,000
Fuel price	USD/L	0.85
Electricity price	IDR/kWh	1,204
Indonesian company income tax rate	%	20
Gold royalty rate	%	5.00

The Model is on a real basis, meaning there are no escalation factors applied to revenue or cost factors.

Physicals

The mining and processing schedules for the financial model are shown in Figure A - 4, Figure A - 5 and Figure A - 6. A summary of the LOM totals is shown below in Table A - 7.

Table A - 7: Summary of LOM physicals underpinning the Model

Parameter	Unit	Assumption
Total material movement	Mt	67.2
Tonnes processed	Mt	12.3
Average strip ratio	waste:ore	4.5x
Average gold head grade	g/t Au	1.98
Mine life	years	6.25
Average annual plant throughput	Mtpa	1.97
Contained gold ounces processed	koz	781
Average metallurgical recoveries	%	83.6%
LOM gold produced	koz	653

Capital Costs

Upfront capital costs

Upfront capital costs include all costs pertaining to expenditure on the Project prior to the commencement of production. Capital cost estimates have been compiled by the various consultants engaged during the 2022 FSU, with Merdeka Mining Services providing rates consistent with current Indonesian supply. The JORC Table 1, Section 4 in Appendix 2 provides further detail on how the estimates were compiled by the various consultants. An estimate of the upfront capital cost is shown in Table A - 8.

Table A - 8: Upfront capital cost estimates

Capital Cost Item	USD million
Project General	9
Open Pit Mining Infrastructure	12
Processing Plant	50
TSF	29
Infrastructure	18
Site Support Facilities	8
Temporary Construction Facilities	1
Owner's Costs	40
Total Capital Expenditure	168
Mobile Equipment	7
Establishment of Operations Team during construction	11
Pre-production Mining Costs	11
Working Capital	2
Total Upfront Capital (excl. Contingency)	199
Contingency	22
Total Upfront Capital (incl. Contingency)	221

Sustaining capital costs

Sustaining capital costs are those capital costs necessary to maintain production through the life-of-mine. In the Model, this includes all capital costs that are incurred after the commencement of production. The primary sustaining capital costs are those associated with the TSF lifts over the life-of-mine which are required to store tailings from ore processing throughout the life of the mine. A summary of the life-of-mine sustaining costs are shown in

Table A - 9. All purchases of mobile fleet and associated leasing costs following commencement of production are also included in the sustaining capital estimate.

Table A - 9: LOM Sustaining Capital

Capital Cost Item	USD million
Mining Fleet[13]	45
Other mine including dewatering	11
Infrastructure	7
TSF	52
Total sustaining capital expenditure	115

Operating Costs

Site operating costs for or the Project have been separated into three main categories – mining costs, processing costs and general and administrative ("G&A") costs.

Mining operating costs were estimated from first principles by AMC based on the life-of-mine plan physicals. Mining equipment productivity assumptions were used to determine the expected equipment operating hours and consumable usage. Consumable costs and maintenance life-cycle costs ("LCC") were sourced from Indonesian OEMs and supplier quotes. Where cost inputs were not available, costs were sourced from previous AMC studies or benchmarks similar to the Sihayo Starter Project operating conditions.

Processing operating costs were estimated from first principles by Primero based on direct consumable consumption and labour estimates and unit rates provided by Merdeka Mining Servis and based on current market rates in Indonesia including the nearby Wetar and Tujuh Bukit mining operations. These rates were adjusted to reflect the complexity and scale of the proposed processing plant for the Project.

G&A costs were estimated by the Company based on first principles and benchmarked to other Indonesian operations and industry standards. Other costs included in the model include royalties and doré transport and refining costs. Royalty rates are based on current Indonesian regulations, while doré transport and refining costs are based on estimates from Merdeka Mining Services. A summary of the operating costs and AISC are shown in Table A - 10.

[13] Includes lease costs of the mining fleet. Lease based on similar agreements for mining fleets in Indonesia. Lease terms assumed: 48-month term, 20% deposit, provision fee of 0.5%, interest rate at 8.4%, 1.75% risk premium, 0.5% insurance and 5% residual value at end of life.

Table A - 10: Operating and All-In Sustaining Cost Summary

Operating Cost Item	Unit	USD/t	USD/oz produced
Mining cost	USD/t material	3.41	351
Processing cost	USD/t ore	13.9	263
General and Administrative cost	USD/t ore	5.96	112
Total site cost (excl. royalties)	USD/t ore	38.5	726
Royalties	USD/t ore	5.03	95
Total opex	USD/t ore	43.6	821
Refining, Transport & Marketing	USD/t ore	0.4	8
Sustaining Capex	USD/t ore	9.4	176
All In Sustaining Capex	USD/t ore	53.3	1,007

Financial Outputs

Outputs for the Model, assuming a gold price of USD1,900/oz and a discount rate of 5%, are shown in Table A - 11. The financial analysis incorporates an Indonesian corporate income tax rate of 20%.

Table A - 11: Financial outputs of the Model

Metric	Unit	Value
LOM Net Revenue[14]	USD million	1,233
LOM Operating Costs (incl. royalties)	USD million	536
Upfront Capital[15]	USD million	208
LOM Sustaining Capital	USD million	115
Mine closure costs	USD million	22
Pre-tax LOM cash flow	USD million	353
Post-tax LOM cash flow	USD million	277
NPV (post-tax)	**USD million**	**169**
IRR (post-tax)	**%**	**20.4%**
Payback period	**years**	**3.75**

Project cashflows over the project life are summarised in Figure A - 11.

[14] Gross revenue net of doré transport, refining and selling costs

[15] Calculated as USD243 million less pre-production mining of USD8 million and working capital of USD4 million, which are included in the LOM Operating Costs

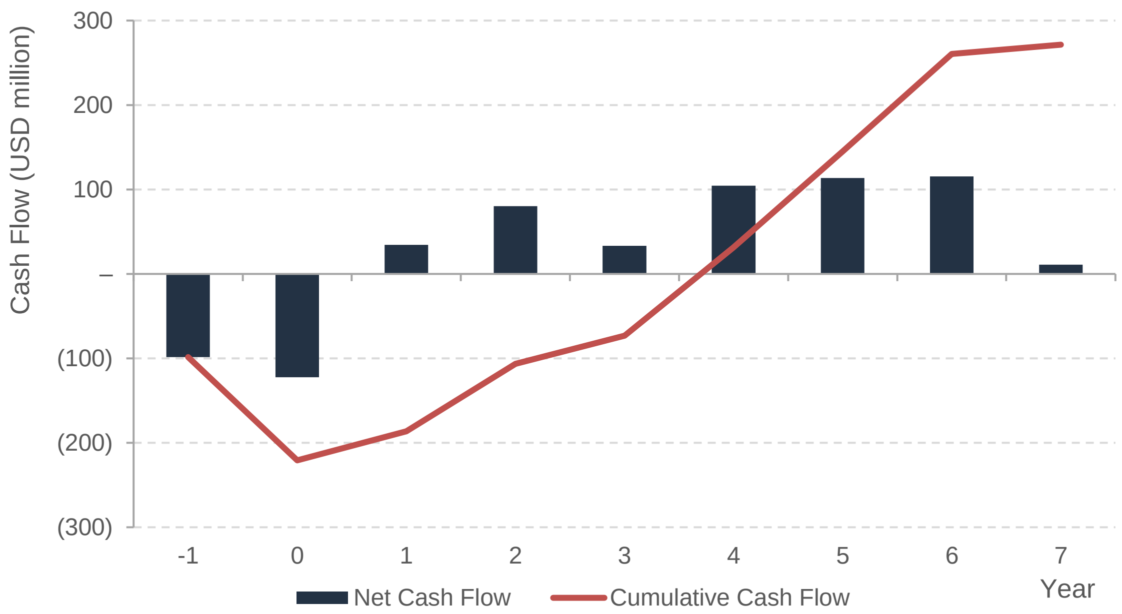


Figure A - 11 Sihayo Starter Project Post-tax Net Cash Flows

Sensitivity Analysis

Valuation for the Sihayo Starter Project is most sensitive to the revenue drivers, being gold price, metallurgical recoveries and head grade. A 10% reduction of gold price, recovery or head grade reduces NPV by approximately 43%. Increasing the gold price, recovery or head grade by 10% increases NPV by approximately 43%. Increasing or decreasing the capital expenditure 10% decreases and increases the NPV by approximately 10%. Increasing or decreasing the operating expenditure by 10% decreases and increases the NPV by approximately 18%. Figure A - 12 shows the valuation sensitivities for revenue drivers (gold price, metallurgical recoveries and head grade have similar sensitivities), capex and opex.

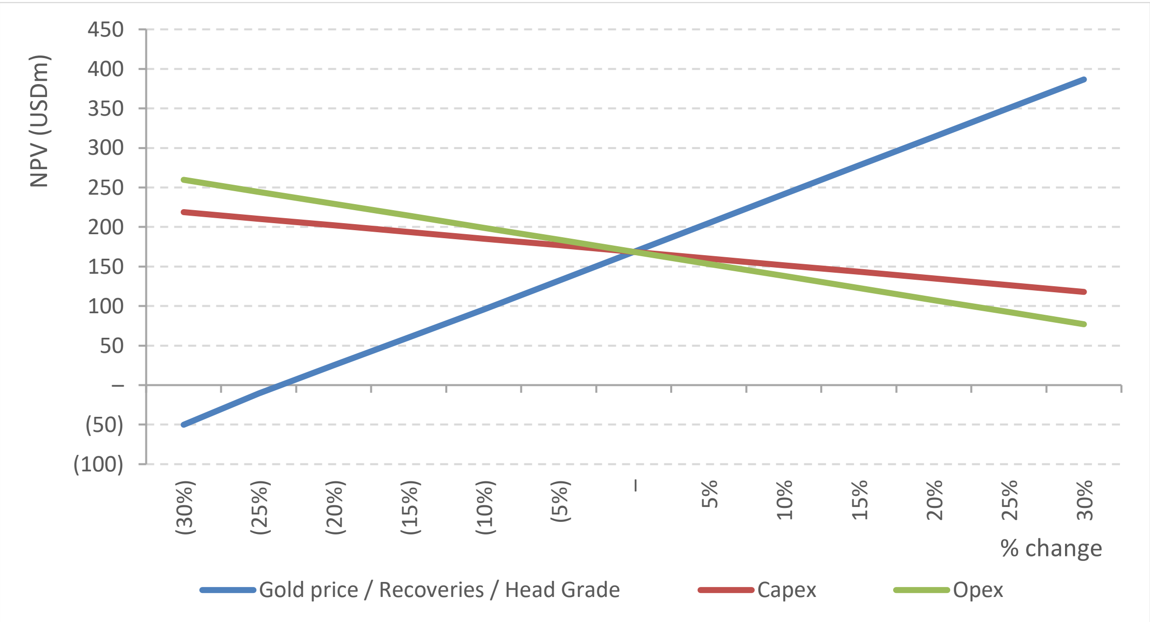
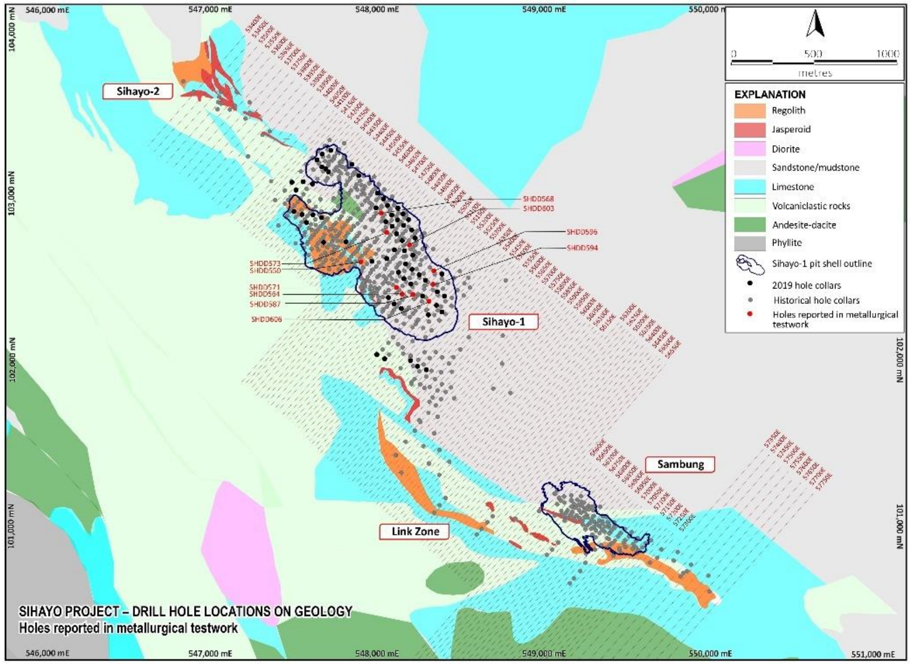


Figure A - 12: Key valuation sensitivities for the 2022 FSU (5% discount rate, USD1,900/oz gold price)

Appendix 2: JORC Code, 2012 Edition – Table 1

Section 1: Sampling Techniques

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	**The samples reported in this announcement are derived from crushed core samples taken from selected holes drilled in the 2019 Sihayo gold resource infill programe completed by PT Sorimas Mining in 2019 (See ASX:SIH announcement Quarterly Activities Report at 31 December 2019).** • The samples are crushed core samples comprising minus-2mm Boyd-crush material derived from sample processing of PQ3/HQ3 half-core sizes and held in cold storage at the sample-preparation facility of PT Intertek Utama Service in Medan. • Splits from individual samples were individually packaged and dispatched to ALS Metallurgy Pty Ltd in Balcatta, Western Australia for sample-preparation and cyanide bottle-roll leach gold analyses. • Each crushed core sample used for the metallurgical testing consists of 0.5-kg or 1.0-kg of minus-2mm crushed core material representing up to 1-metre sample interval within the selected drill hole. • Individual samples reported in this announcement taken from the following drillholes (Figure below): SHDD550, 564, 568, 571, 573, 587, 594, 596, 603, 606. 

Criteria	JORC Code Explanation	Commentary
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	**All samples reported in this announcement are from the 2019 infill resource drilling program:** • The drilling method used to obtain the core samples wire-line triple-tube diamond drilling using PQ3 and HQ3 diameter coring sizes and using man-portable diamond drill rigs owned and operated by PT Indodrill Indonesia of Bogor, Indonesia. • Drilling activities are operated on two 12-hour shifts per day, 7 days per week. • The drill holes are surveyed at 25m down-hole intervals using a Digital ProShot downhole camera. • Drill core is oriented on each drill run in competent ground conditions using an orientation spear in PQ drill intervals and a Coretell ORIshot down-hole orientation tool in HQ drill intervals.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Core recoveries averaged over 95% for the entire program and generally exceeded 90% within the mineralised zones. • Ground conditions are highly variable and locally poor due to a number of factors: 1) Presence of unconsolidated fault structures related to movements along fault arrays within the active Trans Sumatra Fault Zone, 2) contrast in rock strength associated with variations in alteration and reactivation by younger fault movements, 3) occurrence of karst caves/cavity features filled with unconsolidated cave-fill sediments, and 4) occasional local mine cavities. Core recovery is maximised by the careful control of water/mud injection pressure, use of specialised drilling muds, and shorter drill runs in poorly consolidated or highly broken ground. • Core recoveries (and losses) are directly measured from the inner tube splits after of each drill run at the drill site by trained core handling technicians ("core checkers"). The core checker is on-site during the entire 12-hour shift. The core checker takes a photograph of the core from each drill run on the inner tube splits and ensures that the core is properly assembled (reconnected) and the orientation line is properly marked along the core on the inner tube splits before it is tranferred into core trays. • Drill runs and core losses are marked up by the driller on core blocks placed in the core box after each drill run. The positions of any obvious sections of core loss (eg. cavities) are noted in the core boxes. The drill intervals, operational activities and core recoveries are recorded on Daily Shift Drilling Reports for each drilling shift. These are checked, validated and approved at the Site Office and the data are entered in an Excel database. • The drilling contractor maintains appropriate mud mixtures and a high-standard of operational procedure to maximise core recovery. Maximum drill runs are 1.5 metres in length and are shortened if necessary to optimise sample recovery in broken ground conditions. • The drill rigs are checked daily by the project geologists to ensure that maximised core recoveries, high safety and operating procedures are maintained by the drilling contractor and support personnel. • There is no evidence of a grade bias due to variations in core recovery in the results reported.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	• All of the drill core is geologically and geotechnically logged. Mineralised and selected unmineralised holes are marked up for geochemical sampling and assaying. • Logging and sample mark-up are done by the project geologists and trained geotechnicians. Drill logs record lithology, alteration, mineralisation, structure, rock strength and hardness, weathering condition, RQD and other structural defects. • A standardised project nomenclature is used for logging and codes or abbreviations. Logging data is captured on paper logging sheets and entered into a computerised format for import into Micromine software. • The majority of geological and geotechnical logging is qualitative in nature except for oriented core measurements (α and β), RQD and fracture frequency. • All the drill core trays are digitally photographed in both wet and dry condition, before and after the core splitting and sampling. A photographic record of the core trays is kept on file in the Company's project database.

Criteria	JORC Code Explanation	Commentary
		• Bulk density is measured from 10 cm long blocks of whole core taken at systematic 5 m intervals down the entire hole using the wax-sealed sample submersion/water displacement method. • Logging is of a suitable standard for detailed geological analysis and later resource modeling. • Re-evaluation of the drill logs is done on receipt of the final assay results for on-going interpretation and assessment of the results.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	• The samples originated from sawn half-core split from PQ and HQ core sizes. • The samples pertaining to these latest results were individual minus-2mm crushed core samples split from remaining coarse-reject sample stock held in refrigeration at the sample preparation facility of PT Intertek in Medan. The samples varied in weight ranging from 0.2 to 1.2-kg and averaged 0.5-kg. Samples were individually packaged and air freighted to Perth from Jakarta. • At ALS Metallurgy the samples were pulverized to greater than 80% passing 106 microns. The samples then split into 250-g charges for the cyanide leach test work.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, hand held XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	**2019 PT Intertek Utama Services (Jakarta) produced the original Fire Assay & Leachwell LW200 results referenced in this announcement:** • PT Intertek Utama Services (Jakarta/Medan) is the primary sample preparation and assaying laboratory used for the 2019 infill resource drilling program • Coarse crush samples were prepared at the Intertek sample preparation facilty in Medan, North Sumatra. Core samples are weighed and dried at 600C. The entire sample is crushed to P95 (95%) passing minus-2mm and 1.5kg is split off and pulverized to P95 (95%) passing minus-75 microns. • Sample pulps prepared at the facility in Medan are air freighted to Intertek's analytical laboratory in Jakarta. The samples are routinely assayed for gold by 50g-charge Pb-collection Fire Assay with AAS finish (FA51/AAS) and 46 multielements by four-acid digest and ICP/OES determination • In addition, the jasperoid intersections are tested for a more comprehensive set of analyses to investigate the geometallurgical properties of the mineralised material. **This includes assaying for gold & silver by 200-g accelerated cyanide (LeachWELL) with AAS finish (LW200/AA) and Au-tail analysis by FA (TR200/AA)**, mercury by Cold Vapour AAS determination (HG1/CV), and several different sulphur and carbon analyses for soluble and insoluble components (sulphates, organic carbon) (CSA03 – determination of Total Carbon & Sulphur by CS analyser, CSA104 – SCIS determination of carbonate-extract for soluble sulphate, C71/CSA – determination of Carbon non-carbonate or Carbon graphitic). • The nature of the large core size (PQ3/HQ3/NQ3), the total and partial preparation procedures (total crush to

Criteria	JORC Code Explanation	Commentary
		P95 -2mm, 1.5kg split pulverized to P95 -75 micron), and the multiple analytical methods used to assay for gold (FA, CN) and its associated elements (silver, sulphur, carbon & multielements) are considered appropriate for evaluating the potential geometallurgical characteristics of jasperoid- gold mineralization. • The Company inserted OREAS Certified Reference Materials (CRMs) and blanks at a rate of 1 in every 10-12 core samples (~10%) of the sample sequence to evaluate the lab's sample preparation procedures, analytical quality and/or biases. Intertek also conducts and reports its own internal laboratory QAQC checks which are reviewed as part of the QAQC analysis. The results relating to this announcement fall well within acceptable tolerances of accuracy and precision. **2021 ALS Metallurgy (Balcatta, WA) produced the high pH cyanide leach results referenced in this announcement:** • The metallurgical test work results pertaining to this announcement was done by ALS Metallurgy in Balcatta, WA. This laboratory operates to international standards and procedures and participate in Geostatistical Round Robin interlaboratory test surveys. • The samples pertaining to these latest results were individual minus-2mm crushed core samples split from remaining coarse-reject sample stock held in refrigeration at the sample preparation facility of PT Intertek in Medan. The samples varied in weight ranging from 0.2 to 1.2-kg and averaged 0.5-kg. Samples were individually packaged and air freighted to Perth from Jakarta. • At ALS Metallurgy the samples were pulverized to greater than 80% passing 106 microns. The samples then split into ** kg charges for the cyanide leach test work. The analysis used: • At ALS Metallurgy the samples were split into 250-g charges for the following test work: - Stage grind of samples in a rod mill to P80 passing 106 microns - 24 hour pre-oxidation test at pH 13 (NaOH buffer) and Dissolved Oxygen >12 ppm in a continuous bottle-roller Interim checks at 1, 2, 4, 8 & 24 hours Solution and residue for each sample was removed for assaying: leachate (Au, Ag, As, Ag), residue (Au, Ag, As, Sb, S (total), S (sulphide), C (total) and C (organic) analyses - 48 hour Carbon-In-Leach test at pH13 (NaOH buffer), DO >15 ppm and 0.05% NaCN in a continuous bottle-roller Interim checks at 8, 24 & 48 hours Solution and carbon assay taken at 24 and 48 hours: Au, Ag, As, Ag Residue assayed at 48 hours (Au, Ag, As, Sb, S (total), S (sulphide), C (total) and C (organic) analyses • The analytical methods used to assay for gold (FA, CN) and its associated elements (silver, sulphur, carbon and multielements) are considered appropriate for evaluating the potential geometallurgical characteristics of jasperoid-gold mineralization. • QA/QC procedures for metallurgical test results followed standard practices of developing mass balances for each test and comparing calculated and assay head grades for all elements of interest. Where the comparison showed a significant discrepancy between calculated and assay head grades, assays were repeated.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry	• Assay results are received from the laboratory in digital format and hard-copy final certificates. Digital data are stored on a dedicated database server and back-up database server. Hard-copy certificates are stored in Jakarta Office. • Results are received and validated by the Company's Consultant against QAQC protocols. • Results are reported by the Company's Competent Person.

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	procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	• No adjustments or calibrations are applied to any of the assay results.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	• Completed drill hole collars are fixed to known benchmarks and surveyed using a Topcon DS101AC Direct Aiming Total Station with accuracy of +1mm. • The coordinates presented in this announcement represent the Total Station measurements. • The Grid System used is WGS84/ UTM Zone 47 North. • The drill hole paths are surveyed with a Digital Proshot camera at 25-metre down-hole intervals. Drill hole paths are tracked using Micromine software and data is plotted daily from Micromine software.
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	• The drilling program is conducted on approximately 50 m spaced lines/sections oriented near-perpendicular to the strike-projection of the gold-jasperoid target. • No sample compositing is applied to the samples.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Geological modelling of the Sihayo-1 gold deposit shows that the gold mineralization, host stratigraphic package and associated controlling structures related to the Trans-Sumatran Fault Zone are NW-SE striking. The gold-jasperoid target is interpreted to be stratabound by the host Permian limestone-volcaniclastic rock package. This host rock package is interpreted to have a moderate-dip to the northeast. • The drilling program was designed in plan and section to test up-dip and along-strike projections of mineralised jasperoid intersected in historic scout drilling programs of 2004 and 2009. The hole(s) intersect the gold jasperoid target at moderate to high angle to the dip of the interpreted mineralised stratabound zone.
Sample Security	The measures taken to ensure sample security.	• A detailed Chain-of-Custody protocol has been established to ensure the safe and secure transportation of samples from the remote project site to PT Intertek Utama Services sample preparation laboratory in Medan, North Sumatra and then by air freight to ALS Metallurgy laboratory in Balcatta, WA. • All crushed core samples were individually packed and labelled.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• The results of this metallurgical test work have been audited and reviewed by an independent metallurgical consultant, using industry recognised QA/QC techniques when comparing mass balances of each individual test for elements of interest such as Au, Ag, As, Sb, Hg, total and organic carbon and total and sulphide sulphur.

Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The mineral tenement is a 7th Generation Contract of Work (CoW) granted in February 1998 to PT Sorikmas Mining ("PTSM"), an Indonesian joint venture company owned by Aberfoyle Pungkut Investments Pte Ltd (75%) and PT Aneka Tambang Tbk (25%). Sihayo Gold Limited (formerly Oropa Limited) acquired all of the shares of Aberfoyle Pungkut Investments Pte Ltd in April 2004. The CoW is located in North Sumatra in the Republic of Indonesia and is approximately 80km south-east from the Martabe Gold Mine. The joint venture remains as Sihayo Gold Limited (**ASX:SIH**) owning a 75% interest in PT Sorikmas Mining which in turn holds the Sihayo-Pungkut 7th Generation Contract of Work ("**CoW**"). PT Aneka Tambang Tbk is the Company's joint venture partner in the CoW with a 25% interest. The original CoW area covered 201,600 hectares. This was reduced to the current 66,200 hectares after two mandatory partial relinquishments; 1) to 151,000 ha in Feb 1999, and 2) to 66,200 ha in Nov 2000. As a consequence of these two partial relinquishments, the current CoW is subdivided into two separate blocks; North block and South block. The tenement is currently under the Operation/Production phase of the CoW. There is no future requirement for area relinquishment. Tenure on the CoW is until 2049 with an option to extend for two additional 10-year periods. The PT Sorikmas Mining CoW area is located along on a fertile segment of the Sumatra magmatic arc in North Sumatra. The same arc segment includes the giant Martabe gold-silver deposit (located about 80km NW) and the high-grade Dairi lead-zinc deposit (located about 250km NW). The CoW and is considered highly prospective for gold, silver and base metal mineralisation. Multiple mineral prospects have been identified during previous exploration within the CoW area and various mineralisation target-styles are represented including replacement-style carbonate-hosted gold (Carlin-style), intermediate-sulphidation epithermal gold-silver veins, gold-base metal skarns and porphyry-related copper-gold. The Sihayo Starter Project is the most advanced project within the CoW and a Definitive Feasibility Study for the project was completed in June 2020. The project has combined Mineral Resources of 24 Mt at 2.0 g/t for 1.5 Moz of contained gold and an Ore Reserve of 12.5 Mt at 2.1 g/t for 840 koz of contained gold in the Sihayo-1 and Sambung gold deposits. The bulk of this gold in the Sihayo-1 gold deposit. The Company has been active with exploration programs during 2021 including exploration and extension drilling within and surrounding the Sihayo-1 gold deposit, notably on the near-mine Sihayo-2 gold jasperoid target, extensive exploration drilling on the large Hutabargot Julu epithermal gold-silver project located 6km south of the Sihayo Starter Project, and target generation, notably recent prospecting in the Tambang Tinggi project area of the South CoW block. **Sihayo Starter Project** is located within heavily forested and partly cleared rugged terrain of the Barisan Mountains, in the Siabu subdistrict of Mandailing Natal regency, North Sumatra. The Sihayo and Sambung gold resources are located between about 900m and 1230m elevation above sea level. Field activities are based from Sihayo exploration camp. The nearest villages are located within 8 km of the camp on the Batang Gadis river plain of the Panyabungan graben valley, immediately the east of the northern block CoW boundary.

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		Access to the **Sihayo Starter Project** is via walking tracks. The camp is located about 8 km walking distance from a vehicle drop-off point at Hutagodang village on the Batang Gadis River. The vehicle drop-off point is located about 10 km from the Company's administration office at Bukit Malintang and is accessible via a largely unsealed government road. Panyabungan, the closest major regional town to the CoW North block, has a population of just under 100,000 people. Panyabungan is located about 140 km SE from Ferdinand Lumban Tobing airport and about 165 km from the regional city and port of Sibolga. Both the airport and Sibolga are connected to Panyabungan by a major sealed road and can be reached by vehicle in 3.5 hours and 4.5 hours respectively. There are daily flights between Ferdinand Lumban Tobing airport and both Jakarta and Medan. Hutabargot Julu prospect lies within a protected forest designated area however much of it contains a mixture of primary and secondary forest, rubber plantation and areas of fruit and vegetable cultivation under informal landholdings. Much of the PT Sorikmas Mining CoW is covered by state-owned protected forest that is managed by the Ministry of Environment and Forestry. The Company requires an *Ijin Pinjam-Pakai Kawasan Hutan (IPPKH)*, translated as a Borrow-Use forestry area permit, from the the Ministry of Environment and Forestry to access and use a forestry area for any purpose that is outside of forestry activities, including mineral exploration and mining activities. The PT Sorikmas Mining CoW contains caveats that allow the Company to conduct open-cut gold mining in protected forest. The Company holds a valid 485 ha *IPPKH (Operasi)* permit that contains the proposed Sihayo mine development area and, on the 4 September 2020, was granted a 13,800 ha *IPPKH (Eksplorasi)* permit that surrounds the operating permit. This allows the Company to conduct exploration activities including drilling on prospects located along the Sihayo Gold Belt in the North Block of the CoW, which includes Hutabargot Julu, Sihayo and near-by prospects. The 13,800 ha *IPPKH (Eksplorasi)* permit is valid for 2-years until 3 September 2022, and is extendible.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Exploration commenced on the PT Sorikmas Mining CoW in 1995, originally under a domestic investment Kuasa Pertambangan (KP) title held by Antam with work managed by PT Aberfoyle Indonesia, a subsidiary of Aberfoyle Limited (Australia). Work continued under a pre-CoW permit (SIPP) from February 1997 to January 1998, and then under the joint venture company, PT Sorikmas Mining, when the CoW was signed in February 1998. Exploration carried out over this initial three year period included regional drainage geochemical sampling, prospecting, geological mapping, soil geochemical surveys and investigations on some of the historic Dutch mine workings in the district. Scout drilling was conducted by Aberfoyle on the Mandagang porphyry target in 1996 and produced some broad low grade Cu-Mo-Au intercepts. The regional work highlighted numerous gold and multielement anomalies across the CoW. Subsequent prospecting identified multiple targets, representing a broad spectrum of precious and base metal mineralisation styles, including: • Carbonate-hosted jasperoid gold at Sihayo, Sambung, Link Zone, Sihayo-2, Sihayo-3, Sihayo-4, Mentari and Nabontar prospects (North CoW Block); • Epithermal gold-silver veins and disseminated mineralisation at Hutabargot Julu (Dutch working), Sihayo-5 (North CoW Block), and Tambang Hitam, Tarutung, Babisik, Nalan Jae, Nalan Julu, and Rotap prospects (South CoW Block);

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		• Porphyry-style copper ± gold-molybdenum mineralisation at Rura Balancing, Singalancar, Sihayo-2 Copper (North CoW Block), and Mandagang, Tambang Tinggi, Namilas and Siandop prospects (South CoW Block); • Polymetallic skarn at Bandar Lasiak (North CoW Block), and Pagar Gunung, Huta Pungkut prospects and Tambang Ubi/Pagaran Siayu (Dutch mine) prospects. Aberfoyle was taken over by Western Metals Ltd in late 1998. Western Metals farmed out part of their beneficial interest in the CoW to Pacmin Mining Corp in 1999. Pacmin funded and managed detailed prospect-scale work at Sihayo and on some neigbouring prospects during 1999 until early 2000. This work included grid-based soil geochemical surveys, ground IP-Resistivity surveys, detailed geological mapping, trenching on various prospects and the first scout drilling program on the Sihayo gold discovery. The CoW was placed into temporary suspension from November 2000 to February 2003 due to depressed gold prices, lack of funding and changes to the forestry regulations and status that restricted access to the CoW area. PacMin was taken over by Sons of Gwalia (SoG) (Australia) in late 2001. Oropa Limited entered into an agreement to purchase the 75% beneficial interest in the CoW held by SoG/Western Metals in late 2002. Oropa exercised its option to purchase the 75% beneficial interest in the CoW held by SoG/Western Metals in early 2004. Oropa changed its name to Sihayo Gold Limited in late 2009. Exploration resumed on the CoW in early 2003, fully funded by Oropa/Sihayo. This work included detailed prospect-scale exploration such as grid-based soil geochemical surveys, ground IP-Resistivity and magnetics surveys, detailed geological mapping, trenching and drilling campaigns in the North Block (Sihayo, Sihayo-2, Link Zone, Sambung & Hutabargot) and South Block (Tambang Tinggi, Tambang Ubi and Tambang Hitam) that steadily increased from 2003 to 2013. An airborne magnetic and radiometric survey was flown over the CoW in 2011. A total of 86,499 m of diamond drilling in 824 holes was drilled on the CoW up to 2013 including a total of 59,469 m in 547 holes on Sihayo, 12,475 m in 165 holes on Sambung, 1,571 m in 17 holes at **Sihayo-2**, 6,979.5 m in 57 holes at Hutabargot Julu, and 6,005 m in 38 holes in the Tambang Tinggu district. Another hiatus in exploration activity occurred from 2013 to early-2019 due to lack of funding. New investment was injected into Sihayo Gold Limited in 2018 and the Company recommenced ground work at Sihayo in 2019 with an infill drilling program in support of a new Mineral Resource estimate on Sihayo and Sambung gold deposits. A total of 7,338 m in 74 holes of infill drilling was completed at Sihayo in 2019 (*See* ASX:SIH Quarterly reports released in January 2020, April 2020, and ASX release by Sihayo (ASX:SIH) on 23 June 2020). Another significant capital raising was achieved in August 2020, the proceeds of which are being used to fund exploration at Hutabargot Julu and elsewhere, early project works on the Sihayo Starter Project and working capital *See* ASX:SIH Quarterly reports released on 20 August 2020). A total of 4806-m/25 holes of reconnaissance drilling was completed over the greater Hutabargot project area in early 2020, 1740-m/8 holes completed on the Sihorbo North vein target and 2577-m/11 holes on the Penatapan stockwork target were completed in mid-late 2021 (*See* ASX releases by Sihayo ASX:SIH on 12 April 2021, 5 July 2021 and 17 November 2021). Historic resource estimates have only been previously announced on the **Sihayo and Sambung gold deposit**s.

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		Historic resource estimates: Runge Limited Indicated and Inferred resource of 15.2 Mt at 2.8 g/t Au (1,368,200 oz) at 1.2 g/t Au cut-off in oxide/transitional/fresh ore types. Released by Sihayo (ASX:SIH) on 12 June 2012. H & S Consultants P/L Measured, Indicated and Inferred resource of 15.3 Mt at 2.7 g/t Au (1,322,000 oz) at 1.2 g/t Au cut-off in oxide/transitional/fresh ore types. Released by Sihayo (ASX:SIH) on 17 June 2013. PT Sorikmas Mining Measured, Indicated and Inferred resource of 23.399 Mt at 2.11 g/t Au (1,585,000 oz) at 0.6 g/t Au cut-off in oxide/transitional/fresh ore types. Released by Sihayo (ASX:SIH) on 23 August 2018. **Historic resource estimates for Sambung gold deposit:** H & S Consultants P/L Indicated and Inferred resource of 1.58 Mt at 2.0 g/t Au (102,025 oz) at 1.2 g/t Au cut-off in oxide/transitional/fresh ore types. Released by Sihayo (ASX:SIH) on 17 June 2013. **Historic resource estimates: Sihayo-1 & Sambung gold deposits (combined)** PT Sorikmas Mining A Sihayo-1/Sambung combined updated Measured, Indicated and Inferred resource of 24 Mt at 2 g/t Au for 1.5 Moz contained-gold at 0.6 g/t Au cut-off, and an updated Ore Reserve of 12.5 Mt at 2.1 g/t for 840 koz of contained gold at 0.6 g/t Au cut-off in oxide/transition/fresh ore types. Released by Sihayo (ASX:SIH) on 23 June 2020. Illegal (artisanal) gold mining activity has been operating at the top of the Sambung gold deposit since 2012. This has been small-scale highly selective hand-tool mining from reworked regolith, fracture-oxidised jasperoid and oxidised cavity-fill sediments in limestone. Gold is won by amalgamation in tromol barrels that are operated in villages located outside the CoW area. The Company believes that mostly the top 5-meters or less of the Sambung orebody has been depleted by local mining and this is excluded from the Sambung resource reported herewith.
Geology	Deposit type, geological setting and style of mineralisation	**Regional Setting** The CoW is located at the western end of the 7,000 km long Sunda-Banda magmatic arc. Sumatra lies on the south-western margin of the Sundaland promontory at the edge of the Eurasian plate. The promontory basement is

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		composed of accreted and fault-transposed continental plate and magmatic arc terranes that were derived from Gondwana during the Late Palaeozoic and Mesozoic. The CoW straddles a NW-SE trending collisional boundary separating two basement segments: namely the Late Palaeozoic West Sumatra terrane (eastern segment) and Mesozoic Woyla terrane (western segment). The West Sumatra segment is composed of intermediate-felsic volcano-sedimentary rocks and associated shallow marine carbonate rocks. The Woyla segment is an accretionary complex composed of deep to shallow marine sedimentary rocks and associated mafic volcanic rocks. The collisional contact between these two terranes, referred to as the Medial Sumatra Tectonic Line, is stitched by Mesozoic granitic intrusions. Extension on these basement rocks during the early Palaeogene produced local rift basins that were filled by fluvio-lacustrine, coal-bearing siliciclastic-volcano-sedimentary rocks. These rocks have been uplifted, structurally inverted and partly eroded by the development and formation of the Trans Sumatran Fault Zone (TSFZ), commencing in the Miocene. The evolution of the TSFZ was accompanied by Palaeogene magmatism (diorite/andesite – tonalite/dacite intrusions and volcanics) and associated hydrothermal activity and mineralisation within the CoW and surrounding region. Younger volcanic tephras erupted from nearby Quaternary volcanoes (eg Sorikmarapi, Toba) mantle the landscape in parts of the CoW. **Sihayo Gold Belt** The Sihayo Gold Belt straddles the Angkola fault segment and associated fault strands (western margin) of the Barumun-Angkola dextral transtensional jog in the NW-SE trending TSFZ and is immediately adjacent to a major dilatational pull-apart basin (Panyabungan Graben: approximately 100 km long, 12 km wide and 1 km deep) that is controlled by the TSFZ. The TSFZ and associated deep seated dilatational structures that control the pull-apart basin are interpreted to be major structural controls on the alignment and evolution of Tertiary magmatism and mineralisation within the CoW. The Sihayo Gold Belt is one of three parallel/near-parallel prospect-aligned mineral belts recognised across the CoW area. It is a +15 km long NW-SW trending corridor of Permian calcareous volcano-sedimentary rocks, Tertiary siliciclastic-volcaniclastic rocks and associated intrusions. These rocks are highly prospective for replacement-style carbonate-hosted gold, epithermal gold-silver veins, polymetallic skarn and porphyry-related gold and copper mineralisation. It is host to the Sihayo-Sambung gold resources and near-mine prospects of Sihayo-2,-3, -4, -5, Bandar Lasiak, Sihayo-Sambung Link Zone, Hutabargot Julu and Dolok. **Sihayo – Sambung gold deposits** Sihayo and Sambung resources are located about 800m apart but are interpreted to occur at about the same stratigraphic position and on the same controlling regional fault structures. Primary gold mineralisation is hosted in stacked stratabound lenses of hydrothermally altered ('jasperoid' or sulphidic microcrystalline silicification and argillic/clay-sulphide alteration), microbrecciated silty-sandy ("dirty") limestone and calcareous carbonaceous mudstone-siltstone, and in pods of similarly altered cavity-fill sediments within karstified fossiliferous limestone/marble. These rocks occur at the top of a Permian mixed carbonate-clastic volcano-sedimentary rock unit that has been openly folded and strongly faulted. The Permian rock unit is unconformably overlain by a package of Tertiary fluvio-lacustrine carbonaceous siliciclastic sedimentary "cap" rocks (sandstone, siltstone, mudstone, lignite, conglomerate, and agglomerate) that are sometimes mineralised at the

Criteria	JORC Code Explanation	Commentary
		basal unconformity with the underlying Permian rock unit. Diorite intrusions as dykes, sills and laccolith are locally spatially associated with mineralised jasperoid lenses. A steeply dipping discordant jasperoid body (feeder structure?) is apparent within the Sambung deposit. Similar large mineralised discordant jasperoid bodies (feeder structures) have not yet been identified at Sihayo. Sihayo and Sambung are stratabound carbonate-hosted gold deposits or more broadly categorised as Sedimentary Rock Hosted Disseminated Gold Deposit type (SRHGD). Northwest to northerly striking vertical faults controlled by TSFZ dextral movement and associated northeast to easterly striking cross-faults were probably conduits for mineralising hydrothermal fluids from depth. Where vertical structures have met favourable sub horizontal to moderately northeast-dipping lithological contacts, and likely the meteoric fluid interface, hydrothermal fluids have migrated laterally depositing gold mineralisation. Favourable lithological contacts for the development of gold-bearing jasperoid at Sihayo and Sambung are rheologically different stratigraphic units, most notably: i) on the unconformity/contact between Permian calcareous rocks and Tertiary carbonaceous argillaceous rocks, ii) between silty-sandy (“dirty”) limestone and fossiliferous limestone/marble or volcaniclastic rocks within the Permian stratigraphy; iii) within Permian calcareous rocks near diorite intrusion contacts. The subordinate regolith-hosted (eluvium/colluvium) mineralisation occurs on the present land surface and is associated with Quaternary residual weathering and erosion of the primary mineralisation. **Sihayo gold deportment** A gold deportment study on jasperoid sulphide mineralisation at Sihayo was previously done by researchers of CODES University of Tasmania (Hutchinson et al, 2011). This study was completed on six mineralised core samples taken from holes SHDD491 (54.3m), SHDD492 (207.1m), SHDD494 (208.2m), SHDD495 (139.3m), SHDD497 (140m) and SHDD506 (256.2m). Methodologies used were MLA (Mineral Liberation Analyzer) to search for free gold particles greater than 1 micron-size and La-ICP-MS (Laser ablation inductively coupled mass spectroscopy) to detect gold nano-particles and quantify concentrations of trace elements in the sulphide host minerals (Hutchinson et al, 2011). The conclusions of this study are summarised as follows: • Main sulphides present are pyrite, subordinate arsenian pyrite and rare arsenopyrite. • Common sulphide textures are mm-sized euhedral-sunhedral pyrite cores surrounded by narrow arsenian pyrite rims and sub-rounded aggregates composed of small equigranular to acicular grains of pyrite, arsenian pyrite, and rare arsenopyrite. • Most gold (>90% estimated) is “invisible” and concentrated in arsenian pyrite rims and domains within pyrite grains and aggregates but it has not been determined whether it occurs in the host mineral structure or as discrete nano-particles. • Free gold (and silver) grains are rare, show a range in size up to a maximum of 40 microns containing >70 wt % Au and <30 wt % Ag (electrum), and often occuring as small 3-5 µm grains within patches of organic carbon between hydrothermal quartz and feldspar.

Criteria	JORC Code Explanation	Commentary

- The texture and composition of the Sihayo arsenian pyrite are considered to be very similar to the fine grained ore stage pyrite from the Carlin deposits on the north Carlin Trend Nevada. In particular the Au-As characteristics of the pyrite and the elevated levels of Sb, Tl, Ag and Cu.

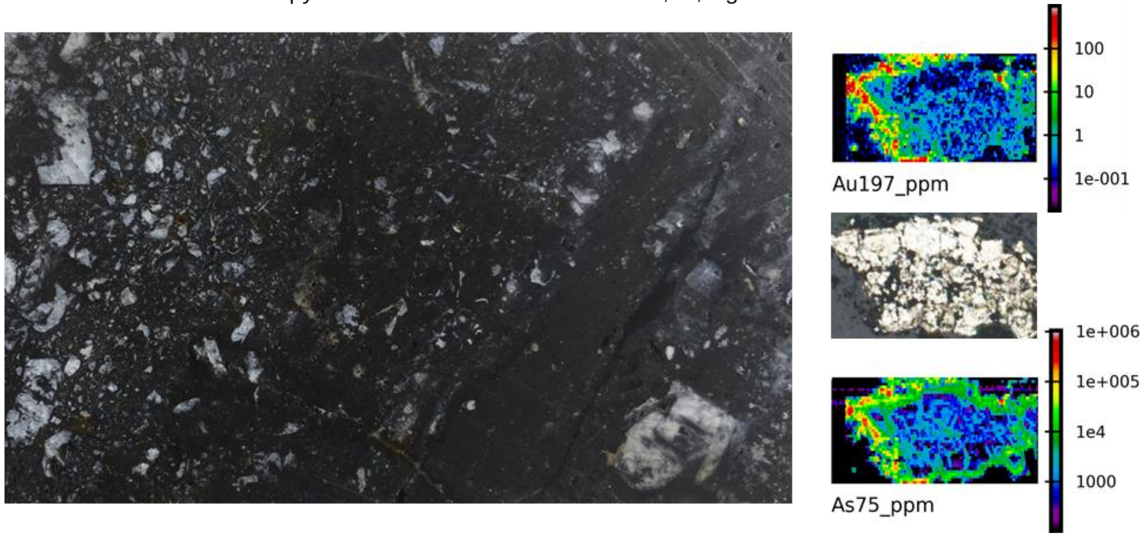

***Figure**: SHDD506 (256.2m) Mineralised sulphidic jasperoid breccia (10 cm long) Shows Laser Ablation ICP-MS image of a 0.01 mm sulphide grain with high Au-Ag arsenian pyrite/arsenopyrite rim (yellow-red) around low Au-Ag As-poor pyrite core (blue-green)*

Reference:

Hutchinson., D, Large, R., Gilbert, S., and Goemann, K. (2011). Sihayo Gold Study: Application of MLA and LA-ICPMS to Characterise the Gold Mineralogy. Report for Sihayo Gold Ltd, 164p.

Hole	Depth	Au g/t	Ag g/t	As ppm	Sb ppm	Weathering State	Lithology
SHDD491	54.3m	0.88	8	230	63	POX	Jasperoid
SHDD492	207.1m	6.23	9	2410	42	POX	Jasperoid
SHDD494	208.15m	5.46	3	534	128	POX	Jasperoid
SHDD495	139.3m	11.2	10	2930	65	POX	Jasperoid
SHDD497	140m	9.61	7	6500	528	POX	Jasperoid
SHDD506	256.2m	11.6	4	5200	93	FR	Jasperoid

List of samples studied at CODES showing corresponding assays within 1-m interval

Criteria	JORC Code Explanation	Commentary
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• No new drilling results relate to this announcement. • For details on the 2019 Resource Infill Drilling Program Refer to ASX:SIH Announcement – Results of Feasibility Study – 23 June 2020
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No drilling results relate to this announcement. • For details on the 2019 Resource Infill Drilling Program Refer to ASX:SIH Announcement – Results of Feasibility Study – 23 June 2020
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this	• No new drilling results relate to this annoucement. • For details on the 2019 Resource Infill Drilling Program Refer to ASX:SIH Announcement – Results of Feasibility Study – 23 June 2020

Criteria	JORC Code Explanation	Commentary
	effect (eg 'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• No new drilling results relate to this announcement. • For details on the 2019 Resource Infill Drilling Program Refer to ASX:SIH Announcement – Results of Feasibility Study – 23 June 2020
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• No new drilling results relate to this announcement. • For details on the 2019 Resource Infill Drilling Program Refer to ASX:SIH Announcement – Results of Feasibility Study – 23 June 2020
Other substantive historic exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• For details on the 2019 Sihayo-1 Resource Infill Drilling Program Refer to ASX:SIH Announcement – Results of Feasibility Study – 23 June 2020 • For details on the 2022 Sihayo-1 Project Development Update Refer to ASX:SIH Announcement – Project Update and Launch of Strategic Review Process – 17 February 2022 • For details on the 2022 Metallurgical Update on Sihayo-1 Refer to ASX:SIH Announcement – High pH Pre-Leaching Test Work Demonstrates Potential for Significant Uplift in Recoveries – 5 July 2022. • For details on the 2022 Stage 1 Drilling Program on Sihayo-1 Refer to ASX:SIH Announcement – High-grade gold intercepts from latest drilling program at Sihayo – 25 October 2022. • For details on early results from the 2023 Stage 2 Drilling Program on Sihayo-1 Refer to ASX:SIH Announcements – Exciting gold results from latest drilling program at Sihayo – 9 March 2023, Significant Au Intercepts – 50 metres at 7.75 g/t Au at Sihayo – 24 March 2023 and Further exciting intercepts from Sihayo drilling – 9 May 2023.

Section 3: Estimating and Reporting of Mineral Resources

Criteria	JORC Code Explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	Primary data was collected by PTSM on laptop computers in Excel or Micromine tables using drop down codes. Field data and original assay certificates compiled and validated by database administrators. Drilling data provided in Micromine tables for collar, survey, and lithology and assay data. Micromine software validation procedures checks for missing intervals and drill holes. Checking inclinations, azimuths, deviations and sample intervals within a given tolerance.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	Site visits were conducted by SGC staff during the period June 2019 through to December 2019. A total in excess of 11 days have been spent on site by SGC personnel.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	The Sihayo gold deposit is situated on the north western end of the 11.5km long Sihayo - Hutabargot mineralised trend and directly adjacent to a major dilational pull apart basin (~100km long, ~12km wide and ~1km deep) that is controlled by the Trans Sumatran Fault Zone (TSFZ). The TSFZ and associated deep seated dilatational structures that control the pull-apart basin are interpreted to be the macro mineralisation controls of the Sihayo and Sambung gold resource. Geological Interpretation has a high degree of confidence. Interpretation based on PT SM diamond drilling validated geological logging and assays. The construction of the mineralisation model incorporated a number of inputs including but not limited to structure, oxidation, alteration and geology. SGC do not believe that the effect of alternative interpretations will have a material impact on the overall Mineral Resource estimates. The geological interpretation is considered robust & alternative interpretations are considered not to have a material effect on the Mineral Resource. No alternate interpretations are proposed as geological confidence in the model is moderate to high. As additional geological data is collected from additional drilling, the geological interpretation will be continually updated. The factors affecting continuity both of grade and geology are most likely to be associated with structural controls and local complexity (e.g. cavity and cave fill style mineral occurrences), the knowledge of which is limited with the current spacing of information. The broad approach to the mineralisation modelling is an attempt to model an unbiased interpretation.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	Refer to sections 9 and 12 of the SGC report for details.

Criteria	JORC Code Explanation	Commentary
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Ordinary Kriging technique was employed using GS3 software based on low coefficient of variation between samples in the mineralised domain. Grade interpolation and search ellipses were based on variography and geometry modelling outcomes. Modelling was conducted in three passes with block sizes being 12.5 m E by 12.5 m N by 2.5 m RL; discretisation was 5x5x2 for both Sihayo and Sambung. In the first pass data and octant criteria used were, Minimum Data=12, maximum Data=32, Minimum Octants=4. Search radii was 30 mE by 40 mN by 8 mRL. An expansion factor of 1 was applied so in the second pass saw the same data and octants criteria with an expanded search to 60mE by 80mN by 16mRL. The third pass saw Minimum Data=6, maximum Data=32, Minimum Octants=2. Search radii was 60mE by 80mN by 16mRL. Top cutting was applied to domains and elements which displayed a very strongly skewed nature as summarise in the report reference, e.g. Sambung Regolith domain, cut 172g/t to 1.1g/t Au. This was the only top cut applied. Secondary attributes including but not limited to Oxidation, Density, Metallurgical Recovery and SCIS were also modelled on three passes (as above) which included the same data and octant criteria as above. No dilution was expressly added to the SGC model however domain was largely driven by alteration and oxidation which did tend to incorporate a degree of lower grade material. No assumptions were made by SGC regarding the recovery of by-products. Only gold was modelled as an element. Blocks in the model were defined based on the likely mining bench heights and the domaining took into account the SMU proposed at the outset of 2 m E by 2 m N by 2.5 m RL. The interpretation or domain model was largely driven by the lithology / geology, oxidation state, and structural intervention and mineralised trends observed over the various project areas including primarily regolith and jasperoid domains. Grade was used as a secondary domain driver for the definition of boundaries. The model was validated in Micromine using section and plan comparisons back to original informing data as well as with the use of swath plots to assess local grade variability between the model and informing data.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	Mineralised domain interpreted on grade ≥ 0.3 g/t Au with reference to local variability. Assumed to be reasonable cut off for small scale shallow open pit proposition given probability plot curve inflexions and grade population distributions.

Criteria	JORC Code Explanation	Commentary
		Resources estimated at a range of cut-offs and reported at a 0.6g/t Au cut-off grade for public reporting.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	This item is beyond the scope of work for SGC as such this item details were not addressed by SGC but will remain the responsibility of the Client and Client's representatives. Consideration was given by SGC to SMU factors, blocks in the model were defined based on the likely mining bench heights and the domaining took into account the SMU proposed at the outset of 2 m E by 2 m N by 2.5 m RL.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	No metallurgical factors or assumptions used to restrict or modify the resource estimation were employed by SGC proceeding or during the construction of the model. Metallurgical recovery modelled as an attribute of the model were based on data combined and supplied by the Client.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	No environmental factors or assumptions were used to restrict or modify the resource estimation.
Bulk Density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of	Bulk density was estimated into block models based on a matrix of oxidation and lithology defined from a dataset of bulk density readings as supplied by the Client.

Criteria	JORC Code Explanation	Commentary
	the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	In all 182 bulk density measurements were taken from core at 10 cm interval over selected core deemed appropriate by the PT SM site representatives during the 2019 infill drilling program. The remainder of the SG database is historical in nature.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource classification was based on drilling density (and the availability of data to present to the search neighbourhood, geological modelling, oxidation and, density and recovery data. The classification criteria are deemed appropriate by SGC.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Other than those noted in this report, to the best of SGC knowledge, no additional public and formalised audits or reviews have been undertaken to date concerning the Mineral Resource estimates for Sihayo and Sambung.
Discussion of relative accuracy / confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	Outlines of resource classifications were reviewed against drill-hole data density and assays results and each block in the model has a resource classification which indicates the relative (block to block) confidence level. Mineral resource estimate technique was deemed appropriate by an internal peer review by SGC as were the estimates themselves. Total mineral resource estimate based on global estimate. No production data was available at the time the estimates were undertaken. The block model was produced to represent global estimates, however the model honours the local grade distributions appropriately given the drilling data provided and the domaining strategy employed. The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.

Criteria	JORC Code Explanation	Commentary
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	

Section 4: Estimation and Reporting of Ore Reserves

Criteria	Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• The Sihayo Gold Project Mineral Resources are reported inclusive of those Mineral Resources modified to estimate Ore Reserves. • Mineral Resources have been estimated for the Sihayo and Sambung gold deposits by Spiers Geological Consultants documented in *Mineral Resource Estimation, Sihayo & Sambung Deposits Sumatra, Indonesia (Spiers Geological Consultants Pty Ltd, April 2020)* and addendum *Addendum 1: Mineral Resource Estimation Sihayo & Sambung Deposits Sumatra, Indonesia (Spiers Geological Consultants Pty Ltd, October 2020)*. • The Sihayo Gold Project Mineral Resources have been estimated using a 0.40 g/t gold (Au) cut-off grade for Sihayo and Sambung respectively. The Mineral Resources is estimated at 27.8 Mt at 1.76 g/t Au containing 1.56 Moz of gold. • AMC developed a predictive geometallurgical gold recovery model for mineral processing using caustic pre-leaching (CAL). In conjunction with the geological drillhole data, a combined set of 74 metallurgical samples were used in the exploratory data analysis. Multiple features (variables) were considered for inclusion in the predictive model. Assessment was undertaken for the most influential features. The three key features with strong relationships to the caustic leach recovery are the Leachwell recovery (au_recov_lw), gold grade (drill_au_gt), and oxidation state (OX_Code). Moderate improvements in the prediction model are possible with the inclusion of arsenic (drill_as_ppk) and antinomy (Sb_ppm), total sulphur, total carbon, non-carbonate carbon, and sulphate sulphur (SCIS_pct). A fitted linear regression prediction model was derived for deployment to the geological block model. • The Sihayo and Sambung geological block models using 12.5 m E x 12.5 m N x 2.5 m Z parent cell size, with sub-celling on geological contacts to a 2.5 m E x 2.5 m N x 0.5 m Z cell size, were updated with re-estimated arsenic and antinomy grades and deployment of the AMC linear regression to model gold recovery for CAL processing of transition and fresh mineralisation. • The Sihayo Ore Reserve estimate is based on the 3D geological resource block model: "SIH_BLANK_OKMOD_ALL_PDOMS_100320_withAsSb22-08-22_AMCGEOMET_EQN_V12.csv" dated August 2022. Using a cut-off grade of 0.40 g/t Au, Sihayo Mineral Resources are estimated at 24.8 Mt at 1.80 g/t Au containing 1.43 Moz of gold. • The Sambung Ore Reserve estimate is based on the 3D geological resource block model: "SAM_BM_with_HpH_rec_070223.csv" dated February 2023. Using a cut-off grade of 0.40 g/t Au, Sambung Mineral Resources are estimated at 3.0 Mt at 1.40 g/t Au containing 0.14 Moz of gold. • The two geological resource block models were developed using a geostatistical assessment of predominantly diamond drillhole sample results. Grade and tonnage estimates of the geological resource block models used to support the Ore Reserve estimate have not changed from the 2021 Mineral Resource block model used to inform the Mineral Resource statement.

Criteria	Explanation	Commentary
		• The Ore Reserve was estimated from the Mineral Resources by developing the diluted mining block models “sih_d5x5x5_0922.dm” and “sam_d5x5x5_0223.dm”, and undertaking pit optimization to determine blocks that are economically viable to mine and process. Pit designs were then verified using the pit optimization shells as a guide.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• AMC’s Competent Person, Mark Flanagan, attended the Sihayo Gold Project site in November 2022. Aerial and ground observations were completed for the Sihayo mining area, and processing plant and mine infrastructure areas. The visit focussed on Project modifying factors and discussions with the site Exploration Manager confirming the business case presented in the 2023 FSUA. • Competent Persons Graham Brock and Brett Stevenson have not undertaken a site visit due to COVID-19 Pandemic travel restrictions. The Competent Persons have reviewed core pictures, virtually toured the core shed on 15 October 2021 (Mr Brock and Mr Flanagan) and discussed the expected site operating conditions with PTSM personnel that have been to the Project site.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• This Ore Reserve estimate is based on the Mineral Resources estimate prepared as at 30 April 2020, a definitive feasibility study completed in 2022 (2022 FSU), and an Addendum completed in 2023 (2023 FSUA). • It is the Competent Person’s opinion that the standard of work in the 2022 FSU and 2023 FSUA is generally at the level of a Feasibility Study, and at a minimum a Pre-Feasibility Study level. • Additional work has been identified and is required in several areas before the Sihayo Gold Project is developed; this work will be completed as part of detailed engineering studies. • The life-of-mine plan is technically achievable based on the modifying factors used in estimating the Ore Reserve. • The Ore Reserve is economically viable, based on consideration of the modifying factors, the life-of-mine plan, expected revenues and estimated capital and operating costs.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• Ore Reserves are estimated using a net smelter return (NSR) cut-off grade which is above the economic break-even cut-off grade based on economic and metallurgical input parameters as follows: – A gold price of USD 1,500/oz. – Royalty of 4.25% of recovered gold value. – Tonne weighted gold metallurgical recovery for the life-of-mine processing schedule is 84%. – CIL processing cost of USD 9.98 per tonne of oxide ore feed, USD 10.25 per tonne of transition ore feed, and USD 10.85 per tonne of fresh ore feed. – CAL processing costs of USD 8.39 per tonne of selected transition and fresh ore feed. – Administration costs of USD 11.5 million per year (USD 5.76 per tonne ore feed). – Rehandle cost of USD 0.74 per tonne ore feed.

Criteria	Explanation	Commentary
		– Tailings storage facility raising cost of USD 4.90 per tonne of ore feed. – Rehabilitation cost of USD 0.14 per tonne ore feed. – Realization cost of USD 11.86/oz of gold (refining, transport charges). – NSR cut-off grade of USD 22.18/t for oxide ore, USD 22.40/t for transition ore, and USD 22.99/t fresh ore for the Sihayo deposit. – NSR cut-off grade of USD 22.24/t for oxide ore, USD 22.88/t for transition ore, and USD 23.48/t fresh ore for the Sambung deposit.
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimization or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimization (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilized in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• Mining method: – The Sihayo and Sambung deposits are planned to be mined using conventional open pit mining methods comprising 74 t class diesel-hydraulic excavators and 40 t class diesel articulated dump trucks. – Mineralisation for both deposits is generally dipping at shallow angles, from horizontal through to 20º to 30º. The thickness of the mineralisation varies and while there is generally a consistent plunge to the south of the main part of the Sihayo deposit, it does change dip in all directions. Furthermore, the distribution of estimated gold grade varies throughout the deposits both laterally and vertically. – Mining will be undertaken in 5 m horizontal benches, and selectively mined in 2.5 m flitches. – Drill and blast will be required for material with a rock quality designation (RQD) greater than 1, and / or an intact rock strength (IRS) greater than 3. The remaining material is planned to be free-dig. RQD and IRS have been estimated in the geological block model based on implicit strength models derived from geotechnical logging. An RQD scale of 0 – 4 (worse to excellent) and an IRS scale of 1 – 7 (extremely weak to extremely strong) has been developed. – The mine's development is planned in several stages to enable lower waste stripping requirements and accelerated access to higher-value material at the start of the mine life. Backfilling of mined-out pits will be undertaken as applicable per the mining schedule. – The terrain at the Sihayo Gold Project is steep and a network of pioneering roads will be built to access the two deposits and the necessary mining infrastructure; allowances in the infrastructure construction and mining equipment and costs have been made to account for this task. – Some of the rock types at the Sihayo Gold Project are highly weathered comprising clays and weak mudstones / sandstones, which are expected to impact equipment trafficability. The mining method has made allowances for adequate sheeting of operating surfaces using aggregates from a dedicated mobile crushing and screening plant, as well as six-wheel drive articulated dump trucks. – The Sihayo and Sambung deposit exhibit karst cavities which have been logged during exploration drilling. Cavity identification and demarcation will be integrated into the grade-control drilling programme. Industry accepted mine operating practices will be adopted when encountering cavities.

Criteria	Explanation	Commentary
		– The Competent Person considers the mining method to be appropriate for the deposit. • Geotechnical parameters: – Site geotechnical guidance was provided by PT Ground Risk Management and Solusi Tambang Indonesia identifying high-risk landslide instability areas. – Open pit geotechnical assessment was completed by AMC Consultants Pty Ltd to a pre-feasibility study level of accuracy. AMC recommended: ○ Five geotechnical zones in Sihayo and one geotechnical zone in Sambung per the pit wall geometry. Each zone was sub-divided into three rock domains per strength criteria; Regolith, Tertiary, and Permian. ○ Pit slope parameters were developed within each sub-divided zone for 15 m stack heights (3 x 5 m benches), with inter-ramp slope angles ranging between 34 to 50 degrees. Berm widths of 7.1 m were designed for each 15 m stack. ○ Stability analysis of the slope parameters identified an acceptable factor of safety assuming pit slopes are adequately dewatered in the tertiary rock units of the Sihayo South pit. ○ Vertical and horizontal dewatering / depressurisation bores have been included in the mining cost estimate for these areas to support pit slope stability. ○ Slope stability is highly sensitive to material property and seismicity assumptions. Further work is required to update slope stability analyses with further laboratory test data. – Waste dump geotechnical assessment was completed by AMC to a pre-feasibility study level of accuracy. AMC recommended: ○ An overall dump design slope angle of 20 degrees. ○ High-strength fresh (Permian) rock be placed in the lowest two lifts of the waste dump for dump toe construction. ○ Coarse and sized fresh rock be placed in rock drains within the dump footprint to facilitate drainage of water seepage. ○ Further investigation and testwork of dump foundation soil depths and strength conditions. During construction, a geotechnical engineer would assess the depth of soil removal required based on soil strength. ○ The waste dumps are constructed via end-tipping from the base up in 10 m lifts. ○ During construction, lower strength rock (regolith and tertiary) will be selectively placed in parts of the dump less critical to stability (eg. at the head of the dump or against valley slopes). ○ Static stability assessment of the waste dump designs showed an acceptable factor of safety.

Criteria	Explanation	Commentary
		○ Dump stability is highly sensitive to seismicity assumptions. Further work is required to assess the consequence of failure of waste dumps. • Mining recovery and dilution: – Mining dilution and recovery (ore loss) was allowed for by regularizing the 3D geological resource block model in an orthogonal grid to a selective mining unit (SMU) block size of 5 mX (across strike), 5 mY (along strike), and 5 mZ (bench height). The minimum SMU block size was applied to ore and to blocks of internal waste dilution. – Diluent material is assigned the grade of the underlying resource model block tonnes-weighted within the SMU, developing diluted mining block models. – At a 0.40 g/t Au cut-off grade, block regularization of the Sihayo deposit sub blocked geological resource block models resulted in tonnage dilution of 32% and ore loss of 7%. 99% of the contained gold was recovered in the Sihayo diluted mining block model. – At a 0.40 g/t Au cut-off grade, block regularization of the Sambung deposit sub blocked geological resource block models resulted in tonnage dilution of 18% and ore loss of 5%. 100% of the contained gold was recovered in the Sambung diluted mining block model. – Ore and waste is proposed to be identified and demarcated with reverse-circulation (RC) grade control drilling. Primary excavators and track dozers are proposed to be equipped with high-precision GPS guidance systems to delineate mining blocks and selectively mine the deposits. – No additional mining recovery and dilution factors have been applied. • Pit design: – Optimum pit limits have been determined using GEOVIA Whittle 4X computer software based on the diluted mining block models, and economic and metallurgical parameters used to define the cut-off grade as described above. – Revenue factor 1 pit shell limits were selected as the basis of the ultimate pit designs for the Sihayo and Sambung deposits to maximize the mine life. – Pit staging limits were selected based on revenue factors ranging between 0.40 to 1.00 and used as the basis of pit stage designs. – Allowance of access ramps (10 m single lane and 16 m dual lane) and minimum mining widths of 20 m is included in the pit designs. Bottom benches comprised ‘goodbye’ cuts which are planned to be excavated using a top loading mining method. • Infrastructure: – Infrastructure included in the mine plan includes a processing plant and laboratory, water management structures, heavy and light vehicle workshops, refuelling facility, explosive storage, tailings storage facility (TSF), laydown areas, waste disposal, administration facilities, employee accommodation, and supporting communication and computing facilities.

Criteria	Explanation	Commentary
		– Hydrology studies have identified that surface water diversion and pit dewatering is a critical aspect of the Sihayo Gold Project mining operation. Based on hydrogeological assessment, groundwater inflows are expected to be modest. Geochemical studies have identified water that contacts mineralised materials (contact water) may have elevated concentrations of metals (As, Sb and Se). Contact water will be contained and distributed to the processing plant or routed to the TSF for subsequent reuse or treatment. Contact water inflows have been estimated based on hydrology and hydrogeology studies and a suitable mine dewatering system designed to accommodate pit dewatering requirements. – Based on the waste dump designs and construction method, surface water runoff from waste dumps will have limited contact with mineralised material, and will be discharged to the receiving environment, after first being routed through sediment control structures. • Life-of-mine plan: – Strategic mine schedules were undertaken in Minemax Scheduler software investigating alternative mining and processing strategies. A preferred mining and processing strategy was identified providing guidance for detailed tactical mine planning. – A tactical life-of-mine plan was developed using the Deswik scheduling software. The plan has been completed in month increments and includes detailed mining and dump sequencing, primary excavator deployment, and haulage requirements. Ore stockpiling is considered to manage the feed blend to the process plant. – The life of mine is approximately seven years plus six months of pre-strip before gold production. – The target process plant throughput rate is 2.0 Mtpa. Plant feed will be highly variable comprising fully oxidized through to fresh ore types. Run-of-mine and longer-term ore stockpiles will be used to manage the feed blend to the plant, with a maximum oxide feed constraint of 70% feed tonnage. – Approximately 57% and 43% of the plant feed is processed over the life-of-mine via the CIL and CAL processing route respectively. – Inferred resources greater than the economic break-even cut-off grade have been included in the life-of-mine schedule and contribute approximately 4.7% of the life-of-mine process plant feed tonnes and 4.3% of contained gold. – A sensitivity life-of-mine plan excluding Inferred Resource as process plant feed was completed. The economic viability of the Sihayo Gold Project is not sensitive to the inclusion of Inferred Resource in the processing schedule.

Criteria	Explanation	Commentary
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralization. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	• The process plant is designed as a carbon-in-leach (CIL) circuit with the ability to accommodate caustic pre-leaching (CAL) of selected transition and fresh mineralisation to recover gold and produce dore bullion in 500 oz bars. The plant design includes proven technologies for the detoxification of the tailings before it is sent to the TSF, including cyanide destruction and precipitation of any leached mercury and arsenic to a stable form. The process plant incorporates the following major processing circuits: – Crushing and sizing. – Milling and classification (SAG mill and hydrocyclones). – Leaching and adsorption. – Acid washing, elution and carbon regeneration. – Electrowinning and smelting. – Tailings thickening and water recovery. – Cyanide destruction and mercury / arsenic precipitation. – Tailings disposal. – Reagent mixing and supply services. • The intensity of weathering or oxidation state (completely oxidized, partial or transitional oxidation, and fresh unoxidized) has been visually logged and estimated in the geological resource block model for both Sihayo and Sambung and is an important consideration for the process plant design and plant feed strategy. • Previous metallurgical testwork and some minerographic studies have confirmed the refractory nature of primary gold mineralization at the Sihayo Gold Project: – Gold is locked up primarily with pyrite / arsenian pyrite and lesser silica / silicate minerals. – Ores containing minor carbonaceous materials (generally less than 0.25 to 1.00 % active carbon) which are potentially “preg-robbing”. – The gold recovery by cyanidation is therefore very dependent on the degree of weathering and oxidation across both deposits and locally. The effect of preg-robbing of cyanide is likely to be locally significant where higher concentrations of carbonaceous materials occur. • The process flowsheet and metallurgical assumptions are based on metallurgical testwork completed in several programs: – A comprehensive assaying program was undertaken in the 2019 infill drilling program (mainly over the Sihayo deposit) to support subsequent resource modelling and metallurgical testwork. Cyanide bottle-roll leach analyses (Leachwell) tests were undertaken on selected samples to estimate the cyanide extractable gold. Gold recoveries were compared with sulphide sulphur and organic carbon assays and related to the degrees of oxidations of sulphides (and possibly carbon). This testwork confirmed the strong positive correlation between gold and sulphide mineralization in the less weathered primary ores and the positive correlation of increasing gold recoveries by cyanidation with the increasing intensity of oxidation in both

Criteria	Explanation	Commentary
		sulphidic jasperoid and decalcified clay-sulphide ore across the Sihayo deposit. – Leachwell analyses for cyanide extractible gold from core samples across both the Sihayo and Sambung deposit have been used as a proxy to estimate predicted gold recoveries for CIL processing within each ore domain in the geological resource block model (attribute “MET_REC”). The MET_REC dataset was validated and underwent a statistical review and subsequent geometry modelling after which the MET_REC attribute was ordinary kriged to produce a block-by-block MET_REC estimate in the geological resource block model. Predicted CIL gold recoveries for mineralized material vary significantly throughout the deposits ranging from 20% to more than 95%. – The MET_REC attribute was used to calculate the block-by-block recovered gold, which was then accumulated within the SMU and recalculated to determine the CIL gold recovery within the SMU (DREC). • Since completion of the 2022 FSU, PTSM has undertaken further metallurgical testwork that included a series of carbon-in-leach (CIL) tests using sodium hydroxide (NaOH or caustic soda) in the grinding / sample preparation stage as well as pre-leaching at a pH of 13. Testwork results indicate an uplift in gold recoveries of between 8% and 61% for Transition mineralization and between 21% and 74% for Fresh mineralization at the Sihayo deposit. PTSM engaged AMC to undertake a geometallurgical study to investigate the application of multivariate analysis of the recovery based on the geological data: – AMC developed a predictive geometallurgical gold recovery model for mineral processing using caustic pre-leaching (CAL). In conjunction with the geological drillhole data, a combined set of 74 metallurgical samples were used in the exploratory data analysis. Multiple features (variables) were considered for inclusion in the predictive model. A fitted linear regression prediction model was derived comprising six variables (leachwell recovery, gold grade, arsenic grade, antimony grade, oxidation, and total sulphur / total carbon / non-carbonate carbon / sulphate sulphur (SCIS). – The CAL linear regression was applied to the geological block model to calculate the block-by-block recovered gold, which was then accumulated within the SMU and recalculated to determine the CAL gold recovery within the SMU (DREC2). – The introduction of CAL to enhance gold recovery in transition and fresh mineralization results in elevated levels of arsenic in solution post-cyanidation. Soluble arsenic is required to be removed before tailings are discharged to the tailings storage facility. A series of tests were conducted to study the quantity of ferric sulphate required to effect arsenic precipitation from high soluble arsenic containing pulps. The first series of tests were conducted using a ratio of 5:1 at pH values of 4.5, 5.0, 6.0 and 7.0. Once the optimum pH was selected (pH 7) the tests were run at ratios of 5:1, 3:1, 2:1 and 1:1. Since results were acceptable at 3:1 ferric: arsenic ratio and at pH

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		7.0 a further test was run at neutral pH of 8.5 (after cyanide destruction and mercury removal). This test again produced a satisfactory result. – It was noted that during cyanide destruction tests arsenic precipitation occurred reducing a soluble arsenic of 1093ppm to 258ppm. To ensure both the arsenic precipitated in the cyanide destruct step and the pH 7.0 and pH 8.5 remained insoluble, tests were run to see what arsenic dissolved by acidification to a pH of 2.5. In the case of the pH 7 test 0.3% of the arsenic re-dissolved raising the solution level from <1ppm arsenic to 3ppm arsenic. In the case of the pH 8.5 test the 2.1% of the arsenic re-dissolved resulting in a solution of 20ppm arsenic. • The mineralogy and material handling characteristics of process plant feed is expected to be highly variable at Sihayo. The 2023 FSUA has developed a plant feed and stockpile design philosophy to manage the expected variability, which includes: – CAL processing will be preferentially applied to selected transition and fresh mineralization, where the increased CAL gold recovery compensates for the additional processing operating cost, increasing the value of a block compared to processing through conventional CIL only (cut-over grade). For all oxide mineralization (where CAL doesn't increase gold recovery) and the remaining transition and fresh mineralization, plant feed will be processed through conventional CIL only. – To accommodate either CIL or CAL processing, material will be fed to the plant in separate campaigns. Extended feed campaigns (one to two months) are preferred to short campaign durations (less than two weeks), allowing semi-autogenous (SAG) mill operating conditions to be set to the feed blend characteristics. Besides slurry milling density and mill speed (relatively easy and quick changes to make), a higher ball charge will be required for oxide feed compared to transition and fresh feed blends. It is expected that a few shifts would be required to load sufficient additional grinding media into the mill to achieve and stabilise the target grind size. – Run-of-mine (ROM) stockpiles adjacent to the process plant run-of-mine bins segregated into fingers by oxidation state as a proxy for material handling characteristics (oxide, transition, and fresh), and recovered gold grade. – Dedicated crushing circuits for oxide and transition / fresh ore types. Oxide ore is fed to a mineral sizer circuit with primary and secondary sized material conveyed to the SAG mill feed conveyor. Transition and fresh ore is fed to a jaw crusher, and then conveyed to the SAG mill feed conveyor. – Direct tipping and stockpile reclaim of ROM material, enabling blending of process plant feed proposed to be directed by the plant metallurgist and plant operations manager. – Controlled SAG mill feed rates by enabling decoupling of the crushing and grinding circuits with surge bin and crushed ore stockpile. A variable speed apron feeder will draw crushed ore from the surge bin and discharge to the SAG mill feed conveyor, and overflow from the surge bin will be redirected to

Criteria	Explanation	Commentary
		a crushed ore stockpile. The crushed ore stockpile can be reclaimed using a front-end loader and delivered back into the surge bin. • Comminution modelling was completed by Orway Mineral Consultants (Sihayo Gold Project Comminution Modelling, OMC 2021). The modelling confirmed that a 5,400 kW SAG mill can achieve the maximum permitted throughput target of 2.0 Mtpa. • In the 2022 FSU, OMC modelled a 100% oxide milling rate of 269 tph. However, this was using a slightly smaller SAG mill. A larger diameter SAG mill has been adopted for the plant design which allows a marginally higher throughput rate. Primero have estimated an updated oxide feed throughput rate of 275 tph (2.2 Mtpa), a transition feed throughput rate of 268 tph (2.14 Mtpa), and a fresh feed throughput rate of 218 tph (1.74 Mtpa). • Primero have estimated 8,000 annual operating hours for the process plant. This is based on the plant operating 365 days per year, 24 hours per day, at an average availability of 91.3%. The 2023 FSUA has not defined seasonable variations in the operating hours as it is expected to have negligible impact on the life-of-mine plan. • Process plant throughput ramp-up capacity targets were developed by Primero Group (Primero), envisaging that the process plant design is a standard circuit, and the post-commissioning period is not expected to be difficult or prolonged. A three-month ramp-up period has been specified using a modified McNulty curve, progressively increasing from 40% nameplate capacity in the first month to 100% from month 4 onwards. • Knight Piesold Pty Ltd (KP) was commissioned to provide a feasibility level design and technical support pertaining to the permitting and development of the TSF for the 2022 FSU: – The TSF is designed with an initial storage capacity of 2 Mt (Stage 1). The facility will be raised annually over 8 years to a final capacity of 14 Mt. There is potential to expand the ultimate capacity to 16 Mt within the current topographical and infrastructure constraints. – The TSF will comprise a cross valley storage embankment, formed by a multi-zoned earthfill embankment built fully downstream in nominally annual stages. A low permeability cut-off trench is proposed upstream of the embankment to reduce seepage. – Tailings will be discharged into the TSF by sub-aerial deposition methods, using a combination of spigots located at regularly spaced intervals from the crest of the embankment to maintain the supernatant pond remote to the embankment. Water will be recycled from the TSF to the process plant as a process water make up supply using a barge mounted pump system. – The TSF water balance is strongly positive requiring controlled discharge from the system to maintain a negative water balance. A pumped system will be used to decant supernatant from the TSF to the Water Treatment Facility for treatment, polishing and controlled release off site / downstream into the Batang Gadis River.

Criteria	Explanation	Commentary
		– The tailings delivery and decant return pipelines run from the process plant site to the TSF either partially located within a catchment that reports directly to the TSF or a bunded pipeline corridor. A catch pond system will be built along the pipeline corridor, in catchments that do not report to the TSF, to provide containment in case of pipeline rupture. – The tailings will be deposited from multiple spigots inserted along the tailings distribution pipeline in such a way as to encourage the formation of beaches over which the slurry will flow in a laminar non-turbulent manner. Water released from the tailings mass will flow to the supernatant pond from where it will be removed from the facility by means of decant pumps. – The decant system will comprise a floating barge at the south-eastern basin extent fitted with a number of submersible pumps. Regular relocation of the barge will be undertaken located the pumps in sufficient water depth as the tailings elevation rises to reduce the volume of tailings solids being pumped to the treatment and/or process plant. The decant system will pump to the process plant (make up water) or the water treatment plant (controlled discharge). – An emergency spillway will be constructed on the western extent of the embankment, during all stages of TSF operation, to reduce the risk of embankment overtopping in the event of an extreme storm event exceeding the storage capacity of the TSF. If the emergency spillway were to operate, uncontrolled runoff from the spillway will report to a sediment control structure prior to discharge offsite, into the Batang Gadis River. – A stability analyses indicate that the proposed embankment (at all stages) will have adequate factors of safety for static loading conditions. The liquefaction potential has been assessed using a number of screening methods. The results indicate that sandy silt / silty sand in the foundations, at shallow depths, is susceptible to liquefaction. These materials will be excavated and replaced with compacted fill as part of the embankment construction. The seismic deformation analyses indicate that the predicted seismic deformations will be within a manageable range, estimates typically indication potential for 1m vertical crest settlement and 5 m horizontal displacement as a result of the Maximum Credible Earthquake event. Significant damage to the structure would be expected and remedial works required. A significant earthquake during facility operation would likely require suspension of discharge into the facility for an extended period whilst repairs are implemented. – A consequence assessment for the final TSF was completed as part of the design in accordance with the requirements of the ANCOLD documents “Guidelines on the Consequence Categories of Dams” and “Guidelines on Tailings Dams – Planning, Design, Construction, Operation and Closure”. Based on a review of habitation and structures downstream and in close vicinity upstream of the TSF and an assessment of the number of personnel who may be working at the facility at any one time, a population at risk in the

Criteria	Explanation	Commentary
		range of 100 to 1,000 was selected. A review of the business importance of the facility (failure likely to be catastrophic from a business perspective) and the minor cost impact of adopting the more conservative assessment, an “extreme” risk rating was adopted for setting the TSF design criteria. – At closure the TSF will store 14 Mt of tailings. A concept level closure and rehabilitation plan has been developed which includes capping of the tailings surface with selected not acid generating material won from the adjacent borrow material and revegetation of the site. The facility is designed to be water shedding (dry cover) with a closure spillway sized to convey flows generated during a probable maximum flood (PMF). On decommissioning, the supernatant pond will be removed, the tailings beach capped with selected soils and all disturbed surfaces will be rehabilitated with selected vegetation. The final emergency spillway will be upgraded to form the closure spillway. – In accordance with current tailings management standards, a monitoring, maintenance, and surveillance program for the TSF will be developed as part the final design phase and presented as a formal Operating and Maintenance Manual. • No allowance was made in the economic evaluation for deleterious elements. • The metallurgical testwork and predicted gold recoveries are considered representative of the expected variability of the orebody and are appropriate for the style of mineralization. • The metallurgical process is well understood and appropriate for the deposit.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterization and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• Environmental baseline studies and data collection has been conducted at the Sihayo Gold Project between 2010 and 2021. These include meteorology, hydrology, terrestrial ecology, aquatic ecology, hydrogeology, surface water quality, stream/river sediment quality, soils, air quality and noise. The principal sources of the environmental data are: – Golder, 2010. Sihayo Gold Project Environmental and Social Baseline Study. Report#: 098713030-001-R-Rev1. – Schlumberger Water Services, 2012. Sihayo Project Proposed Mine Water Management System. Report#: 50108/R4. – Golder, 2013. Sihayo – Pungkut Gold Project Environmental and Social Impact Assessment. Report#: 128713024-006-R-Rev2. – PT EOS Consultants, 2015. Sihayo – Pungkut Gold Project AMDAL. – PT Sorikmas Mining, 2019. RKL-RPL Quarterly Report I 2019. – PT LAPI ITB, 2020. PT Sorikmas Mining Hydrology and Hydrogeology Final Report. – PT Sorikmas Mining, 2021. Environmental Baseline Monitoring 2021.

		• Key environmental impacts were assessed in the 2022 FSU for the development of the Sihayo Gold Project including: soil, groundwater, surface water, biodiversity, air quality, and noise. – The potential impacts are well understood, and management plans are planned to be implemented to address potential impacts for each item assessed. – The preparation, resourcing, and implementation of these plans will commence prior to project construction. – The plans will comply with statutory requirements based on prevailing Indonesian environmental laws and their regulations, and international standards and guidelines (World Bank Group / International Finance Corporation (IFC)). – Where applicable, engineering controls have been designed into the Sihayo Gold Project to prevent or mitigate known potential impacts including: o Progressive clearing and rehabilitation of disturbed areas. o Recovery and stockpiling of disturbed soils where possible. o Design and implementation of a mine water management system comprising contact water collection, reuse, and treatment. o Surface water diversion of non-contact water though the use of drains and sedimentation ponds to allow sufficient residence time for settling before discharge. Ponds will be periodically cleaned. o Retaining qualified security personnel and site access restrictions. o PTSM will seek to offset habitat loss through a biodiversity offset programme through collaboration with reputable independent organisations. o Dust suppression protocols in the mine and process plant areas. o Equipment specifications to include noise attenuation. • An assessment of acid rock drainage and metal leaching (ARD/ML) potential of waste rock and ore has been conducted by PT Lorax Indonesia on 33 selected samples retrieved from the 2019 infill drilling program. All samples underwent acid-base accounting (ABA) and total inorganic carbon (TIC) tests. A subset of nine samples underwent four acid-digestible solid-phase analysis and water extraction / metal leaching tests: – ABA tests concluded that approximately 95% of the selected samples identified that the material is non-acid forming or exhibits strong acid neutralising properties. – Water extraction tests showed that all samples meet the criteria of Environment Ministerial Decree No. 202/2004. Arsenic concentration in the extract of five tested samples exceeded both the standard set in Government Regulation No. 22/2021 and by the IFC. Cu, Ni, Pb, Se, and Zn concentrations were also found elevated above the water quality standard set in Government Regulation No. 22/2021 in some water extract samples. Contact water will be contained and distributed to the processing plant or routed to the TSF for subsequent reuse or treatment via the mine water management system.

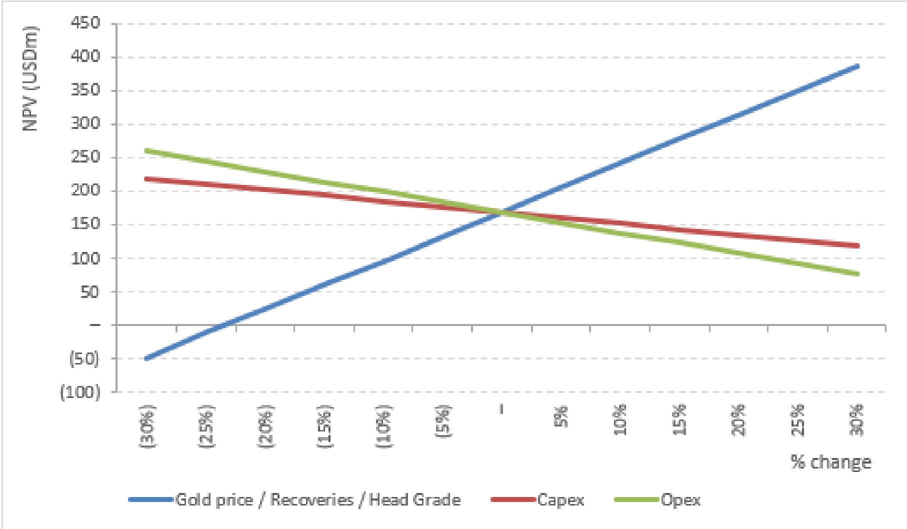
Criteria	Explanation	Commentary
		• A conceptual mine closure plan has been developed for the Sihayo Gold Project. The conceptual mine plan assumes approximately 8 years of mining and processing, after which mine closure activities are initiated. Description of mine closure and reclamation activities include progressive reclamation during mining operations and after closure as well as closure works (decommissioning and removal of facilities and equipment) subsequent to cessation of mining and processing operations. The aim of the mine closure plan is to ensure a safe and environmentally sustainable post-mine site and a legacy of improved and sustainable socio-economic conditions in the affected communities. • The Project has approvals for all major permits, consisting of the Environmental Permit, Government of Indonesia Feasibility Study and the Forestry Borrow-to-Use Permit. Compilation of an addendum to the Environmental and Social Impact Assessment (AMDAL) is currently underway to address recent changes documented in the 2022 FSU. The approval of the AMDAL Addendum is expected as there are no known impediments.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• The project is located in a mountainous area of Sumatra populated by several villages and a major highway running through an adjacent valley. The Sihayo Gold Project comprises the following major infrastructure: – Site access. – Power supply. – Water supply. – Water management structures. – Process plant. – TSF. – Mine infrastructure area, explosives storage and magazines. – Employee accommodation (camp).

		• Access to the site will be established through the construction of a site access road from the adjacent valley to the mine site. A government access road from the West Sumatra Highway was constructed as part of early works and completed up to the Batan Gadis river bridge. The Batan Gadis bridge has been designed by an Indonesian bridge designer and meets public work requirements, with access to the eastern and western bridge abutment improved to facilitate the transportation of construction equipment. The site access road is approximately 6.4 km long extending from the site front-gate, climbing 1,000 m to the process plant and TSF access road junction. A mine access road then extends a further 300 m vertically to the Sihayo pit area. • Power will be sourced from the local grid managed by Perusahaan Listrik Negara (PLN). Meetings with PLN have confirmed that 20 MVA is available from the PLN GI Padang Sidempuan overhead lines running along the Trans Sumatran Highway past the government access road and a memorandum of understanding (MOU) has been agreed between PLN and PTSM for power supply to the Sihayo Gold Project. This is sufficient to meet the estimated Sihayo Gold Project Power demand of approximately 11.6 MW (17 MW installed). Power will be taken from this supply line and distributed to the site front-gate. An electrical switch room and transformer yard will be constructed at the site front-gate for PLN to terminate. An overhead line will then follow the site access road, connecting the site to the grid. The MOU will be advanced to a commercial agreement in-line with project milestones. • Water supply to the process plant will be drawn from contact water generated at the mine facilities. In periods where contact water sources do not meet the processing water demand, supplementary water will be sourced from decant water pumped from the TSF supernatant pond. In periods where contact water supply exceeds processing water demand, excess contact water will be pumped to the TSF for storage and reuse, or for treatment and discharge. The mine water management system has been designed to provide 100% of process plant water demand when required. Potable water will be generated by extracting water from two bores for distribution to a water treatment plant comprising filtering, ultraviolet sterilisation, and chemical dosing. • The mine water management system has been designed to manage seepage and run-off from all planned mine facilities. The system includes diversion channels, sediment ponds, gravity drainage and pumped pipelines, dewatering sumps, pumps and pipelines, and a contact water pond at the process plant. • The process plant is located at the junction of the site access road and the TSF access road. • Most mine services and infrastructure (administration offices, heavy vehicle and light vehicle workshops, explosive storage and magazines, fuel storage and dispensing) will be located near the open pit at the top of the site access road. The facilities have been designed to accommodate the estimated mobile fleet and major consumables requirements derived from the life-of-mine plan. • The Sihayo Gold Project workforce is expected to peak at 1,130 people during the mine life.

Criteria	Explanation	Commentary
		• Based on a detailed organisational structure and labour schedule, a 400-person employee accommodation camp has been designed for staff not living locally. The camp is designed as a mixture of private rooms and dormitory-style accommodation for operations and contracting personnel. General staff, junior staff, manager, and female accommodation is also incorporated into the camp. • Most of the Sihayo Gold Project workforce will reside locally. Staff will be transported by bus to and from the front-gate administration offices and camp facilities to the processing plant and mine infrastructure area.
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• Infrastructure, process plant, and TSF capital costs were estimated by Merdeka Mining Services (MMS) based on a detailed bill of quantities provided by Primero (process plant design), Knight Piesold (TSF design), and MMS (infrastructure design). Direct costs are calculated to an accuracy of +/- 15% consistent with a feasibility study level of accuracy and include: – Estimation of bulk earthworks and construction aggregates quantities, supported by unit rate quotes. – Unit rates for construction labour and materials were based on information from operating Indonesian mines and an MMS database. – Budget pricing for equipment was obtained for major mechanical items and equipment unique to this project. Supply costs for all other equipment items were taken from the MMS database and in consultation with consultants and key suppliers. – Offices, workshops and other process support buildings were included as listed. The site accommodation buildings and related service buildings are included. – Building cost estimates are inclusive of engineering, structural steel, mechanical, electrical, and internal equipment where applicable. – Benchmarking with quantities for similar facilities from previous projects provided an acceptable level of confidence required for a feasibility study level estimate. – Capital estimates have been prepared inclusive of contingency allowances for individual areas according to risk. • Mining capital costs were estimated by AMC based on a detailed first-principal estimate from the life-of-mine plan. Costs are estimated to an accuracy of +/-15% consistent with a feasibility study level of accuracy and include: – Mine physicals and equipment productivity assumptions developed from first principles and benchmarked to the AMC Benchmark Database. – Equipment quotes from Indonesia original equipment manufacturers (OEMs) and suppliers. Quotes include import duties and freight costs delivered to the Sihayo Gold Project site, assemblage, and commissioning. • Owners capital costs were estimated by PT Sorikmas Mining (PTSM) in collaboration with AMC (mining), Primero (processing), Knight Piesold (TSF), and MMS (infrastructure). Costs are estimated to an accuracy of +/-15% consistent with a feasibility study level of accuracy and include: – Project study costs.

Criteria	Explanation	Commentary
		– Project Management. – Detailed engineering. – First fills and spares. – Resource definition drilling. – Mobile equipment (non-mining and processing). – Operational establishment of the PTSM Operations team. – Land acquisition, compensation, and relocation. – Working capital. • Processing operating costs were estimated from first principles by Primero based on direct consumable and operating costs from the nearby Wetar and Tujuh Bukit mining operations in Indonesia and adjusted to reflect the complexity and scale of the proposed plant. • Mining operating costs were estimated from first principles by AMC based on the life-of-mine plan physicals. Mining equipment productivity assumptions were used to determine the expected equipment operating hours and consumable usage. Consumable costs and maintenance life-cycle costs (LCC) were sourced from Indonesian OEMs and supplier quotes. Where cost inputs were not available, costs were sourced from previous AMC studies or benchmarks similar to the Sihayo Gold Project operating conditions. • General and administration costs (G&A) were estimated by PTSM based on first principals and benchmarked to other PTSM operations and industry standards. • Capital and operating costs were estimated in United states dollars (USD) based on an exchange rate of 15,000 Indonesian Rupiah (Rp) to USD 1.00. • Gold is recovered to produce dore bullion in 500 gm bars. Gold content is expected to exceed 90% by weight in the dore and no deleterious elements are anticipated. Dore bullion may contain small amounts of silver, which is not expected to be material and has been excluded from revenue forecasts and economics analysis. • Dore bullion will be transported to Jakarta for refining by the Logam Mulia Refinery (LMR). LMR produces gold as kilogram bars or ingots with 99.99% purity, complying with requirements of the London Bullion Market Association (LBMA) for domestic and international markets. PTSM and LMR will enter a refining agreement prior to commencement of production. • Realisation costs (bullion transportation and refining charges) are estimated by PTSM based on supplier quotes and Indonesian benchmarks from other operations. • Closure costs are estimated by PT Lorax Indonesia and have been included in the economic assessment. • Severance payments have been estimated by PTSM based on the Sihayo Gold Project labour model and Indonesian regulations. • Government royalties are included at a rate of 5.00% of gross revenue from gold production. • Property taxes and other government payments are included in the General and Administration cost estimated.

Criteria	Explanation	Commentary
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• Head grade is estimated using geostatistical techniques in 3D modelling of exploration and resource definition drilling results, with allowance for ore loss and mining dilution. Weighted gold recoveries within the SMU are applied to the diluted gold grade. A monthly processing schedule is developed in the life-of-mine plan to estimate the quantity of gold production (recovered gold). • The Ore Reserve economic analysis is based on gold revenues assuming a 2023 real term gold price of USD 1,900/oz. This assumption is supported by prices being used by other major producers for similar purposes and is considered reasonable. • A refining gold return of 99.85% is used to develop gold revenues. • Realization cost of USD 11.86/oz of gold recovered (refining and transport charges). • No penalties for deleterious elements were applied.
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• Gold is a regularly traded commodity on the open market and is subject to forces of supply and demand. • No product sales contracts are required, and analysis of customers and competitors is not required. • Price forecasts are based on recent historical prices, the outlook of PTSM and financial market intelligence supplied by independent parties. • Volume forecasts are limited by processing capacity, head grade, and metallurgical recovery.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• Currency exchange rate of Rp 15,000:1.00 Rp:USD. • Discount rate of 5% per annum real used for long-term analysis. • The assumed gold price and Indonesian currency exchange rate is selected to reflect recent prices and rates. • Ore feed tonnes, head grade, and gold production is based on detailed pit designs and a life-of-mine plan used to generate undiscounted cash flows. • Capital cost estimates were derived using the infrastructure designs prepared by specialists for their respective areas (e.g. processing plant, TSF), with MMS providing unit rates for earthworks, labour and construction materials. • Inflation and escalation are not considered, and all analysis is conducted in real terms. • Corporate taxation is assessed at 20% of profits after depreciation, amortisation, and interest payments. • Value added taxes (VAT) are included on 100% of capital and 75% operating costs with an 18 and 12-month delay between payment of VAT and the receipt of VAT refunds respectively. There is no VAT payable on gold sales.

Criteria	Explanation	Commentary
		• Financing costs, such as debt facility establishment fees, commitment fees and interest during construction, were not included in the economic analysis and NPV calculation. • Contingencies ranging between 10% to 15% were applied to upfront capital cost items based on an estimate of risk. The overall Sihayo Gold Project contingency is approximately 12% on the upfront capital estimate. • PTSM estimated the NPV of the project which is positive based on the assumptions used in the analysis and a gold price of USD 1,900/oz. • The NPV is most sensitive to the revenue drivers; gold price and metallurgical recovery. A 10% reduction of gold price or recovery reduces NPV by approximately 43%. Increasing the gold price or recovery by 10% increases NPV by approximately 43%. Increasing or decreasing the capital expenditure 10% decreases and increases the NPV by approximately 10%. Increasing or decreasing the operating expenditure by 10% decreases and increases the NPV by approximately 18% respectively. • A sensitivity excluding Inferred Resource as process plant feed was completed. The NPV excluding Inferred Resource remains positive and is reduced by approximately 17% compared to the NPV with Inferred Resources included. 
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• The Sihayo Gold Project will affect several communities in the mining area. Local communities directly affected include: Seven villages in the Naga Juang sub-district (Banua Simanosor, Banua Rakyat, Tambiski, Tambiski Nauli, Tarutung Panjang, Sayur Matua, and Humbang I); six villages in the Siabu sub-district (Tangga Bosi I, Tangga Bosi II, Tangga Bosi III, Muara Batang Angkola, Tanjung Sialang, Hutagodang Muda); and one village in the Huta Bargot sub-district

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		(Sayur Maincat). PTSM have been frequently engaging with these communities' providing information on the status of the project. • Key potential social impacts associated with the project have been identified as a part of the AMDAL (environmental and social impact study) process and associated stakeholder consultations. Social management plans are designed to enhance positive social impacts and where not possible, mitigate negative impacts described in the Sihayo Gold Project 2022 FSU. The principal potential social impacts to the affected communities associated with the project are: – Illegal miners on within the project area losing source of income. – Oversubscription of local employment opportunities to local employment needs. – Project history amongst the local population. – In-migration. – Loss of employment post-construction. – Unresolved land acquisition process with communities. – Lack of community inclusivity and engagement. • These potential social impacts are primarily associated with increased economic activity associated with the project and associated in-migration from other areas of the Regency, Province, and Indonesia. The potential impacts are well understood, and management plans are planned to be implemented to address these impacts: – The preparation, resourcing, and implementation of these plans will commence prior to project construction. – The plans will comply with statutory requirements based on prevailing Indonesian environmental laws and their regulations, and international standards and guidelines (World Bank Group / International Finance Corporation (IFC)). • The land acquisition process for the Sihayo Gold Project will be complex due to its location on protected forest, which is also customary land of the former Tangga Bosi kingdom (within the Siabu sub-district). PTSM have an exception for open pit mining in Protected Forest via a Presidential Decree. A land acquisition management plan (LAMP) will be developed and implemented prior to construction. • Through progressive alignment to the Equator Principles and IFC Performance Standards, PTSM has identified a series of opportunities to improve its social governance and minimise potential community risks (reinforced through independent risk assessments). These opportunities entail: addressing gaps within PTSM's existing social governance framework, additional studies that assess impacts on traditional and customary land to inform the development of plans and processes associated with resettlement, livelihood restoration, and assess potential human rights risks associated with the project.

Criteria	Explanation	Commentary
Other	• To the extent relevant, the impact of the following on the project and / or on the estimation and classification of the Ore Reserves: – Any identified material naturally occurring risks. – The status of material legal agreements and marketing arrangements. – The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• The Sihayo Gold Project is located within the Sihayo-Pungkut 7th generation contract of work (COW), which was issued to PT Sorikmas Mining (PTSM) on 19 February 1998. The COW was converted into operation production phase on 7 December 2017, which runs until 6 October 2049. At the end of this phase, PTSM has the right to two 10-year extensions under prevailing Indonesian mining law. • All major Sihayo Gold Project approvals/permits consisting of the Environmental Permit, Government of Indonesia Feasibility Study and the Forestry Borrow-to-Use Permit, are in place. • A Republic of Indonesia Feasibility Study (ROIFS) was approved by the Indonesian Government in 2021. • An AMDAL of PTSM was approved by the Indonesian Government in 2015. Subsequent changes to the project design will require an addendum and resubmission to the Ministry of Environment and Forestry. Compilation of an addendum to the Environmental and Social Impact Assessment (AMDAL) is currently underway to address recent changes documented in the 2022 FSU. • The forestry boundary (IPPKH) permit was renewed in 2019 and covers 485 ha of the COW area, which contains the mine, plant facilities, office, camp facilities and other project infrastructure. The IPPKH will need to be adjusted for variations in the ROIFS. The process is expected to take approximately four months after approval of the ROIFS. • Sequential Letters of recommendation / approvals from the Indonesian Dam Safety Committee are required for the TSF facility design, construction, and operations. Permitting requires detailed technical design specifications, drawings, stability analysis, water balance, and monitoring and management plans. • A Tailings Permit is required from the Ministry of Environment and Forestry prior to discharge of tailings to the TSF which will stipulate environmental standards, management, and monitoring requirements. • Seismic activity is prevalent in the area and its potential effects have been taken into consideration when designing mining infrastructure. • The Sihayo Gold Project, as presented in the Ore Reserve report, is economically viable. Further studies may identify options that provide improved outcomes.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral. • Resources (if any).	• Proved Ore Reserve is based on the Mineral Resource classified as Measured, while the Probable Ore Reserve is based on the Mineral Resource classified as Indicated. No Probable Ore Reserves were derived from Measured Resource. • Inferred resources greater than the economic break-even cut-off grade have been included in the life-of-mine schedule and contribute approximately 4.7% of the life-of-mine process plant feed tonnes and 4.3% of contained gold. The economic viability of the Sihayo Gold Project is not sensitive to the inclusion of Inferred Resource in the processing schedule. • The Sihayo Gold Project Ore Reserve report and Ore Reserve estimate appropriately reflect the Competent Person's views.

Criteria	Explanation	Commentary
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• AMC conducted a high-level review of the geological block model and Mineral Resources estimate in 2020. This review did not highlight any fatal flaws with the Mineral Resources. • The Competent Persons are not aware of any other audits or reviews that have been undertaken on the 2021 Ore Reserve estimate.
Discussion of relative accuracy / confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognized that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• In the Competent Person's view, the confidence level for the modifying factors is deemed reasonable for the Sihayo Gold Project based on the levels of study completed. • The contributors to the studies PTSM, MMS, Primero Group, and AMC have significant relevant experience dealing with design, costing, and operating mining projects in this region. • For the DFS Update 2021, AMC was unable to develop an accurate geotechnical model to adopt in open pit and waste dump stability analyses with too many geotechnical unknowns due to the limited data available, and hence the geotechnical assessments are to a prefeasibility study level of accuracy. Pit slope and waste dump stability is highly sensitive to material properties and seismicity assumptions: – Further work is required to update pit slope stability analyses with laboratory test data. – It is difficult to predict geotechnical outcomes during a major seismic event, although the seismic risk has been incorporated in the recommended waste dump designs. Based on the identified risks, it is recommended that a consequence analysis is undertaken to understand potential dump failure outcomes in future work.