
10 September 2024

Presentation to investors at North American Conferences

Attached is a presentation by Mr Andrew Strelein, Managing Director & CEO, to investors this week at the Precious Metals Summit Beaver Creek and next week at the Gold Forum Americas.

Authorised by

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Investor Presentation

Andrew Strelein, Managing Director & CEO
September 2024



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Financial figures are in Australian dollars unless otherwise noted. Financial year is 1 July to 30 June. This presentation is not audited.

Australian Securities Exchange (ASX) Listing code “SBM”



Disclaimer

JORC Code

It is a requirement of the ASX Listing Rules that the reporting of (amongst other things) exploration results and mineral resources in Australia comply with the 2012 edition of the Joint Ore Reserves Committee's Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code**). Investors outside Australia should note that while mineral resource estimates of St Barbara in this Presentation comply with the JORC Code (such JORC Code mineral resources being **Mineral Resources**), they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators (the **Canadian NI 43-101 Standards**); or (ii) Item 1300 of Regulation SK, which governs disclosures of mineral reserves in registration statements filed with the SEC. Information contained in this Presentation describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws. You should not assume that quantities reported as "resources" will be converted to reserves under the JORC Code or any other reporting regime or that St Barbara will be able to legally and economically extract them.

JORC Compliance statement

The information in this report that relates to Simberi's Mineral Resources or Ore Reserves is extracted from the report titled '*Simberi Ore Reserves Increase 40% to 2.8 Moz; Mineral Resource and Ore Reserve Statement as at 30 June 2024*' released to the ASX on 30 July 2024 and Atlantic's Mineral Resources or Ore Reserves is extracted from the report titled '*Mineral Resource and Ore Reserve Statement as at 31 December 2023*' released to the ASX on 13 February 2024 and available to view at www.stbarbara.com.au and www.asx.com.au, and for which Competent Persons' consents were obtained. St Barbara confirms that it is not aware of any new information or data that materially affects the information included in the Original Reports and that all material assumptions and technical parameters underpinning the Mineral Resources and Ore Reserves estimates in the Original Reports continue to apply and have not materially changed. St Barbara confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the Original Reports and that each Competent Person's consent remains in place for subsequent releases by St Barbara of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompany consent.

Exploration Results

The information in this presentation that relates to Exploration Results is based on information compiled by Dr Roger Mustard, who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Mustard is a full-time employee of St Barbara and has sufficient experience 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Mustard consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



Corporate Overview

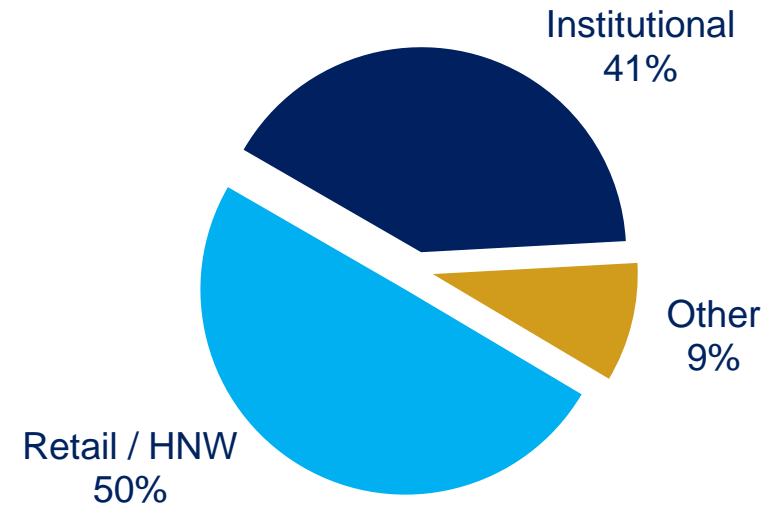


Corporate Overview

Corporate Structure

Shares on issue (ASX: SBM)	818.3 M
Performance rights	53.2 M
Share price ¹	A\$0.23
Market capitalisation	A\$188 M
Cash ²	A\$191 M
Debt	Nil
Listed equity investments ¹	A\$24 M
Proceeds from Catalyst shares	A\$25 M

Shareholders³





Substantial shareholders⁴



Baker Steel Capital Managers	9.2%
Schroder Investment Management	5.4%

1. Based on closing share prices on 6 September 2024; 2. Cash position as at 30 June 2024 including \$45M restricted cash for Atlantic rehabilitation bond; 3 Shareholders as at 15 August 2024; and 4. Substantial shareholders as at 6 September 2024



The St Barbara Asset Portfolio

Atlantic operations, Nova Scotia	
Atlantic Operations	
Ore Reserves	38.3Mt @ 1.1 g/t for 1.4Moz Au
Mineral Resource	56.5Mt @ 1.1 g/t for 2.0Moz Au
 <p>Atlantic Operations Development Projects</p> 	

Simberi operations, Papua New Guinea	
Simberi Operations	
Ore Reserves	47.3Mt @ 1.8 g/t for 2.8Moz Au
Mineral Resource	113.6Mt @ 1.4 g/t for 5.0Moz Au
FY25 Gold Prod	65-75koz
FY25 AISC guidance¹	US\$2,100 – 2,400/oz
 <p>Simberi Operations</p> 	

Investment portfolio	
Assets	
Cash²	\$191M
Listed investments portfolio³	
Brightstar Resources (ASX: BTR) – 10.9%	\$12M
Patronus Resources (ASX:PTN) – 13.4%	\$8M
Peel Mining (ASX:PEX) – 7.2%	\$4M
Exploration portfolio	
Back Creek (NSW)	
Pinjin Joint Venture (WA)	

1. A\$3,200 to A\$3,600 per ounce at AUD/USD of 0.66; 2. Cash position as at 30 June 2024, including \$45M restricted cash for Atlantic rehabilitation bond; 3. Based on ASX closing prices as at 6 September 2024.



Simberi Operations

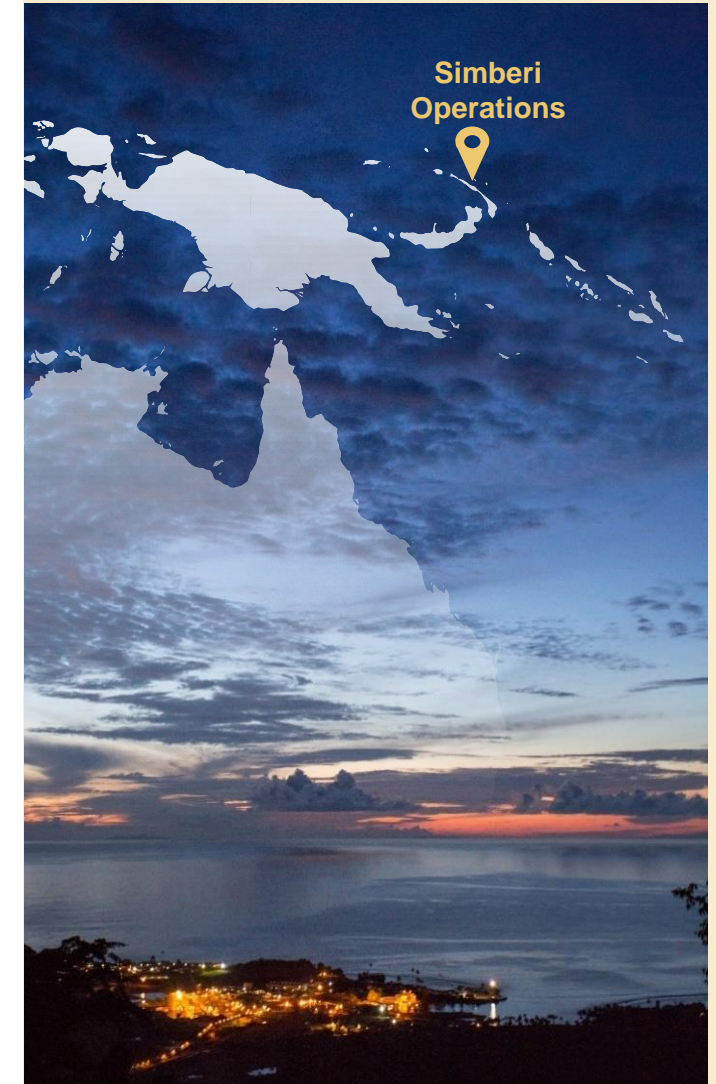


Simberi Operations

Overview

- 5.0 Moz in Mineral Resources
- 2.8 Moz in Ore Reserves
- Northernmost island in the Tabar group of islands in the New Ireland Province, Papua New Guinea
- Open cut mine with a 3.5 Mtpa plant (Carbon-in-Leach circuit)
- FY25 production guidance of 65-75koz, processed from oxide ores
- Simberi Sulphide Expansion Project study work outlines an attractive long-life asset

Simberi Expansion	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				✓



Simberi Sulphide Expansion

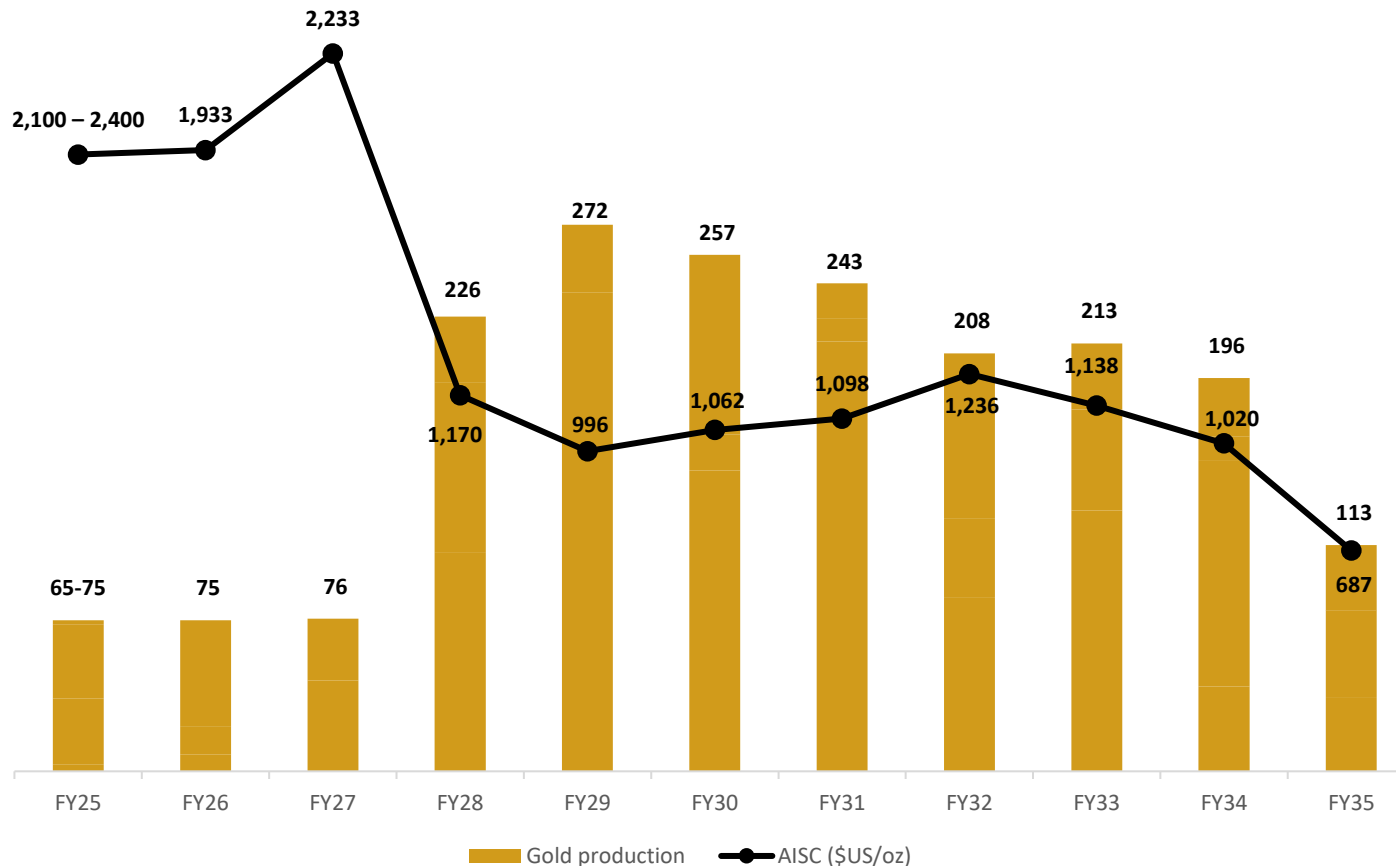
Highlights

- Simberi Mine Plan exceeds 10 years
- Average annual gold production of 230 koz from FY28 to FY34
- All-in Sustaining Cost (AISC) decreasing to US\$1,000/oz to US\$1,200/oz from FY28 to FY34
- Expansion Growth Capital estimated at US\$213 million (-20/+30% Class 5 Estimate) across FY26 to FY28
- Saleable Concentrate Flowsheet selected
 - Additions to existing circuit: new Ball Mill, Flotation Circuit, Concentrate Shed and Wharf upgrade
- Pre-Expansion Growth Capital of US\$40 million to US\$55 million across FY25 to FY27
 - Studies and Designs, New Sizer, Camp upgrade, RO Plant and miscellaneous improvements
- Saleable gold concentrate flowsheet chosen over concentrate Ultra Fine Grind (UFG) / cyanide leach driven by:
 - Testwork showing ~5% higher overall gold recovery than previous testwork
 - Favourable concentrate market conditions suggestive of the ability to negotiate higher gold payable and lower refining charges than previously modelled



Simberi 10 Year Plus Mine Plan Outlook

Production & AISC based on 3.7 Mtpa Saleable Concentrate Case

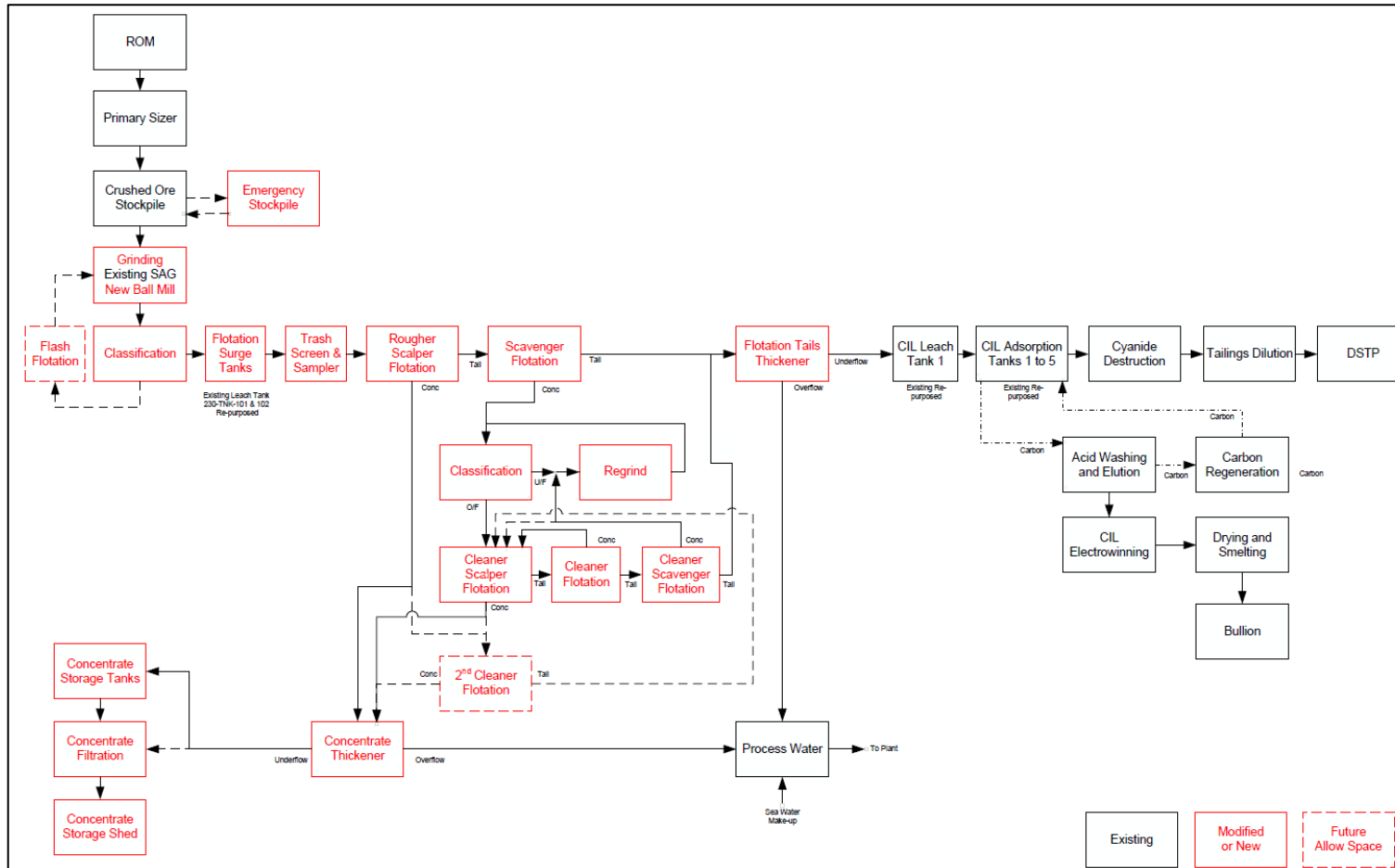


- The 3.7 Mtpa Saleable Concentrate flowsheet case is the basis for the 10 Year Plus Mine Plan Outlook supported by previous Feasibility Study work and the current Mineral Resource and Ore Reserve estimates
- Average gold production from FY28 to FY34 of 230,000 ounces
- Average All-in Sustaining Cost (AISC) from FY28 to FY34 of US\$1,103/oz



Simberi 10 Year Plus Mine Plan Outlook

Saleable Concentrate Flowsheet – Block Flow Diagram



- Additions to existing processing circuit:
 - Sizer (already ordered); new 5MW Ball Mill; Flotation Circuit; Filter Press; and Concentrate Shed



Simberi 10 Year Plus Mine Plan Outlook

Mining & Processing Physicals, Growth Capital & Operating costs

Description	Unit	3.7 Mtpa Saleable Concentrate
Ore Tonnes Mined	Mt	39.5
Waste Tonnes Mined	Mt	133.6
Total Tonnes	Mt	173.1
Strip Ratio	w/o	3.4
Tonnes Milled	Mt	37.5
Feed Grade	g/t	2.0
Contained Gold	koz	2,392
Produced Gold (Doré & Gold in Concentrate)	koz	1,955
Gold Payable	koz	1,869
Average Concentrate Grade	g/t	26.2
Pre-Expansion Growth Capex	US\$M	45
Expansion Growth Capex	US\$M	213
Mining Cost	US\$/t mined	4.0
Processing Cost (Inc. TC/RC)	US\$/t milled	28.4
G&A Cost	US\$/t milled	8.3

- Simberi would generate operating cashflow¹ in FY28 of:
 - US\$168 M at US\$2,000/oz
 - US\$276 M at US\$2,500/oz

1. Operating cashflow calculated from production and cost midpoints in Table 1 of ASX announcement on 10 May 2024 titled "10 Year Plus Outlook for Simberi"



Simberi 10 Year Plus Mine Plan Outlook

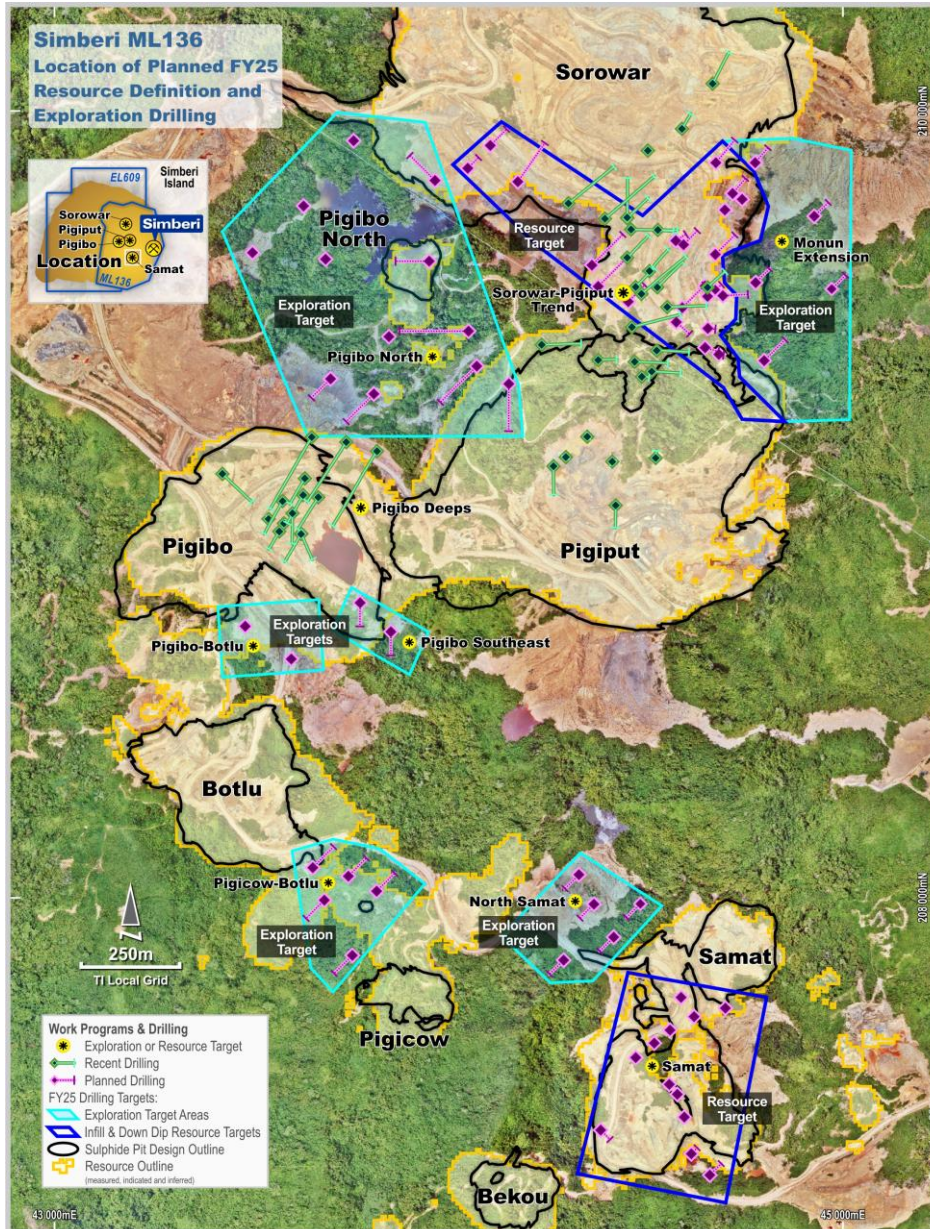
Next Steps for FY25

- Complete metallurgical testwork program;
 - Process Plant Layout and Design;
 - Feasibility Study Update completion targeted in H2 FY25;
 - Completion of work specified by Conservation & Environmental Protection Authority (CEPA) under permit approvals; and
 - Resource Definition and Exploration drilling program.
- Targeting Final Investment Decision in late calendar 2025
 - First production from Sulphide Expansion in late calendar 2027

Simberi Expansion	Status	Q1 Sep FY25	Q2 Dec FY25	Q3 Mar FY25	Q4 Jun FY25
Resource definition drilling / exploration and sterilisation drilling	In progress	→			
Metallurgical testwork / Flowsheet finalisation	In progress	→			
Process Plant Layout and Design (Class 4) Study	Commenced	→			
Feasibility Study update	January start			→	



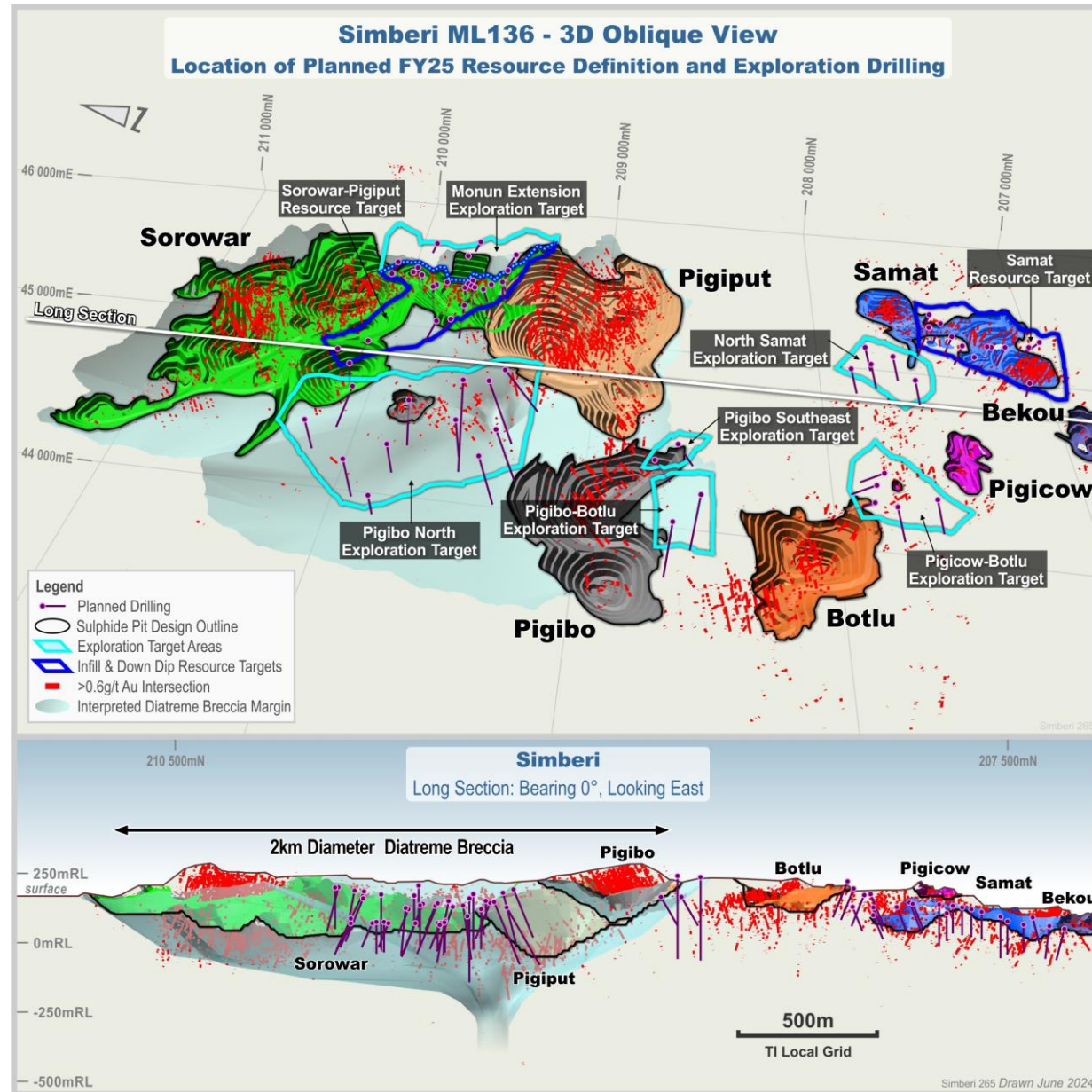
Simberi – FY25 Resource & Exploration Drilling



- An interpreted diatreme breccia model has been developed, the outer margin forming a 1.7 to 2.2 km diameter oval
- In three dimensions, the breccia body forms an ‘inverted cone’ geometry with the base dipping moderate to shallowly inwards towards the centre
- Most of the gold mineralisation dips sub-parallel to the breccia margin, moderate to shallowly inwards towards the centre
- Resource definition and exploration drilling has continued into FY25 and includes 9,000 m of diamond \pm reverse circulation drilling
- Drilling targets are Sorowar-Pigiput trend, Samat, Sorowar-Pigibo trend and Pigibo North



Simberi – FY25 Resource & Exploration Drilling



- The 3D model looking down towards the northeast. Current gold mineralisation >0.6 g/t Au intersected in drilling is displayed in red
- The locations of pit shells are displayed as well as the location of the interpreted margin to the main diatreme breccia



Atlantic Operations



Atlantic Operations

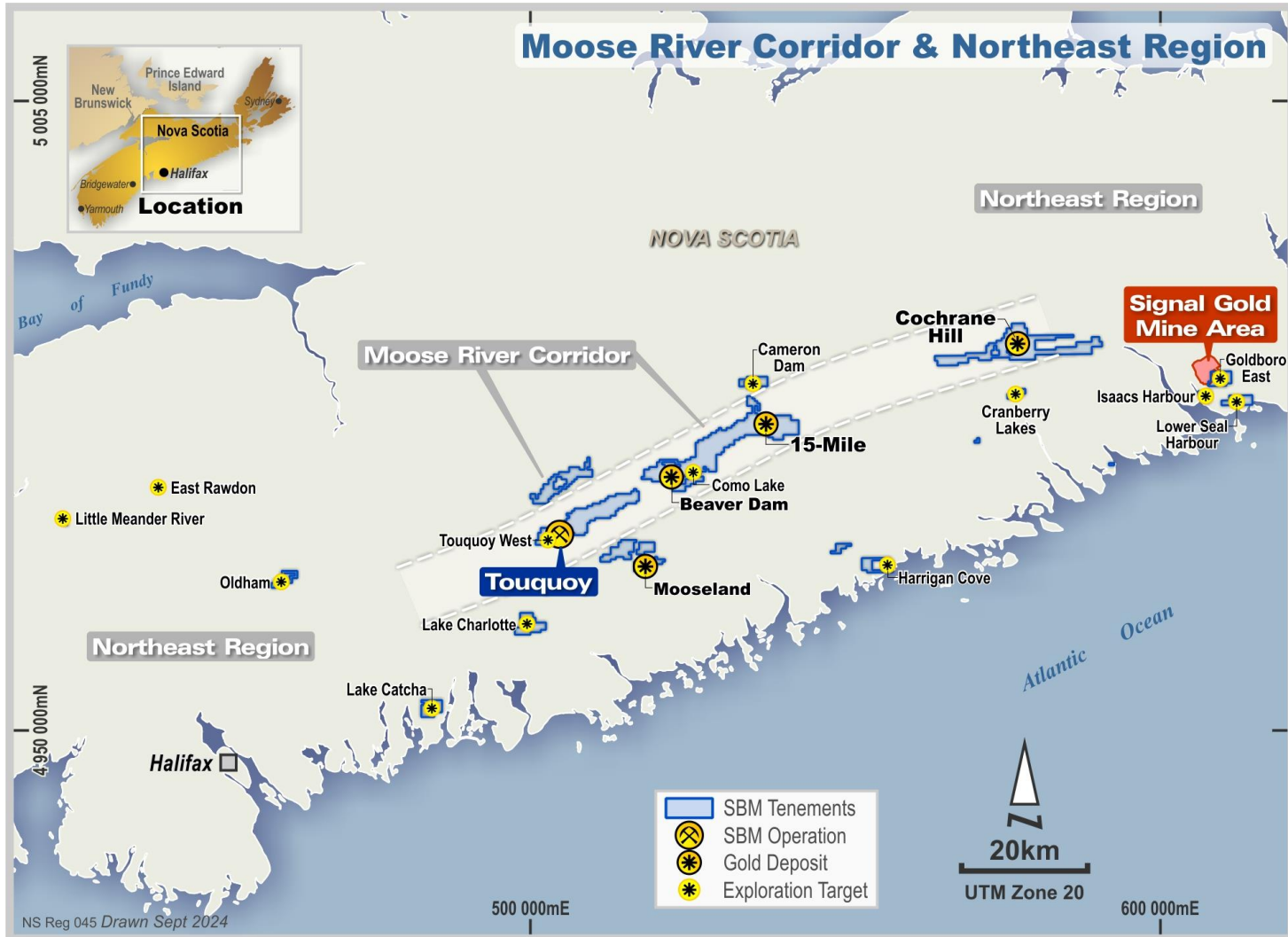
Overview

- 2.0Moz in Mineral Resources
- 1.4Moz in Ore Reserves
- Located north-east of Halifax, Nova Scotia, Canada
- Touquoy plant is a conventional Carbon-in-Leach circuit with 2.8Mtpa capacity
- Three advanced gold development projects
- 15-Mile is the next planned project, utilising relocated Touquoy mill, with potential additional ore trucked ~60km from Beaver Dam

Nova Scotia Projects	Status	Q1 Sep FY24	Q2 Dec FY24	Q3 Mar FY24	Q4 Jun FY24
Touquoy plant relocation study	Complete		✓		
Withdrawal of previous permit submissions	Complete		✓		
15-Mile Pre-feasibility Study	Complete		✓		
Beaver Dam Mineral Resource and Ore Reserve update	Complete			✓	
Update environmental and social impact assessment studies	On hold				
Cochrane Hill project drilling	Complete			✓	



Nova Scotia Development Projects



- 15-Mile Project is next planned project:
 - Designed as standalone 1.8 Mtpa processing facility utilising relocated Touquoy plant
 - 11-year mine life producing 55-60kozpa gold at AISC of US\$992/oz
 - Capital cost of C\$182 M
- Beaver Dam Project (60km via road from 15-Mile):
 - planned as a single open pit with conventional drill and blast, and ore transported to 15-Mile for final processing



APPENDIX A – St Barbara Ore Reserves

Deposit	Proved			Probable			Total		
	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)
Simberi Oxide	11.7	1.3	480	7.1	1.2	270	18.8	1.2	750
Simberi Sulphide	9.9	2.2	690	17.2	2.3	1,260	27.1	2.2	1,950
Simberi Stockpile	1.5	1.2	60	-	-	-	1.5	1.2	60
Total Simberi Operations	23.0	1.7	1,220	24.3	2.0	1,540	47.3	1.8	2,760
Beaver Dam	2.9	1.6	140	1.6	1.5	80	4.5	1.5	220
Fifteen Mile Stream	4.2	1.0	140	14.3	1.0	480	18.5	1.0	620
Cochrane Hill	10.2	1.1	350	5.1	1.0	160	15.4	1.0	510
Total Atlantic Operations	17.3	1.2	630	21.0	1.1	720	38.3	1.1	1,350
Group Total	40.3	1.4	1,850	45.3	1.5	2,260	85.6	1.5	4,110

Note: Simberi's Ore Reserve estimates are extracted from the report titled 'Mineral Resource and Ore Reserve Statement as at 30 June 2024' released to the ASX on 30 July 2024 and Atlantic's Ore Reserve estimates are extracted from the report titled 'Mineral Resource and Ore Reserve Statement as at 31 December 2023' released to the ASX on 13 February 2024.

- Ore Reserves are based on a gold price of: Simberi (FY25-27: US\$1,800/oz, +FY28: US\$1,700/oz) and Atlantic (C\$1,920/oz for Beaver Dam & 15-Mile and C\$1,688/oz Cochrane Hill).
- Cut-off grades Simberi (based on a \$0/t net revenue, including gold revenue), Atlantic Mining (0.3 g/t Au for 15-Mile & Cochrane Hill and 0.5 g/t Au for Beaver Dam).
- Simberi mine plan assumes oxide processing FY25-27, sulphide processing from FY28, and remnant oxide processing on sulphide depletion.
- For Simberi metal recovery is based on formulae for oxide (average 73%) and sulphide (average 82%).
- Mineral Resources are reported inclusive of Ore Reserves.
- Rounding may result in apparent summation differences between tonnes, grade and contained metal.



APPENDIX B – St Barbara Mineral Resources

Deposit	Measured			Indicated			Inferred			Total		
	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)	Tonnes (Mt)	Grade (g/t Au)	Ounces (000's)
Simberi Oxide	19.3	1.1	680	12.9	1.1	450	2.6	1.1	90	34.7	1.1	1,220
Simberi Sulphide	23.0	1.5	1,090	52.9	1.5	2,580	1.5	1.5	70	77.3	1.5	3,740
Simberi Stockpile	1.5	1.2	60	-	-	-	-	-	-	1.5	1.2	60
Total Simberi Operations	43.8	1.3	1,830	65.7	1.4	3,030	4.1	1.2	160	113.6	1.4	5,020
Beaver Dam	5.1	1.3	210	4.8	1.2	190	1.2	1.4	50	11.1	1.3	450
15-Mile	4.4	1.0	150	17.7	1.0	590	2.4	1.3	100	24.5	1.1	840
Cochrane Hill	10.7	1.1	370	7.7	1.0	240	2.6	1.0	80	21.0	1.0	690
Total Atlantic Operations	20.2	1.1	730	30.2	1.0	1,020	6.1	1.2	230	56.5	1.1	1,980
Group Total	64.0	1.2	2,560	95.9	1.3	4,050	10.2	1.2	390	170.1	1.3	7,000

Note: Simberi's Mineral Resource estimates are extracted from the report titled 'Mineral Resource and Ore Reserve Statement as at 30 June 2024' released to the ASX on 30 July 2024 and Atlantic's Mineral Resource estimates are extracted from the report titled 'Mineral Resource and Ore Reserve Statement as at 31 December 2023' released to the ASX on 13 February 2024.

1. Mineral Resources are reported inclusive of Ore Reserves.
2. Cut-off Grades Simberi Oxide (0.4 g/t Au), Simberi Sulphide (0.6 g/t Au), Atlantic Operations (0.3 g/t Au).
3. Simberi Mineral Resources are reported constrained by a US\$2,000/oz pit shell. 15-Mile Resources are constrained by a US\$2,000/oz pit shell. Beaver Dam and Cochrane Hill are constrained by a US\$1,800/oz pit shell.
4. Rounding may result in apparent summation differences between tonnes, grade and contained metal.



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