



ASX Announcement

5 July 2022

High pH Pre-Leaching Test Work Demonstrates Potential for Significant Uplift in Recoveries

Highlights:

- Final results received for the recent high pH (caustic) pre-leaching test work program
- Results indicate an uplift in recoveries of between 8% and 61% for Transition mineralisation and between 21% and 74% for Fresh mineralisation at the Sihayo Starter Project
- The introduction of high pH pre-leaching has the potential to increase overall recoveries of the Sihayo Starter Project from 71.2% to greater than 80%
- Uplift in recoveries through the use of high pH pre-leaching is transformational for Sihayo Starter Project resulting in higher gold production from existing Ore Reserves and a potential increase of Ore Reserves
- Multivariate analysis has commenced to incorporate these results into an update of the Ore Reserve and feasibility assessment of the Sihayo Starter Project

Sihayo Gold Limited (**ASX:SIH** – “**Sihayo**” or the “**Company**”) is pleased to provide an update on the Company’s metallurgical test work program exploring the use of high pH pre-leaching to improve recoveries in refractory mineralisation for the Sihayo Starter Project (the “**Project**”).

Sihayo’s Executive Chairman, Colin Moorhead commented on the latest results:

“The metallurgical test work program for high pH pre-leaching, which commenced in 2021, has been a major success for the Company. The program has demonstrated the potential to introduce a high pH pre-leaching step in the processing flowsheet to increase recoveries above the LeachWELL recoveries applied in the 2022 Feasibility Study Update for the Sihayo Starter Project. This is a truly transformational change for the Project, and we look forward to providing an update on the Ore Reserves and Project’s economics in the near future.”

Background

As outlined in the ASX:SIH announcements “*Further Metallurgical Test Work Results*”, dated 23 September 2021, and *Significant Results from High pH Leaching Test Work*, dated 31 January 2022, Sihayo’s near term focus has been on further metallurgical test work to support the introduction of a leaching step at high pH (pH = 13) using sodium hydroxide (“**caustic**”) prior to Carbon-In-Leach (“**CIL**”) gold recovery to improve the overall metallurgical recoveries for the Project.

In the Feasibility Study Update completed in February 2022 (“**2022 FSU**”) (refer to ASX:SIH announcement “*Project Update and Launch of Strategic Review Process*”, dated 17 February 2022), the average life-of-mine (“**LOM**”) recovery was assumed to be 71.2%. Sihayo therefore considers improved metallurgical recoveries as an area of opportunity to significantly improve project economics.

The Ore Reserve comprising the mine plan has been characterised into three broad categories based on oxidation state namely, Oxide, Transition or Fresh ore. Generally, metallurgical recoveries within the oxide ore are relatively uniform and consistently greater than 80% and mostly over 90%. Within the more refractory Transition and Fresh material, recoveries are highly variable, ranging from less than 10% to 90%.

The Fresh and Transition material types contain pyrite crystals that are rimmed with gold-rich arsenian pyrite. This is a refractory sulphide gold mineralisation type that yields highly variable gold recoveries in direct conventional cyanide leaching, leading to recoveries as low as 20%. The effect of pre-leaching at high pH is thought to break down the arsenian pyrite rims, releasing the gold for subsequent cyanidation.

Sihayo’s test work program on the use of high pH leaching on Transition and Fresh mineralisation has now been completed with the results to be used to update the design and operating parameters of the Project.

High pH Metallurgical Test Work Program

Test work has been conducted over the past 18 months to determine the effect of a high pH pre-leach on the gold recovery of Fresh and Transition material from the Sihayo deposits. The test work conditions mimicked a 12 hour pre-leach at high pH, with 40 kg/t of caustic, followed by a conventional 24 hour cyanide leach (CIL).

Sihayo has reported the results from the high pH test work conducted by ALS Metallurgy in Perth on four composites and 27 individual samples (see SIH:ASX announcement *Significant Results from High pH Leaching Test Work* dated 31 January 2022). These results showed an uplift in recoveries from an average 52.3% to 74.5% for Transition ore and an increase from 35% to 80% for Fresh ore. It has been determined that high pH pre-leaching has minimal impact on recoveries of Oxide Ore.

Following the initial test work at ALS, the Company initiated additional test work programs at PT Geoservices in Jakarta as well as at ALS. The aim of these further programs was to provide additional data to revise the geometallurgical model used by the Company for generating Ore Reserves and production schedules for its feasibility studies, as well as develop operating parameters for implementing the caustic pre-leaching into the processing flow sheet, including optimising leach times and caustic consumption rates.

Table 2 and Table 3 show the full list of results of individual samples for Transition and Fresh mineralisation for tests conducted at both ALS and Geoservices. In total, the dataset comprises 55 individual Transition and 17 Fresh samples.

For Transition mineralisation, the uplift in recoveries when applying caustic pre-leaching ranged from 8% to 61%, with an average uplift of 32% (in absolute percentage points). For Fresh mineralisation, recovery uplifts ranged from 21% to 74% with the average of 45%.

Caustic Usage

Optimisation test work performed at a range of caustic addition rates found that a caustic addition of 40 kg/t was required to achieve the optimum gold recovery, taking into account the cost of the reagents. Only 10 kg/t of the caustic is consumed during the leach, allowing the remainder to be recycled. Along with the increased gold recovery, another positive impact of the high pH leach conditions is a reduction in cyanide consumption of 0.3 kg/t. The net additional processing cost of high pH leaching is estimated to be US\$4.50/t of Transition and Fresh mineralisation treated.

Implications

Previous Mineral Resources and Ore Reserves were estimated using standard CIL results only. The proportion of mineralisation included in the 2022 FSU mine plan from oxide, transition and fresh, along with grades and recoveries, are shown in Table 1.

Table 1: Average LOM recoveries from 2022 FSU and targeted post-caustic recoveries by mineralisation type

Mineralisation Type	Proportion of Life of Mine Plant Feed (%)	Average gold grade (g/t)	Average CIL recovery (%)	Targeted Recovery Post Caustic (%)
Oxide	37.5%	1.57	83.4%	83.4%
Transition	37.5%	2.27	70.2%	80 - 85%
Fresh	25.0%	2.22	59.8%	80 - 85%
Average		2.00	71.2%	80 – 85%

As shown in Table 1, the introduction of high pH pre-leaching has the potential to increase overall recoveries of the Sihayo Starter Project from 71.2% to approximately 80 – 85%, based only on the mineralisation included in the 2022 FSU (which was comprised of 96% Ore Reserves and 4% Mineral Resources classified as Inferred). Applying higher recoveries to the Project can potentially add additional mineralisation not already included in the mine plan. Moreover, the larger recovery uplifts from high pH pre-leaching appear to be aligned with higher grade material at depth. It is the Company's view that further high-grade mineralisation exists below the current pit design which has the potential to be economic with the higher recoveries. This area is largely underexplored and is the target of the Company's current drilling program (refer to Figure 1).

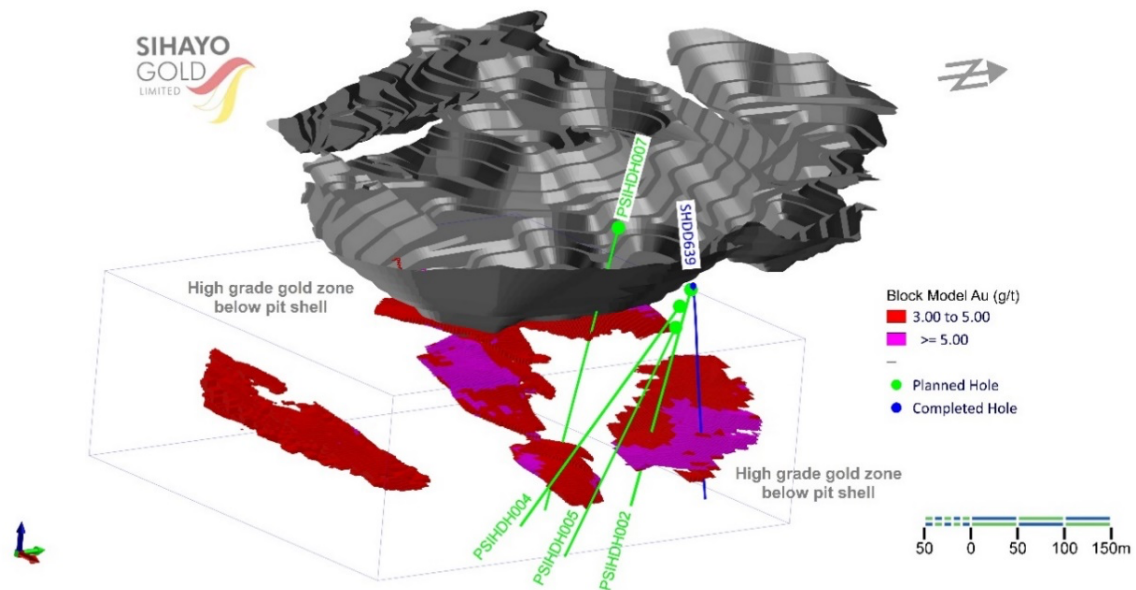


Figure 1: Sihayo pit showing higher grade Mineral Resource (>3 g/t Au) and planned drill holes below the designed pit shell

As illustrated in the sensitivity analysis for the 2022 FSU, the Project valuation is highly sensitive to revenue factors (refer to Figure 2) including gold price, grade and recoveries. Increases in recoveries from the use of high pH leaching, therefore, have the potential to significantly enhance the value of the Project.

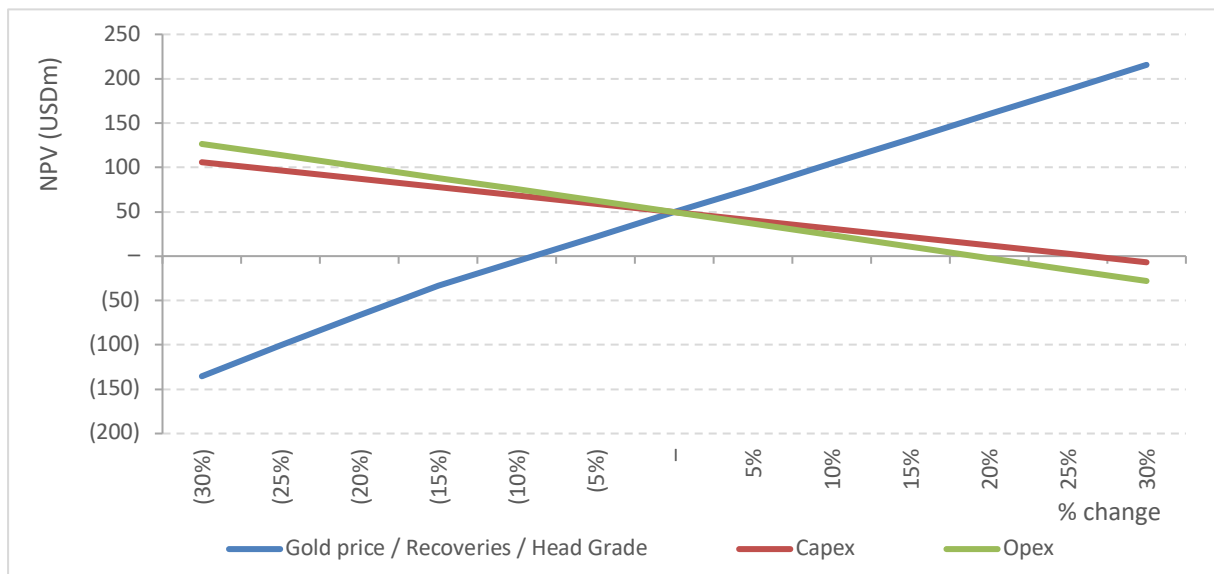


Figure 2: Sensitivity analysis from the 2022 FSU (see SIH:ASX announcement dated 17 February 2022)

Future Work

The Company has commenced further geometallurgical studies to investigate the application of multivariate analysis of the recovery and geological data. The objective of these studies is to better understand and confirm the drivers for the metallurgical recovery increase identified for high pH pre-leaching. The results of this are expected by the end of August and would set the foundation for a revision of the Project's Mineral Resources and Ore Reserves estimates.

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

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Table 2: Comparison of Original LeachWELL with High pH Pre-Leach CIL Recoveries on individual drill core samples of fresh (unoxidized) and transition oxidised jasperoid ore. High pH Pre-Leach CIL analyses performed at ALS (Perth)

Hole ID	Sample ID	Sample Interval Down-hole		Calculated Head Grade Gold (g/t)	LeachWELL Recovery (%)	High pH Pre-Leach CIL Recovery (%)	Sample Oxidation State
		From _m	To _m				
SHDD553	1013446	114.00	115.00	3.65	8.7%	74.0%	Fresh
SHDD592	1015110	76.00	77.00	1.22	1.6%	41.3%	Fresh
SHDD592	1015135	95.00	96.00	1.02	19.6%	52.4%	Fresh
SHDD592	1015141	101.00	102.00	23.30	34.1%	67.4%	Fresh
SHDD592	1015142	102.00	103.00	12.30	19.3%	65.4%	Fresh
SHDD600	1015682	158.00	159.00	3.24	3.9%	51.6%	Fresh
SHDD615	1016596	186.00	187.00	23.80	35.4%	93.8%	Fresh
SHDD615	1016597	187.00	188.00	2.10	11.5%	32.2%	Fresh
SHDD615	1016599	189.00	190.00	23.40	12.8%	66.5%	Fresh
SHDD615	1016600	190.00	191.00	16.40	13.9%	87.5%	Fresh
SHDD618	1016856	75.00	76.00	1.80	33.5%	72.5%	Fresh
SHDD569	1014136	61.00	62.00	2.41	41.1%	83.8%	Fresh
SHDD597	1015437	59.00	60.00	1.97	41.4%	80.5%	Fresh
SHDD597	1015476	89.00	90.00	1.17	26.1%	66.6%	Fresh
SHDD598	1015497	84.00	85.00	1.27	37.3%	83.3%	Fresh
SHDD598	1015498	85.00	86.00	0.99	31%	77.1%	Fresh
SHDD597	1015475	88.00	89.00	0.33	33.3%	78.8%	Fresh
SHDD568	1014105	41.00	42.00	5.46	21.8%	67.8%	Transition
SHDD571	1014301	96.00	97.00	1.62	24.7%	77.9%	Transition
SHDD573	1014398	67.00	68.00	4.21	67.8%	84.2%	Transition
SHDD587	1014928	97.00	98.00	0.9	21.2%	71.1%	Transition
SHDD594	1015239	94.00	95.00	2.52	59.7%	85.8%	Transition
SHDD596	1015355	106.00	107.00	5.34	57.8%	55.7%	Transition
SHDD598	1015503	90.00	91.00	6.02	37.7%	49.4%	Transition
SHDD603	1015828	79.00	80.00	1.12	67.5%	80.3%	Transition
SHDD606	1015964	140.00	141.00	1.18	25.9%	62.5%	Transition
SHDD606	1015965	141.00	142.00	3.9	70.5%	82.5%	Transition
SHDD606	1015967	143.00	144.00	3.06	68.7%	82.4%	Transition
SHDD606	1015969	145.00	146.00	5.97	63.4%	79.2%	Transition
SHDD606	1015970	146.00	147.00	6.82	62.1%	98.7%	Transition
SHDD606	1015974	150.00	151.00	13.07	76.5%	84.3%	Transition
SHDD606	1015975	151.00	152.00	9.1	58.3%	73.3%	Transition
SHDD606	1015981	156.00	157.00	7.7	55.5%	77.2%	Transition
SHDD606	1015982	157.00	158.00	12.27	31.7%	63.7%	Transition
SHDD606	1015984	158.00	159.00	8.17	63.0%	52.6%	Transition

Table 3: Comparison of Original LeachWELL with High pH Pre-Leach CIL Recoveries on individual drill core samples of transition oxidised jasperoid ore – High pH Pre-Leach CIL analyses performed at PT Geoservices (Jakarta)

Hole ID	Sample ID	Sample Interval Down-hole		Calculated Head Grade Gold (g/t)	LeachWELL Recovery (%)	High pH Pre-Leach CIL Recovery (%)	Sample Oxidation State
		From _m	To _m				
SHDD549	1013303	71	72	5.00	37.3%	66.2%	Transition
SHDD553	1013422	93	94	4.43	41.7%	61.6%	Transition
SHDD572	1014330	20	21	1.34	44.0%	83.5%	Transition
SHDD572	1014336	26	27	8.71	35.1%	66.9%	Transition
SHDD579	1014670	53	54	1.10	36.9%	69.0%	Transition
SHDD583	1014798	90	91	1.47	19.2%	38.1%	Transition
SHDD583	1014800	92	93	1.71	22.6%	40.2%	Transition
SHDD583	1014801	93	94	2.36	14.9%	48.2%	Transition
SHDD583	1014803	95	96	3.05	13.0%	46.5%	Transition
SHDD583	1014804	96	97	4.15	11.9%	50.8%	Transition
SHDD587	1014922	91	92	8.41	39.3%	70.3%	Transition
SHDD587	1014924	93	94	1.11	8.9%	47.0%	Transition
SHDD587	1014955	120	121	8.68	6.5%	50.3%	Transition
SHDD589	1015018	68	69	2.46	18.0%	29.7%	Transition
SHDD598	1015505	91	92	4.57	36.9%	63.2%	Transition
SHDD598	1015506	92	93	4.22	36.9%	66.6%	Transition
SHDD598	1015509	93	94	3.45	33.3%	61.7%	Transition
SHDD599	1015541	21	22	1.78	33.6%	83.7%	Transition
SHDD599	1015542	22	23	4.05	33.8%	94.3%	Transition
SHDD605	1015935	50	51	2.18	39.7%	35.9%	Transition
SHDD607	1016040	91	92	3.07	40.2%	76.9%	Transition
SHDD607	1016042	93	94	4.94	36.8%	78.5%	Transition
SHDD609	1016100	26	27	4.05	14.2%	47.1%	Transition
SHDD609	1016141	87	88	0.78	31.0%	56.4%	Transition
SHDD609	1016143	89	90	1.74	25.2%	70.1%	Transition
SHDD609	1016144	90	91	1.84	33.8%	75.1%	Transition
SHDD609	1016145	91	92	1.50	29.8%	49.2%	Transition
SHDD609	1016147	93	94	5.05	31.1%	64.7%	Transition
SHDD609	1016149	95	96	1.82	17.5%	41.1%	Transition
SHDD609	1016150	96	97	1.99	4.9%	35.3%	Transition
SHDD609	1016153	97	98	7.07	13.0%	42.3%	Transition
SHDD609	1016155	99	100	5.89	46.2%	62.3%	Transition
SHDD609	1016156	100	101	2.46	11.7%	64.3%	Transition
SHDD609	1016161	105	106	1.95	1.6%	55.3%	Transition
SHDD609	1016162	106	107	2.16	4.6%	47.6%	Transition
SHDD609	1016166	107	108	1.73	21.3%	69.9%	Transition
SHDD609	1016167	108	109	2.75	0.2%	44.4%	Transition
SHDD609	1016197	134	135	4.13	43.6%	73.9%	Transition
SHDD621	1017068	107	108	1.15	21.6%	75.6%	Transition

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 Andrew Goulsbra (B. App. Sc (Met)), who is a contract employee of the Company. Mr Goulsbra does not hold any shares in the company, either directly or indirectly. Mr Goulsbra is a member of the Australian 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 Goulsbra consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

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Appendix 1: Location of Drill Holes Used in Test Work Program

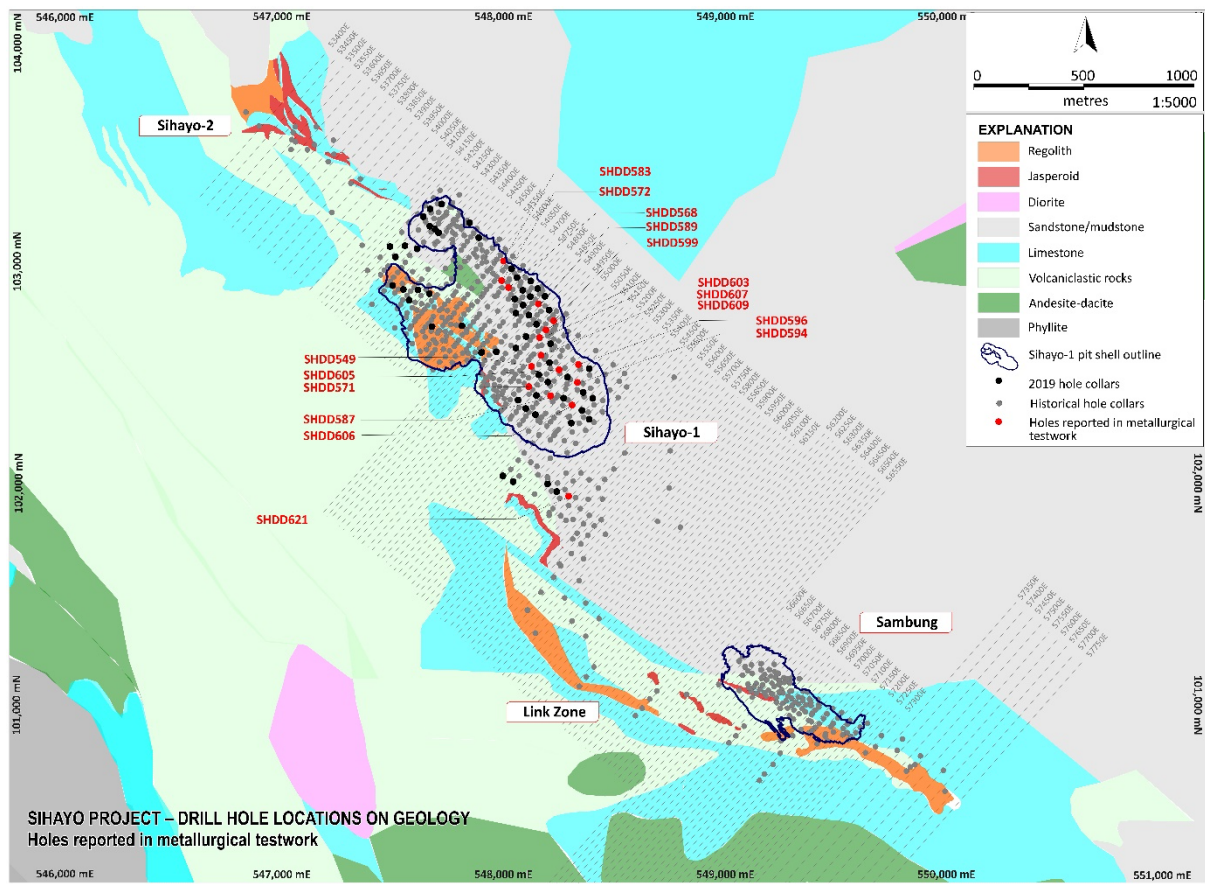


Figure 3: Sihayo - Drill Hole Locations for samples used in metallurgical test work

Appendix 1: JORC Code, 2012 Edition – Section 1 Reporting of Current Results

<p>Sampling Techniques</p>	<p>The samples reported in this announcement are derived from crushed core samples taken from selected holes drilled in the 2019 Sihayo gold resource infill programme completed by PT Sorimas Mining in 2019 (See ASX:SIH announcement Quarterly Activities Report at 31 December 2019).</p> <ul style="list-style-type: none"> • 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 1): SHDD549, 568, 571, 572, 583, 587, 589, 594, 596, 599, 603, 605, 606, 607, 609, 621.
<p>Drilling techniques</p>	<p>All samples reported in this announcement are from the 2019 infill resource drilling program:</p> <ul style="list-style-type: none"> • 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.
<p>Drill sample recovery</p>	<ul style="list-style-type: none"> • 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 transferred 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

	<p>Site Office and the data are entered in an Excel database.</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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. • 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	<ul style="list-style-type: none"> • Results derived from the 2019 Fire Assay and LeachWELL gold program were derived from drill core that was manually split/cut using petrol-driven core saws and diamond-impregnated core saw blades. Continuous half-core is collected over nominal 0.5 to 2 metre sample intervals that were originally logged and marked up by the project geologists in the core boxes. Selective quarter-core is collected over nominal 2 m sample intervals in unmineralised zones. • Samples were methodically marked-up, labeled, cut and sampled at the Site Core Shed under the full supervision of the project geologists. The remaining half-cores were stored in the core boxes at the Site Core Shed as a physical archive of the drilling program. • Quarter-core sample duplicate testing for gold grade variations was done in the 2019 Fire Assay and LeachWELL program. This was carried out at a frequency of 1 in every 30 core samples. The quarter-core duplicate assay results showed a generally low variation in grade distribution between the duplicate sample pairs for the Fire Assay and LeachWELL gold analyses.. • Boyd crush sample duplicates testing for assaying repeatability was also done in the 2019 Fire Assay and LeachWELL program. These duplicate samples were prepared by PT Intertek Utama Services at their sample preparation facility in Medan. Two duplicate 1-1.5 kg samples are split from core crushed to 95% passing minus 2 mm from the Boyd crusher at a frequency of 1 in every 15 samples. The Boyd crush duplicate assay results show low variation and a high degree of

	<p>repeatability between the duplicate pairs for the Fire Assay and LeachWELL gold analyses.</p> <ul style="list-style-type: none"> • The samples pertaining to these latest High pH Pre-leach / CIL results were derived from 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 Jakarta (PT Geoservices) and Perth (ALS Metallurgy). • At ALS Metallurgy the samples were pulverized to greater than 80% passing 106 microns. The samples then split into 0.2-0.5 kg charges for the cyanide leach test work.
<p>Quality of assay data and laboratory tests</p>	<p><u>2019 PT Intertek Utama Services (Jakarta) produced the original Fire Assay & Leachwell LW200 results referenced in this announcement:</u></p> <ul style="list-style-type: none"> • 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 facility 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 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.

	<p><u>2022 ALS Metallurgy (Balcatta, WA) High pH pre-leach cyanide leach results referenced in this announcement:</u></p> <ul style="list-style-type: none"> • 35 of the 74 metallurgical test work results pertaining to this announcement were produced 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 were split into 250-g charges for the following test work: <ul style="list-style-type: none"> - 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. <p><u>2022 PT Geoservices (Jakarta) High pH pre-leach cyanide leach results referenced in this announcement:</u></p> <ul style="list-style-type: none"> • 39 of the 74 metallurgical test work results pertaining to this announcement were produced by GeoAssay Metallurgical Laboratory of PT Geoservices in Jakarta, Indonesia. This laboratory operates to international standards and procedures and participate in Geostatistical Round Robin interlaboratory test surveys. • The same analytical procedures were applied as described for ALS Metallurgy (above).
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> • 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. • No adjustments or calibrations are applied to any of the assay results.

Location of data points	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 2019 drilling program was designed in plan and section to test up-dip and along-strike projections of stratbound mineralised jasperoid target. The hole(s) intersect the gold jasperoid target at moderate to high angle to the dip of the interpreted mineralised stratabound zone.
Sample Security	<ul style="list-style-type: none"> • 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 and PT Geoservices metallurgical laboratory in Jakarta, Indonesia. • All crushed core samples were individually packed and labelled.
Audits or reviews	<ul style="list-style-type: none"> • 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.