

JORC Code, 2012 Edition – Table 1 report template

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<ul style="list-style-type: none"> • <i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i> • <i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i> 	<ul style="list-style-type: none"> • The Ore Reserve estimate is based on the Mineral Resource estimate carried out by H&SC in December 2013. • The Mineral Resources are reported inclusive of Ore Reserves.
<i>Site visits</i>	<ul style="list-style-type: none"> • <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> • <i>If no site visits have been undertaken indicate why this is the case.</i> 	<ul style="list-style-type: none"> • A site visit has not been conducted by the Competent Person. • The Competent Person is satisfied that the descriptions of the planned infrastructure and locality provided by SIH along with the surveyed 3D topography are sufficient information to carry out the mine design and classify the Ore Reserves.
<i>Study status</i>	<ul style="list-style-type: none"> • <i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Feasibility Study level.
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> • <i>The basis of the cut-off grade(s) or quality parameters applied.</i> 	<ul style="list-style-type: none"> • Cut-off grades were determined based on unit costs from the FS cost model
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> • <i>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 optimisation or by preliminary or detailed design).</i> • <i>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.</i> • <i>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</i> • <i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i> • <i>The mining dilution factors used.</i> 	<ul style="list-style-type: none"> • Ore Reserves have been calculated by generating mining designs for the proposed open pits. • A three month ramp up to full mining production has been assumed i.e., 3 months at 50% productivity. • Pit wall slopes are based on recommendations provided by PT Ground Risk Management (GRM) and based upon expected rock type, weathering profile and depth below surface. • Inferred material has not been included within this Reserve estimate (treated as waste) but has been considered in LOM planning. It is assumed that Inferred material will be converted to Reserve via grade control drilling which has been provided for and will be carried out ahead of mining.

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	<ul style="list-style-type: none"> The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods. 	<ul style="list-style-type: none"> 10% dilution (zero grade) & 95% mining recovery has assumed. A minimum mining width down to 20 m for final pit extraction from the base of pit has been used. Standard haul roads, mine drainage and workshop facilities are assumed for open pit mining.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. 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? 	<ul style="list-style-type: none"> Ore will be processed using a carbon-in-leach plant. This process is proven and commonly used for similar deposits globally. Metallurgical testwork was carried out on 19 metallurgical composites (MetComps) representative of Sihayo and Sambung ore types. Modelling based on the Metcomp recoveries indicates the following overall metallurgical recovery factors: <ul style="list-style-type: none"> Oxide 87.3 % Transitional 69.1 % Fresh 62.1 % Process plant design has been developed utilising the results of all metallurgical testwork completed to date A mineral sizer has been assumed for initial size reduction of ore to the process plant during years 1 - 4. Installation of a jaw crusher and additional grinding capacity has been assumed to be installed during year 4 for operation year 5 onwards. Lower recovery in transitional/fresh ore may be the result of fine grain gold within gangue, however additional metallurgical investigation is necessary to confirm this and the potential benefit of further processing
Environmental	<ul style="list-style-type: none"> The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation 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. 	<ul style="list-style-type: none"> Environmental impacts and hazards are being considered as part of the Republic of Indonesia (RoI) AMDAL process commenced by Sihayo. Waste rock characterisation and hydrogeological investigations indicates the rock mass is considered non-acid forming. Mine waste from Sihayo pit and filtered tailings are proposed to be consumed within the Tailings Storage Facility (TSF) utilising 'dry stacking' methods. It is expected that permitting for the project will not be unreasonably withheld.
Infrastructure	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> All infrastructure required for the processing and mining of the Ore Reserve will be constructed before the commencement of open pit

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	<i>infrastructure can be provided, or accessed.</i>	operations.
Costs	<ul style="list-style-type: none"> • <i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i> • <i>The methodology used to estimate operating costs.</i> • <i>Allowances made for the content of deleterious elements.</i> • <i>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.</i> • <i>The source of exchange rates used in the study.</i> • <i>Derivation of transportation charges.</i> • <i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i> • <i>The allowances made for royalties payable, both Government and private.</i> 	<ul style="list-style-type: none"> • Capital costs have been sourced from supplier and contractor quotes through the DFS process. • No contingency has been provided for within these estimates • Operating costs have been based on supplier and contractor estimates, equipment manufacturer information and labour rates. These were supplemented with in-house labour and equipment costings, relevant updates from contractors and suppliers and comparison to similar operations in Indonesia. • Government Taxes and Royalties have been provided for at levels stated within the Contract of Work.
Revenue factors	<ul style="list-style-type: none"> • <i>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.</i> • <i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i> 	<ul style="list-style-type: none"> • Mine optimisation and designs used a gold price of US \$1,300 / oz • Final revenue modelling of the project used a gold price of US \$1,400 / oz • Gold price assumptions have been calculated by taking discounts to 4 year trailing average gold prices.
Market assessment	<ul style="list-style-type: none"> • <i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i> • <i>A customer and competitor analysis along with the identification of likely market windows for the product.</i> • <i>Price and volume forecasts and the basis for these forecasts.</i> • <i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i> 	<ul style="list-style-type: none"> • All product from the mine is to be sold to PT Aneka Tambang (ANTAM) in accordance with the Contract of Work.
Economic	<ul style="list-style-type: none"> • <i>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.</i> • <i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i> 	<ul style="list-style-type: none"> • Discount rate has been assumed at 8% for the determination of NPV • No escalation or inflation of costs has been applied
Social	<ul style="list-style-type: none"> • <i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i> 	<ul style="list-style-type: none"> • The Republic of Indonesia (RoI) requires appropriate social and community development programs commitments to be agreed as outcomes prior to issuance of the Construction permit. • It is expected that necessary agreements will be in place as required prior to Construction.

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<i>Other</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The project area is held by PT Sorikmas Mining (PTSM) which has a Generation VII Contract of Work with the Government of RoI. PTSM is operated in accordance with a Joint Venture Agreement between 75% Aberfoyle Pungkut Investments Pte (API) and 25% ANTAM. Sihayo Gold Ltd (SIH) owns 100% of API The Company is in the process of obtaining approval for AMDAL and RoI Feasibility study in order to obtain a Construction permit to advance the project. The Construction period allowed is 3 years plus a 1 year extension if required. Upon completion of the Construction period the project will enter the Operational period within which 30 years are allowed for exploitation of mineral resources, plus 2 x 10 year extension if required. Although delays in the permitting and approvals process can occur, there appears to be no impediment to the company progressing through the Construction and Operational periods
<i>Classification</i>	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> The Ore Reserve has been broken into Proven and Probable categories. Only Measured material has been converted to a Proven Ore Reserve. Indicated material has been converted to a Probable Ore Reserve. The Competent Person believes the classification of the Open Pit Mineral Resource and hence the conversion to Ore Reserve is appropriate.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> The results of any audits or reviews of Ore Reserve estimates. 	<ul style="list-style-type: none"> The Ore Reserve has been peer reviewed internally and is in line with current industry standards.
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> The design, schedule and financial model on which the Ore Reserve is based has been completed to a FS standard, with a corresponding level of confidence. All modifying factors have been applied to design mining shapes on a global scale.

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	<p><i>relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></p> <ul style="list-style-type: none"> • <i>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.</i> • <i>It is recognised 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.</i> 	