



Accelerating the Simberi Sulphide Expansion

December 2024



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Accelerating Simberi Sulphides

- Simberi open pit mine transitioning from processing remnant oxides to a high annual production / low-cost sulphide operation:
 - producing +200kpa from Q1 September FY28;
 - +2g/t Au head grade at low strip ratio with high recoveries;
 - 2.8Moz Ore Reserve
- Well supported \$100 million capital raise to accelerate development timeline and bring forward sulphide production by up to five months to early Q1 September FY28.
- St Barbara group has strong balance sheet with over A\$200 million unrestricted cash and listed investments.



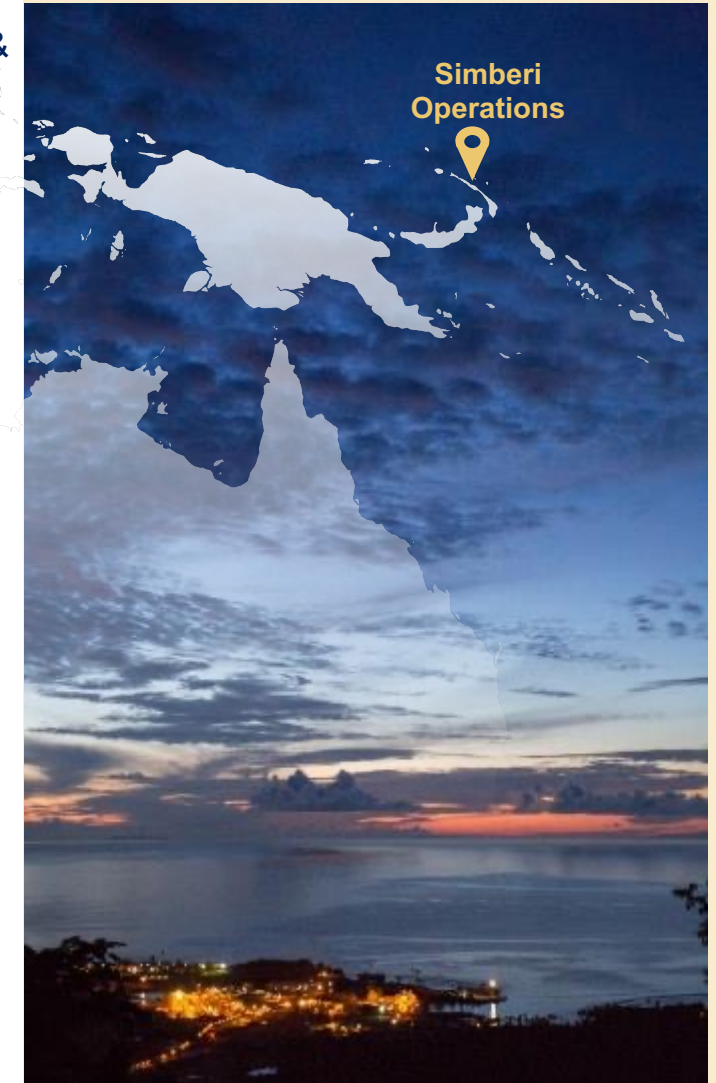
Simberi Operations

Overview

- Mineral Resource of 113.6 Mt at 1.4g/t Au containing 5.0 Moz
 - Mineral Resources increased by 1.0 Moz¹ (over 18 months) and 1.9 Moz converted to Measured & Indicated
- Ore Reserves of 47.3 Mt at 1.8g/t Au containing 2.8 Moz (increased 0.8 Moz over 12 months)
- FY25 production guidance of 65-75koz, processed from remnant oxide mining
- Concept Study outlining +10 Year Mine Plan supported by Proven and Probable Reserves¹
 - Average annual gold output in excess of 200 kozpa
 - All-In Sustaining Cost in the range of US\$1,000 to US\$1,200/oz

Simberi Sulphides Expansion Work Areas	Status	Q1 Sep FY24	Q2 Dec FY24	Q3 Mar FY24	Q4 Jun FY24
Metallurgical drilling	Complete		✓		
Mine fleet selection trade off study	Complete		✓		
Pit wall geotechnical study update	Complete		✓		
Alternative flowsheet concept study	Complete			✓	
Commence metallurgical testwork on alternative flowsheet	Complete			✓	
Resource definition drilling	Complete				✓
Updated Mineral Resources and Ore Reserves	Complete				✓

1. Refer to ASX announcement on 10 May 2024 titled "10 Year Plus Outlook for Simberi"



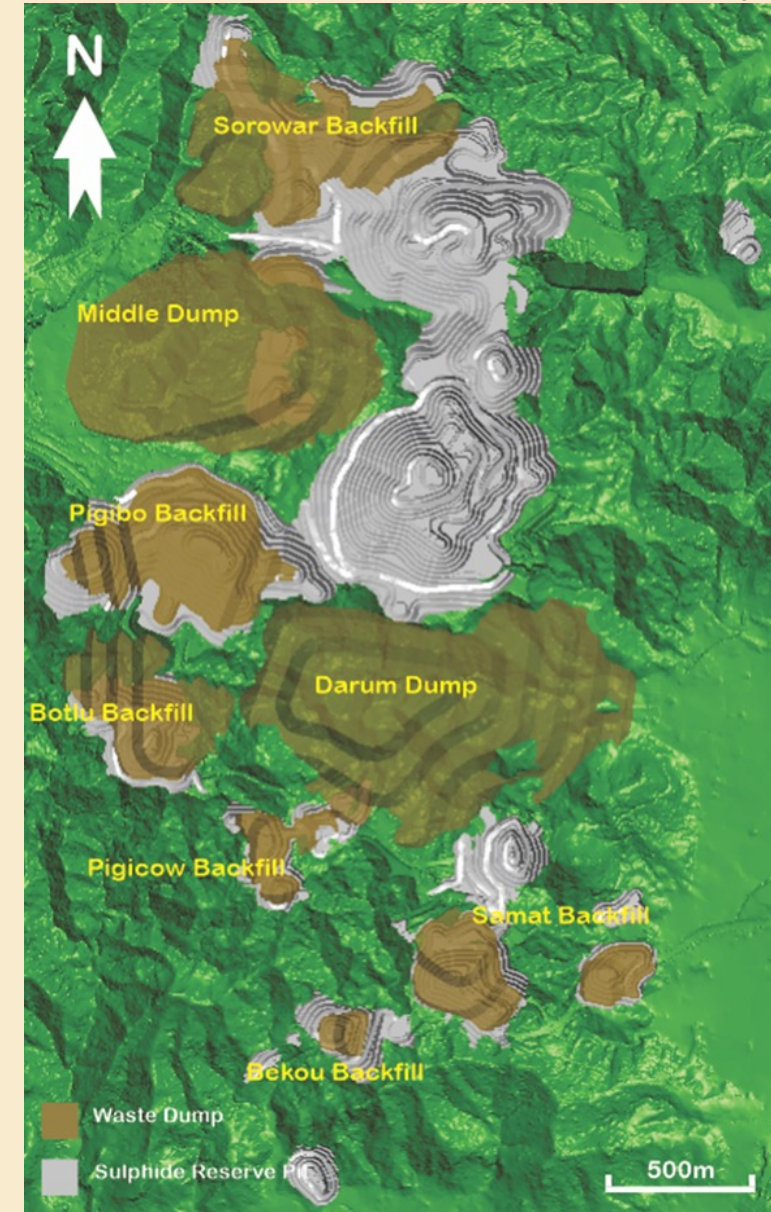
1. Increase from Mineral Resources estimate as at 31 December 2022 – refer to ASX release "Ore Reserves and Mineral Resources Statements as at 31 December 2022" dated 22 February 2023



Simberi Sulphides Expansion Project

Capital Requirements

- Pre-Expansion Growth Capital of US\$40 million to US\$55 million across FY25 to FY27 on:
 - Studies, Designs, and early Capital expenditures
 - Sizer and excavators on schedule for Q3 FY25 delivery, Volvo trial trucks in operation. New kitchen/mess and camp purchase with installation starting Q3 FY25.
- Expansion Growth Capital mid-point estimated at US\$213 million (-20/+30% Class 5 Estimate) across FY26 to FY28
 - Additions to existing circuit: new Ball Mill, Flotation Circuit, Concentrate Shed and Wharf upgrade



Simberi Sulphides Expansion

Focus on Earliest Possible Delivery of Sulphides Project

- Studies remain on or ahead of schedule:
 - Saleable Concentrate Flowsheet selected¹;
 - Plant Design and Capital Cost Estimate on track for delivery in early Q3; and
 - Mine rescheduling and waste management redesign well advanced
- Project Team has identified the key project components that will drive acceleration and de-risking of the construction schedule:
 - Order and installation of the new ball mill circuit, commencement of ROM pad construction and early upgrade of the wharf;
 - Earlier final investment decision (FID);
 - First production target brought forward by up to five months to Q1 FY28; and
 - Shorter oxide life duration would create opportunity to optimise oxide production outlook for FY26 and FY27 and improve operating cashflow and funding options

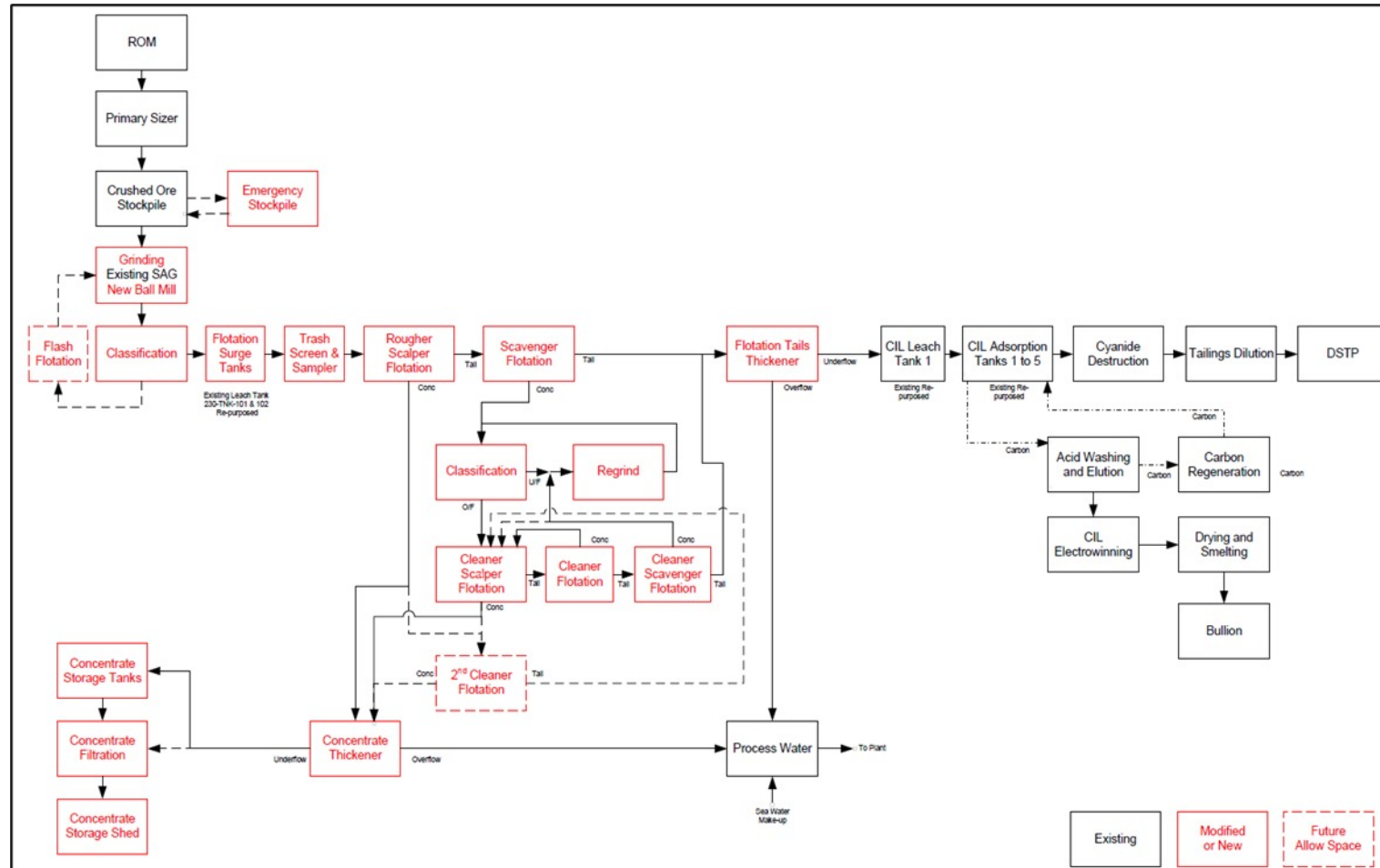
- Accelerating Sulphides Expansion enables:
 - Earlier FID;
 - First production brought forward by up to five months; and
 - Opportunity to optimise oxide production outlook for FY26 and FY27 and improve operating cashflow and funding options

1. Refer to ASX announcement on 19 August 2024 titled "Simberi Sulphides Expansion Flowsheet Selected"



Simberi Sulphides Expansion Project

Saleable Concentrate Flowsheet – Block Flow Diagram



- Additions to existing processing circuit:
 - Sizer (already ordered);
 - New Ball Mill;
 - Flotation Circuit;
 - Filter Press; and
 - Concentrate Shed



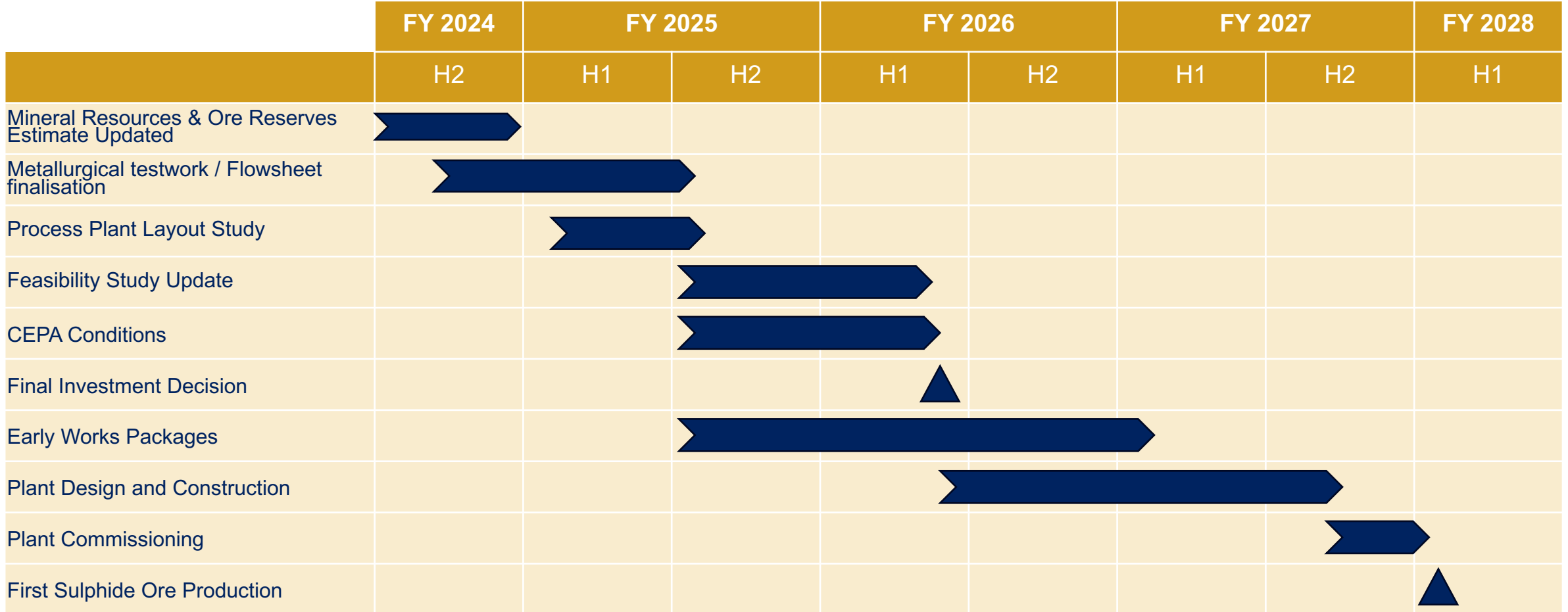
Early Extension of Mining Lease

- Current ML expires in December 2028.
- Extension of ML required to match Life of Mine of Sulphides and provide stability for investors, employees, landowners and government.
- Renewal Application submitted November 2024:
 - Full support of Landowners, NIPG and MP Namatanai Open seat



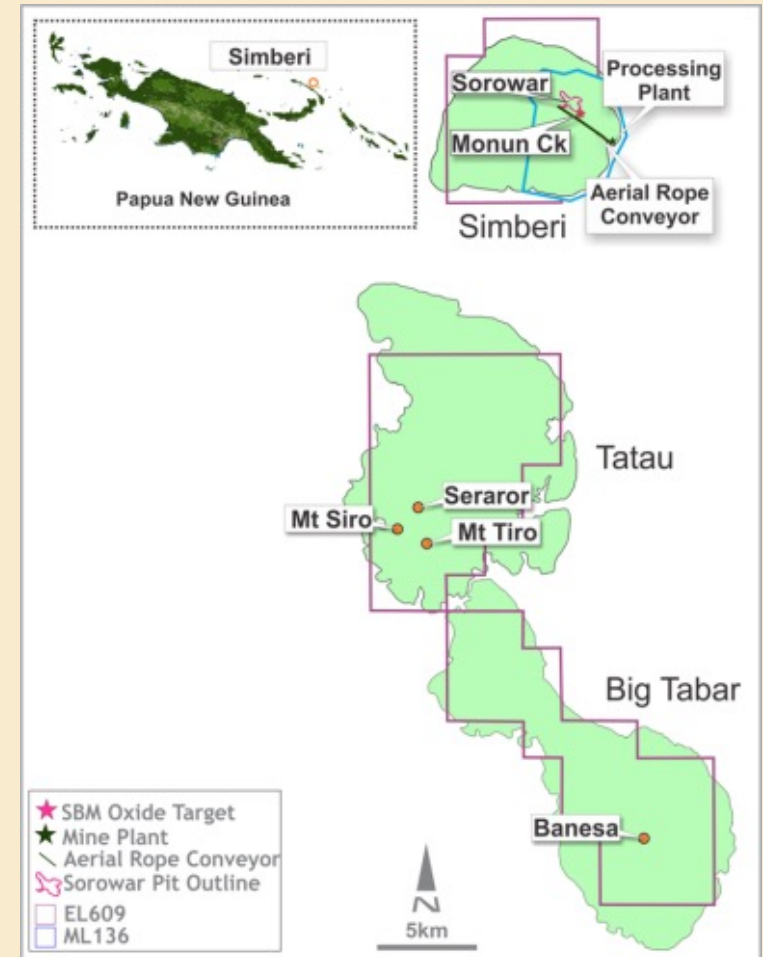
Simberi Sulphides Expansion Project

Indicative Timeline



Memorandum of Agreement (MoU) – Kumul Minerals

- Simberi Gold Company Limited has entered a MoU with Kumul Minerals for potential acquisition of 20% interest in the Simberi project under an unincorporated joint venture.
- The MOU also anticipates an agreement for Kumul Minerals to 'farm-in' to own a 20% interest in a separate unincorporated joint venture over two exploration licenses on Tabar Islands held by a separate St Barbara subsidiary.
- St. Barbara looks forward to working with Kumul Minerals to develop the Simberi Sulphide expansion and continue to add value to all stakeholders.

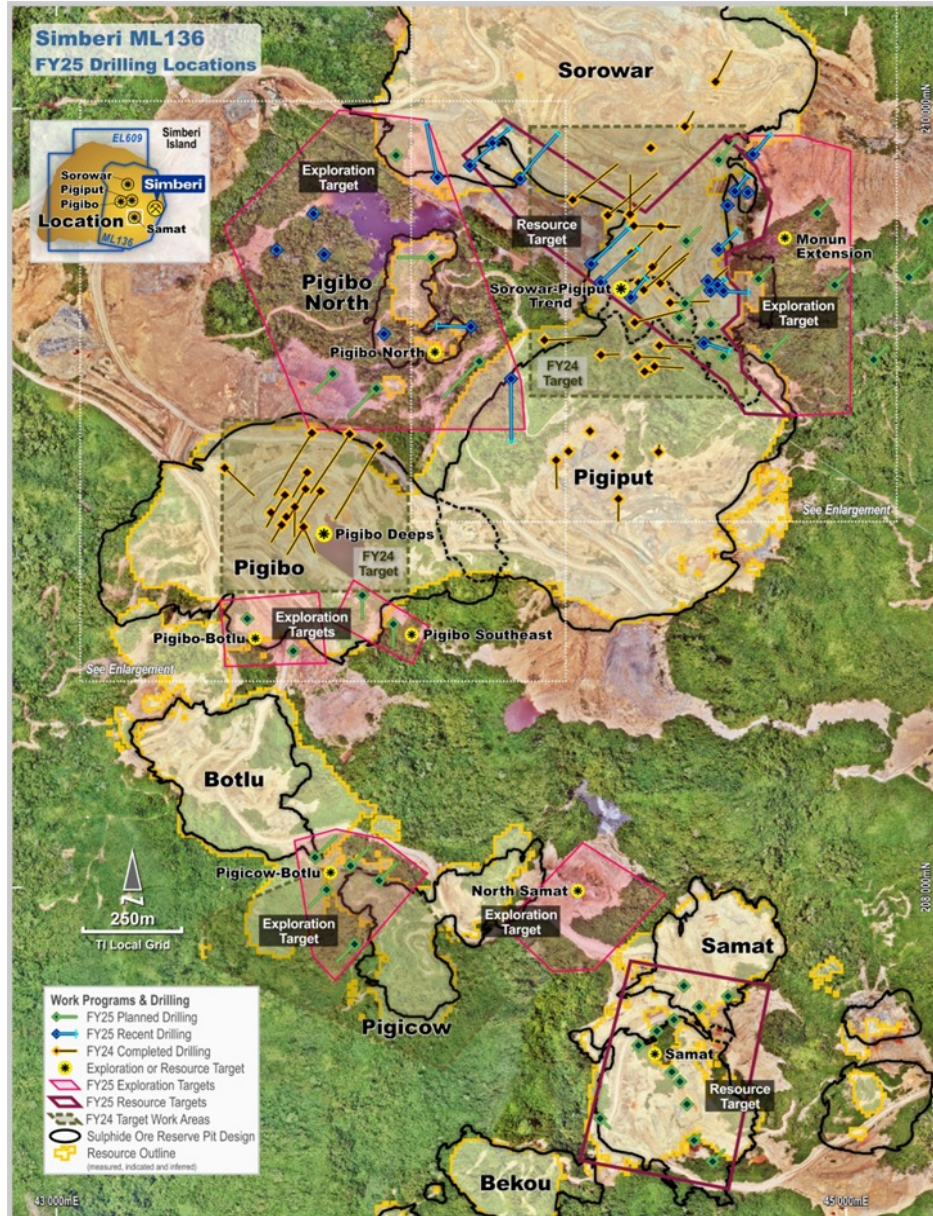


Enhanced Royalty Scheme

- Simberi Gold Company Limited (SGCL) has notified key stakeholders (Mineral Resources Authority, Mining Minister, New Ireland Provincial Government, Simberi Mining Area Association) of the intent to offer an enhanced royalty scheme once ML136 is extended, and sulphide mining commences.
- SGCL is offering to increase the legislated 2% net smelter royalty (NSR) to 3%, or a 10% net profit royalty (NPR), whichever is greater:
 - This royalty scheme is common in other jurisdictions, however, has never been introduced in PNG;
 - It increases stakeholder return in the project, with stakeholders sharing the success of the operation, while being protected with the minimum 3% NSR;
 - SGCL is not obligated as a ML to increase royalties above the legislative requirements, however, wants to partner with the State to ensure a stable investment environment to base the Sulphide expansion on.
- The combination of potential Kumul Minerals equity investment, the enhanced royalty structure and the existing corporate tax structure gives PNG stakeholders significant return on the Simberi Mining project.



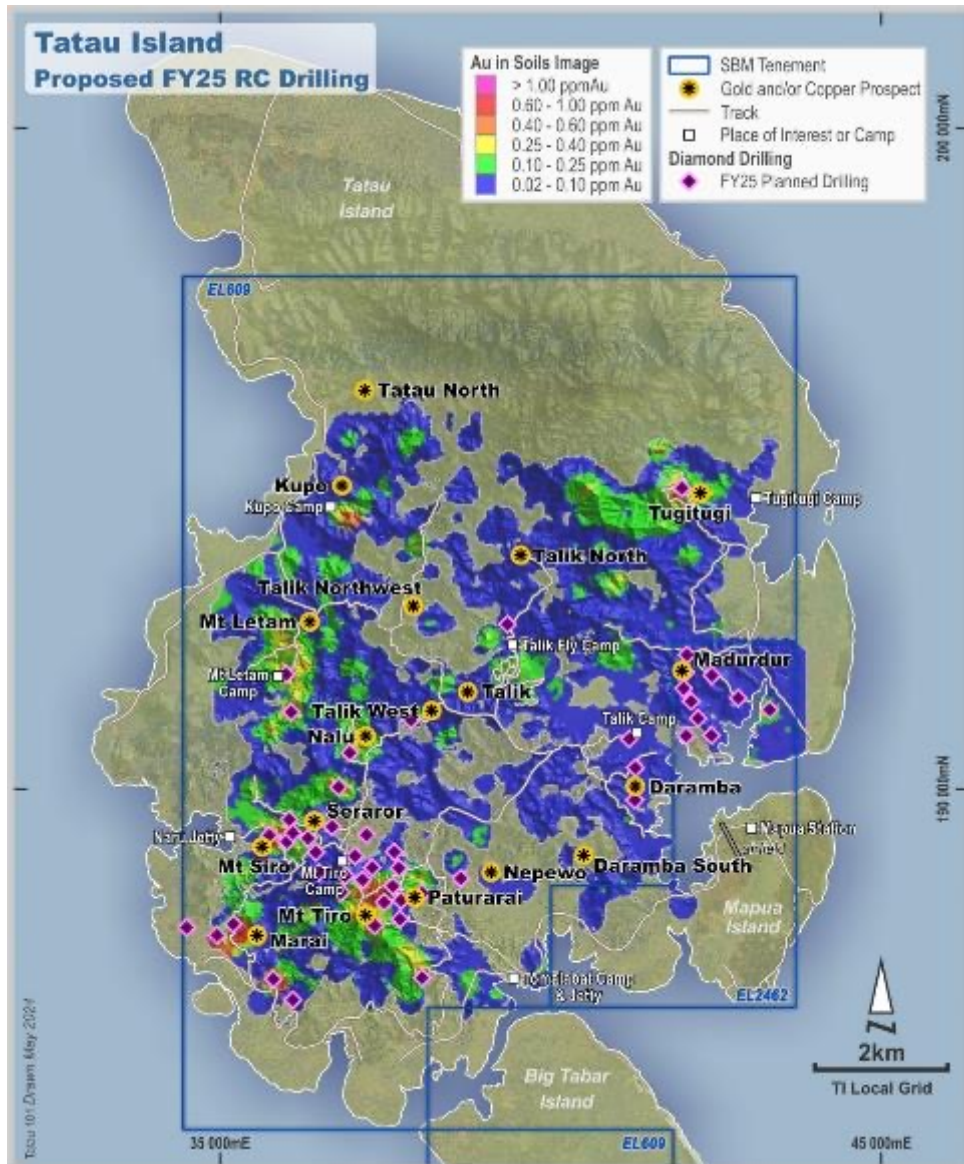
Simberi – FY25 Resource & Exploration Drilling



- FY25 drill program of 9,000m from 62 holes targeting:
 - Resource definition;
 - Extending known mineralization; and
 - Sterilisation.
- Recent drilling has targeted extensions to sulphide mineralisation between existing deposits, as well as at depth
- Key drilling targets are Sorowar-Pigiput Trend, Samat, Pigibo North and between smaller pits (i.e. Botlu and Pigicow)



TGI Exploration (EL609/2462)



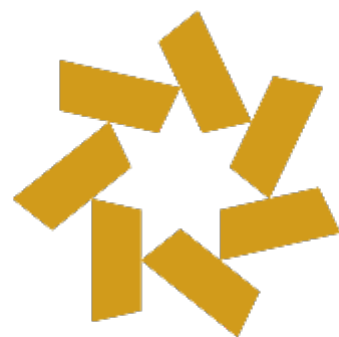
Over the last 10 Years:

- 122 drill holes for 16,900 metres,
- 389 trenches over a 30-kilometre distance collecting just under 7,000 samples,
- Over 7,000 surface samples,
- In total that amounts to collecting and analysing 31,000 samples,
- The company has invested **K\$75 million** on exploration during this time,
- Work has been conducted extensively across all 3 Islands and significantly advanced the geological knowledge.

Tatau Island Exploration - RC Drilling FY25

- RC Drilling on EL609 & EL2462:
 - Up to 42 RC holes for 2,520m
 - Drilling planned for Q3 FY25
- Multiple targets to be tested
 - Gold Targets in Southwest
 - Copper ± Gold Targets in Central and Northeast





St Barbara