

# ASX ANNOUNCEMENT 4 SEPTEMBER 2011

# OPERATIONAL AND DFS UPDATE POTENTIAL 22% LIFT IN ANNUAL AVERAGE GOLD PRODUCTION & 10% REDUCTION IN AVERAGE SITE CASH OPERATING COSTS (INCL ROYALTIES)

The Board of **Sihayo Gold Limited (ASX: SIH)** is pleased to provide an Operational and Definitive Feasibility Study ("DFS") update for its 75% owned Sihayo Pungkut Gold Project ("SPGP") in North Sumatra, Indonesia.

# **Operational Update**

Drilling activities at the SPGP are set to resume in late September, following the end of the Ramahdan period and the associated public holidays, with a focus on the final phase of infill drilling for the SPGP. An infill programme of approximately 3,000 meters is required to likely convert the limited amount of Inferred Resource contained within the overall JORC compliant resource into the higher Indicated category. The programme will be undertaken with two diamond drill rigs and given the relatively shallow depth of the planned holes it is anticipated that the drilling will be completed within three months.

Once the infill programme is complete, ongoing exploration drilling shall target potential near-surface mineralisation along strike from the existing JORC Resources, which could potentially be included in the early years of the current proposed mine schedule as described within the DFS.

Figure 1 below shows the Sihayo and Sambung Resources and highlights the potential resource extensions to the northwest and southeast of the Sihayo deposit.

# **Government and Community meetings**

As previously reported, on Sunday 29th May, a group of demonstrators, believed to be supported by the representatives of illegal artisanal miners from the region, arrived and caused significant damage to Sihayo's exploration camp.

Over the past three months, our company relations team has conducted over forty meetings with the key SPGP stakeholders including; local community members, village heads, religious groups, NGO's, local and provincial Government representatives, local and provincial Police and Army commanders, the newly elected Bupati of Mandailing Natal, North Sumatra and the Governor of North Sumatra. The meetings have been focused on ensuring that the future activities of the Company are conducted in a safe and secure environment without the risk of any further unlawful acts against the Company.

As with any mining project, our relationship with the local community is critical to our long term operational success. As part of our ongoing community programme we are taking 15 local representatives on a site visit to a newly commissioned gold mine in North Sulawesi, Indonesia in mid-September, to show them first-hand the operational, environmental and community aspects of a mine of similar size to our planned SPGP.



# **Definitive Feasibility Study ("DFS")**

The final phase of the DFS work related to the overall metallurgical gold recoveries is progressing well. Over 4,500 additional cyanide leach tests are being completed (1,500 completed to date) across the multiple mineralisation types that make up the Sihayo and Sambung Resources and the initial results suggest that some improvement in overall process gold recoveries maybe achievable. It is anticipated that the metallurgical work will be completed by the end of October.

Ongoing assessment of the "optimal plant capacity" has indicated that an increase from the current 1.25 mtpa capacity to a rate of 1.5 mtpa is economically positive. The Capex and Opex components of an expansion to 1.5 mtpa have been completed to DFS standard and the key summary results are detailed in the table below. An additional scenario of improved recoveries over the initial mine life has also been included in the table, however, it needs to be emphasised that this is merely for indicative purposes at this stage and any improvement in overall recoveries will be confirmed at the conclusion of the current metallurgical testwork programme.

The Sambung Resource has been included in the mining schedule of the expanded 1.5 mtpa throughput case, however, it must be noted that the Sambung Resource is currently in the Inferred category and therefore will require a successful infill drilling programme to bring the resource up to the required Indicated category for its ultimate inclusion in the DFS mining schedule.

### Key DFS parameters for the 1.25 mtpa and 1.5 mtpa cases

 1.5 mtpa case delivers 22% increase in average annual gold production and 10% decrease in site cash operating costs (including royalties) compared with 1.25 mtpa case

Sihayo Pungkut Gold Project		1.25 Mtpa	1.5 Mtpa	1.5 Mtpa *
Capital Cost (pre contingency allowance)	USD mill	80.4	87.1	87.1
Pre-production mining	USD mill	Nil	11.2	11.2
Initial Mine Life	years	7	7	7
LOM Total ore processed**	Mt	8.6	10.2	10.2
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LOM Average anual gold production	Oz	72,000	88,000	93,000
			,	
LOM Site Cash Costs (including royalties)	US\$/oz	752	678	639
LOM average gold recoveries	%	71.5	71.5	75*
LOM average strip ratio	Waste:Ore	5.4:1	4:1	4:1

Note: 1.5 Mtpa\* scenario assume a lift in LOM average gold recoveries to 75% from the base case 71.5%

Note: LOM Total ore processed for the 1.5 Mtpa case includes 1.6 Mt currently classified as Inferred Resource

Note: Inferred Resource material comprises 16% of the forecast total ore processed in the 1.5 Mtpa case



#### Sambung JORC Resource

Runge Limited completed an updated JORC Resource report for the Sambung Resource in July 2011. Whilst there has not been any additional drilling since the previous JORC Report completed in January 2007, Runge have used the greater knowledge base obtained during the preparation of the latest JORC Report for the Sihayo Resource to assist in the completion of the new Sambung Report.

In summary, the new JORC report saw an increase in the estimated contained gold from 100,000oz to 123,200oz, a decline in the average grade from 2.6 g/t Au to 2.2 g/t Au and a revised cut-off grade of 1.2 g/t compared to 1.5 g/t previously. The table below details the new Sambung JORC resource.

Sambung Inferred Mineral Resource Estimate								
Туре	Tonnes	Au	Au	Au				
	t	g/t	ounces	cut-off				
Oxide	313,000	2.3	22,900					
Transitional	1,404,000	2.2	100,100					
Fresh	4,000	2	200					
				l				
Total	1,721,000	2.2	123,200	1.2 g/t				

Note 1: Errors may occur due to rounding

Note 2: Sambung resource JORC estimate completed by Runge Limited

Note 2: Competent person, Rob Williams

#### **Regional Exploration**

For the entire period of the disruption at our main project, regional exploration work at Tambang Tinggi, Hutabargot Julu and Huta Pungkut, including drilling at Tambang Tinggi, has continued without issue. Refer to Figure 2 below for the location of all prospects.

# **Hutabargot Julu epithermal gold prospect**

The work program has significantly expanded the known mineralisation potential of the prospect to the north, east and west. The underlying geology, soil and rock chip geochemistry results are contained in Figures 3-5 below.

New mineralised vein systems have been discovered to the east (fault vein) and to the north (Kaporas prospect). Soil and IP programs will be extended to the northwest to cover the expanding anomalous zones.

The Kaporas East soil gold anomaly is approximately 1 x 1 km sq and open under cover to the east. The anomaly is consistent with a broad area of magnetite destruction (alteration) and represents a high priority target for bulk tonnage gold potential.

The Kaporas West soil gold anomaly is also approximately 1 x 1 km sq and is open to the north and the west and is consistent with a mapped granodiorite intrusive.

Gold mineralisation at Hutabargot Julu is hosted in epithermal veins and structures within a north-south trending belt of dacitic volcanics. The mineralised vein systems are covered to the south by post-mineral acidic (dacite-rhyolite) flows and pyroclastics and to the east by quaternary alluvium.



Hutabargot Julu is a high priority for further exploration and potential discovery of both high grade – low tonnage gold deposits and bulk tonnage – low grade gold deposits and is located only 8km along trend from the Sihayo and Sambung Resources.

Drilling is expected to commence in late September.

#### Tambang Tinggi gold and copper / gold

Drilling of the multiple near surface gold targets in the Tambang Tinggi Region is nearing the completion of the first phase. The second phase of the drilling programme will be a series of deeper holes testing the copper / gold potential indicated by the results of holes TTDD011 and TTDD008.

#### Conclusion

With the final phase of infill drilling about to commence at our main project and concurrently a recommencement of drilling at the highly prospective Hutabargot Julu epithermal gold prospect, the next six months should prove to be a very exciting period for our Company.

Yours faithfully, SIHAYO GOLD LIMITED

**Paul Willis** 

Chief Executive Officer 4 September 2011

#### **Competent Persons Statements**

Sihayo Gold Limited: The information in this report that relates to exploration, mineral resources or ore reserves is based on information compiled by Mr Graham Petersen (BSc.Geol) who is a full time employee of PT Sorikmas Mining(75% owned subsidiary of Sihayo Gold Limited), and is a Member of the AusIMM. Mr Petersen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a competent person as described by the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Petersen consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

**Runge Limited:** The information in this report that relates to Mineral Resources at Sihayo and Sambung is based on information compiled by Mr Robert Williams BSc, a Member of the Australian Institute of Mining and Metallurgy, who is a full time employee of Runge Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting for Exploration Results, Mineral Resources and Ore Reserves. Mr Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Modelling:** Both the Sihayo and Sambung deposits were estimated by Runge Limited using Ordinary Kriging grade interpolation, constrained by mineralisation envelopes prepared using a nominal 0.5g/t gold cut-off grade. In all cases a minimum downhole intercept length of 2m was adopted.

The block dimensions used in the Sihayo model were 25m EW by 10m NS by 5m vertical with sub-cells of 6.25m by 2.5m by 1.25m, while a block dimension of 20m EW by 20m NS by 5m vertical with sub-cells of 5m by 5m by 1.25m was adopted for the Sambung model. Statistical analysis of the deposit determined that no high grade cuts were required in the Sihayo estimate, although a 25g/t Au has been used in the Sambung estimate. Bulk density was assigned in the model based upon the results of 4,629 bulk density determinations.



#### Note

All statements in this report, other than statements of historical facts that address future timings, activities, events and developments that the Company expects, are forward looking statements. Although Sihayo Gold Limited, its subsidiaries, officers and consultants believe the expectations expressed in such forward looking statements are based on reasonable expectations, investors are cautioned that such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward looking statements. Factors that could cause actual results to differ materially from forward looking statements include, amongst other things commodity prices, continued availability of capital and financing, timing and receipt of environmental and other regulatory approvals, and general economic, market or business conditions.

Figure 1: SPGP mineralisation plan showing surface projection of Sihayo and Sambung JORC resources

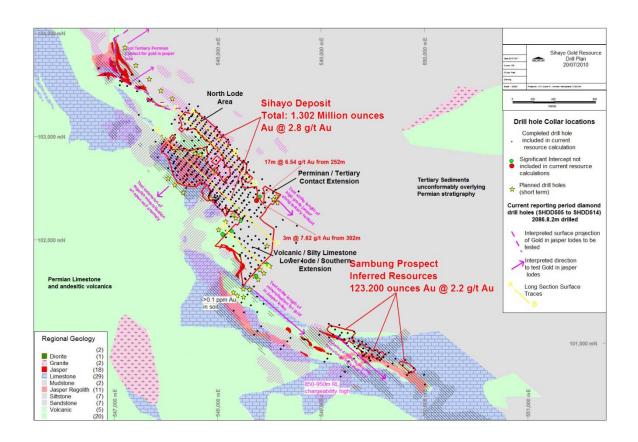




Figure 2: Sihayo Pungkut Gold Project and prospect locations

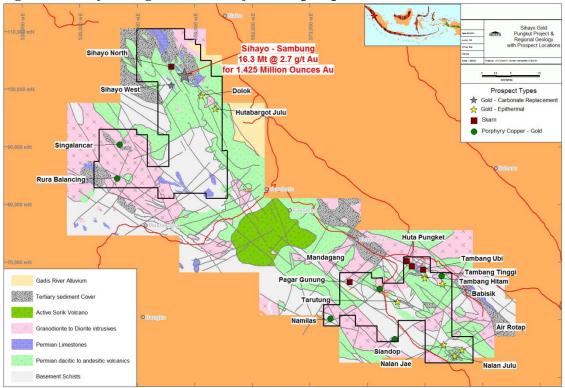




Figure 3: Hutabargot Julu underlying geology and Au rock chip geochemistry

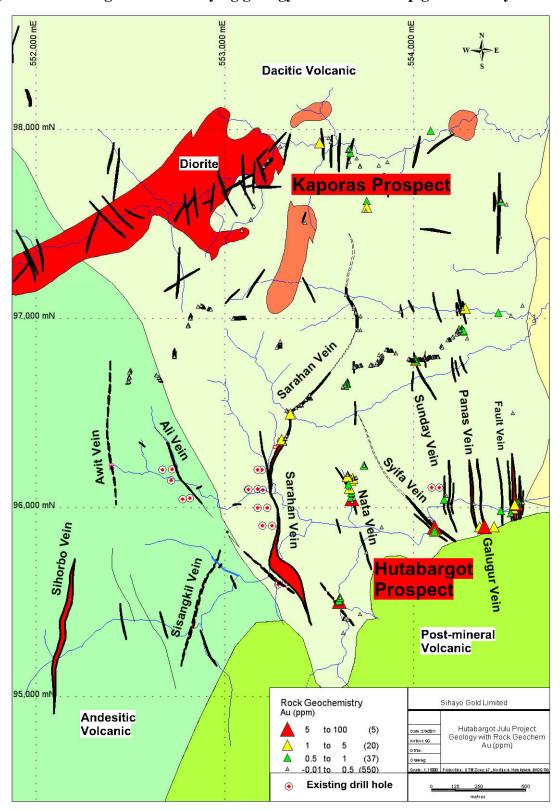




Figure 4: Hutabargot Julu gold soil geochemsitry

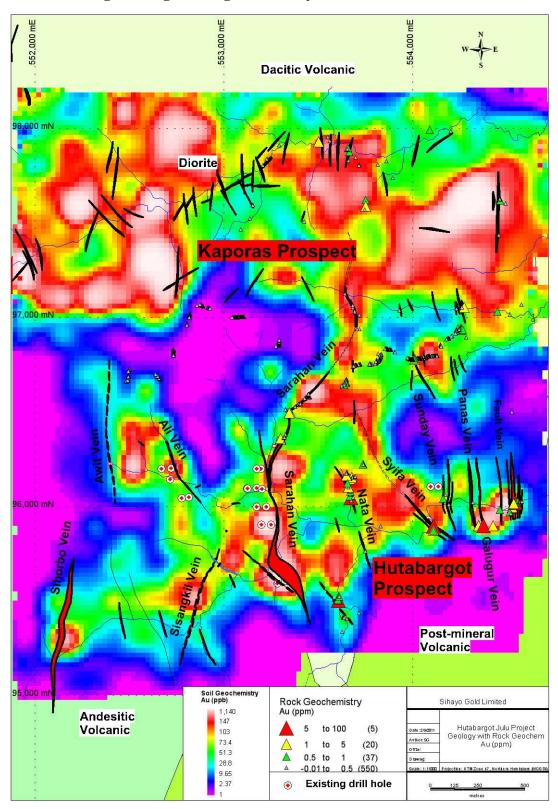




Figure 5: Hutabargot Julu silver soil geochemistry

