

20 December 2021

## Strategic acquisition of Bardoc Gold accelerates Leonora Province Plan

St Barbara Limited (ASX: SBM) (“Company” or “St Barbara”) refers to its earlier announcement of its entry into an agreement to acquire 100% of the shares in Bardoc Gold Limited (ASX: BDC) (“Bardoc”), to be implemented by way of an all-scrip scheme of arrangement (“Scheme”).

### Highlights

- St Barbara to acquire Bardoc with 3.1Moz Mineral Resource estimates and 1.0Moz Ore Reserves estimate<sup>1</sup>
  - Significant land package including highly prospective Bardoc Tectonic Zone
  - Zoroastrian and Aphrodite deposits shovel ready
  - Located 180km south of Leonora adjacent to rail line and highway enable economic haulage to Leonora processing plant
- Acquisition coincides with upgrade of Tower Hill resource to 1.2Moz, an increase of 0.6moz
- Significant resource position underpins plans to expand the Leonora processing plant from 1.4Mtpa to 2.1Mtpa
- Growth plan funded through operating cashflow and existing debt facilities

St Barbara Managing Director and CEO Craig Jetson said, “A key component of our Leonora Province Plan, which we launched in December 2020, was a review of opportunities in the region where we could deliver value. Earlier this year we identified that the Bardoc ore bodies are in proximity to the Kalgoorlie-to-Leonora rail line and highway bringing them within economic haulage range of Leonora. In combination with our existing organic opportunities, including Tower Hill and Harbour Lights, this acquisition positions us to accelerate the delivery of a multi-decade province of satellite mines feeding an upgraded 2.1Mtpa capacity mill capable of alternating between free milling and refractory ore at Leonora.

Importantly, our plans for the integration and development of the Bardoc deposits, as well as our other growth initiatives, will be fully funded through future operating cashflows and existing debt facilities.

The addition of Bardoc’s extensive land package to St Barbara’s leading position in the Leonora province provides a strong platform for the Company to deliver organic growth for years to come. Providing us with an expanded presence in the Western Australian goldfields; this transaction further establishes St Barbara as a growing gold company.”

The successful acquisition of Bardoc will give St Barbara access to the advanced Aphrodite and Zoroastrian underground deposits lying immediately adjacent to the rail line which runs to the Leonora processing plant. This provides the opportunity to accelerate St Barbara’s Leonora Province Plan including:

- Integration of the Zoroastrian underground project into the Leonora Province Plan as a source of near-term mill feed; and
- The mining of the ore from the Aphrodite underground refractory deposit provides a high margin opportunity to accelerate the installation of refractory treatment capacity at the Leonora processing plant ahead of the Harbour Lights deposit.

St Barbara’s ongoing Pre-Feasibility Study (“PFS”) of growth initiatives at Leonora has identified open pit mining as the preferred development option for the Tower Hill deposit which has facilitated the declaration of a substantially increased Mineral Resource Estimate (refer to page 3). The combined Mineral Resource estimate across Gwalia Underground, Tower Hill and the refractory Harbour Lights deposit provides the foundation for a low cost expansion of the existing Leonora processing plant from 1.4Mtpa to 2.1Mtpa.

### About Bardoc Gold

Bardoc’s key asset is the Bardoc Gold Project located approximately 40 kilometres north of Kalgoorlie and approximately 180km by rail south of Leonora. The project straddles the Goldfields Highway and Kalgoorlie to Leonora railway and covers 447km<sup>2</sup> of granted Mining Leases and Prospecting Licenses. The main tenement package is focused on the Bardoc Tectonic Zone (the northern extension of the Boulder-Lefroy Fault), which is integral to the significant mineralisation seen at St Ives, New Celebration, the Golden Mile, Paddington deposits and those within the Bardoc Gold Project<sup>1</sup>.

Bardoc’s project-wide Measured, Indicated and Inferred Mineral Resource (“Bardoc MRE”) is 54.6Mt at 1.8g/t Au for 3.07Moz of contained gold. The Bardoc MRE includes 8.4Mt at 3.7g/t Au for 988koz that may be amenable to underground mining methods<sup>1</sup>.

The Bardoc Gold Project JORC (2012) Ore Reserve Estimate is 15.87 Mt at 2.0g/t Au for 1.01Moz of contained gold including 3.14Mt at 3.4g/t Au for 344koz at the Aphrodite underground deposit and 839kt at 3.6g/t for 98koz at the Zoroastrian underground deposit<sup>1</sup>. Bardoc has received Mining Proposal and Closure Plan approval for Zoroastrian from the Department of Mines, Industry Regulation and Safety (“DMIRS”) for the development of the underground deposit. The Mining Proposal and Closure Plan for Aphrodite has also been submitted to DMIRS and will be amended as needed to suit St Barbara’s final mining approach for the underground deposit.

<sup>1</sup> As stated in the market release titled “St Barbara to acquire Bardoc Gold via Board recommended scheme of arrangement” on 20 December 2021.



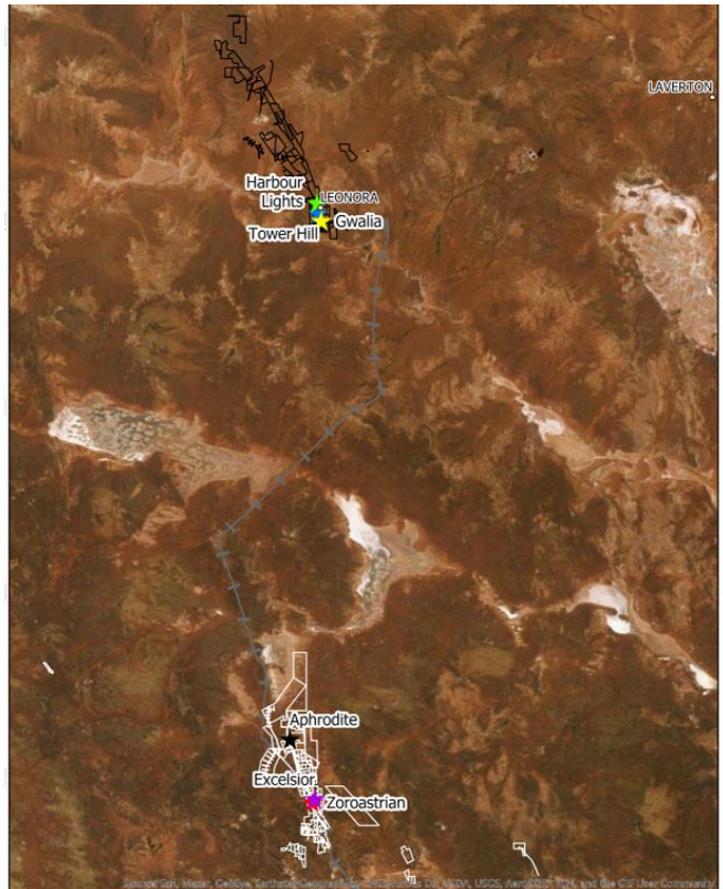
## Rail corridor extends range of Leonora Province Plan

In November 2021, St Barbara submitted a Mining Proposal for construction of a dedicated rail siding adjacent to the Leonora processing plant to be built in calendar 2022. The intention is to switch to rail transportation once rail siding and loading/offloading infrastructure is complete. Both the Zoroastrian and Aphrodite underground deposits and the Leonora processing plant are immediately adjacent to the Kalgoorlie to Leonora railway facilitating low cost development of the necessary rail infrastructure at both ends.

St Barbara has been working with two rail haulage companies to expand their current operations on a back-haul opportunity from the Bardoc Gold Projects to the Leonora processing plant.



Existing Kalgoorlie to Leonora railway



## Extensive land package

The Aphrodite and Zoroastrian underground projects will be the priority for development by St Barbara while the Company examines opportunities across the broader Bardoc Gold Project comprising:

- a) Aphrodite Open-Pit Project
- b) Zoroastrian Open-Pit Project
- c) Excelsior Open-Pit Project
- d) Bulletin South Project
- e) Mayday North Open-Pit Project
- f) Mulwarrie Project
- g) North Kanowna Star Project
- h) Other smaller deposits such as Talbot North, Duke North, Lochinvar and Eldorado.



## Construction of two new underground mines

As part of its due diligence enquiries St Barbara reviewed the feasibility studies Bardoc had completed on the construction of the Zoroastrian and Aphrodite underground mines. These studies will form the basis for St Barbara's PFS for each mine with the key differences relating to material being transported ~180km by rail to the Leonora processing plant for production of gold doré (instead of a concentrate product produced on site, as proposed by Bardoc for the Aphrodite refractory ore).

St Barbara aims to commence work on the Zoroastrian underground mine in Q4 FY23 at an estimated capital cost of ~A\$15 million<sup>2</sup>. The estimate assumes portal access via the existing Zoroastrian pit, with longhole open stoping as the mining method. The mine is expected to produce free milling ore with St Barbara targeting first ore to be transported to the Leonora processing plant in the second half of FY24.

St Barbara aims to commence construction of the Aphrodite underground mine in Q1 FY24 at an estimated capital cost of ~A\$30 million<sup>2</sup>. The estimate assumes the utilisation of a top-down mining method with conventional sub-level longhole open stoping techniques. It is anticipated that the refractory ore produced from the mine will be railed to the Leonora processing plant.

At this stage, St Barbara is envisaging contract mining operations for the Aphrodite and Zoroastrian mines, with the majority of personnel being based in Kalgoorlie (located approximately 40 km from the mine sites) and working on a daily drive in and out roster. No camp infrastructure is being planned for the mines.

## Filling the Leonora processing plant

Mine	Ore mining rate being evaluated	Mineral Resource estimate		
		Mtpa	Tonnes (Mt)	Grade (g/t Au)
Gwalia Underground	1.1	25.4	5.9	4.8
Trevor Bore	TBD	TBD	TBD	TBD
Zoroastrian Underground	0.3 - 0.5 <sup>3</sup>	1.6 <sup>4</sup>	4.0 <sup>4</sup>	0.2 <sup>4</sup>
Aphrodite Underground <sup>5</sup>	0.9 - 1.0 <sup>3</sup>	6.7 <sup>4</sup>	3.6 <sup>4</sup>	0.8 <sup>4</sup>
Harbour Lights <sup>5</sup>	1.1 – 2.1	12.9	1.5	0.6
Tower Hill Open Pit	1.1 – 2.9	20.7	1.8	1.2

## Tower Hill resource estimate increases by 0.6Moz and more drilling underway

St Barbara is pleased to also announce that it has elected to mine Tower Hill by open pit with an initial open pit Indicated Mineral Resource of 21Mt at 1.8g/t for 1.2Moz at a 0.4g/t Au cut-off grade. This represents a 0.6Moz increase in gold Mineral Resource. The Tower Hill open pit is ~2 kilometres from the existing processing plant and ore processing rates of between 1.1 and 2.9Mtpa are being considered in the PFS. It is anticipated that Ore Reserves will be revised for Tower Hill in Q4 FY22<sup>6</sup>.

Resource infill and geotechnical drilling commenced at Tower Hill in October 2021 and is expected to commence at Harbour Lights in Q3 FY22. At Harbour Lights, 20,500 metres of historical drill core has been recovered in excellent condition and is being re-logged and assayed to inform a revised Mineral Resource model. In addition, a diamond drilling program at Tower Hill is due to commence in Q3 FY22 testing targets at depth.

Resource definition drilling also commenced at Trevor Bore this month following updated heritage clearances. This 40m x 30m RC drilling programme will continue into January 2022. St Barbara also looks forward to the results of diamond drilling to commence in Q3 on untested targets at depth at Harbour Lights Deeps and between the Gwalia underground mine and Tower Hill.

<sup>2</sup> Preliminary estimate only, to be the subject of detailed analysis as part of the proposed Leonora Province Plan Pre-Feasibility Study.

<sup>3</sup> Indicative mining rates to be the subject of detailed analysis as part of the proposed Leonora Province Plan Pre-Feasibility Study

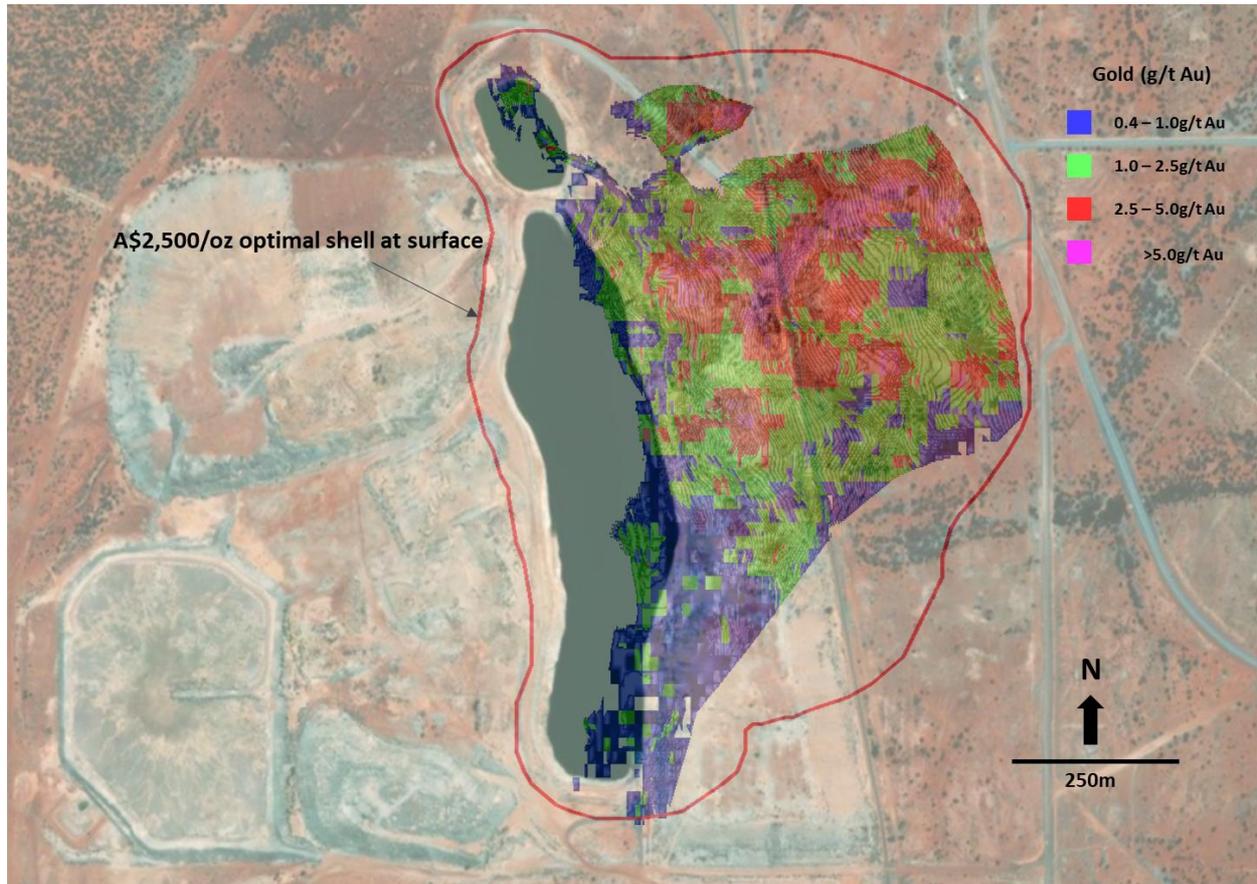
<sup>4</sup> As stated in the market release titled "St Barbara to acquire Bardoc Gold via Board recommended scheme of arrangement" on 20 December 2021.

<sup>5</sup> Refractory ore

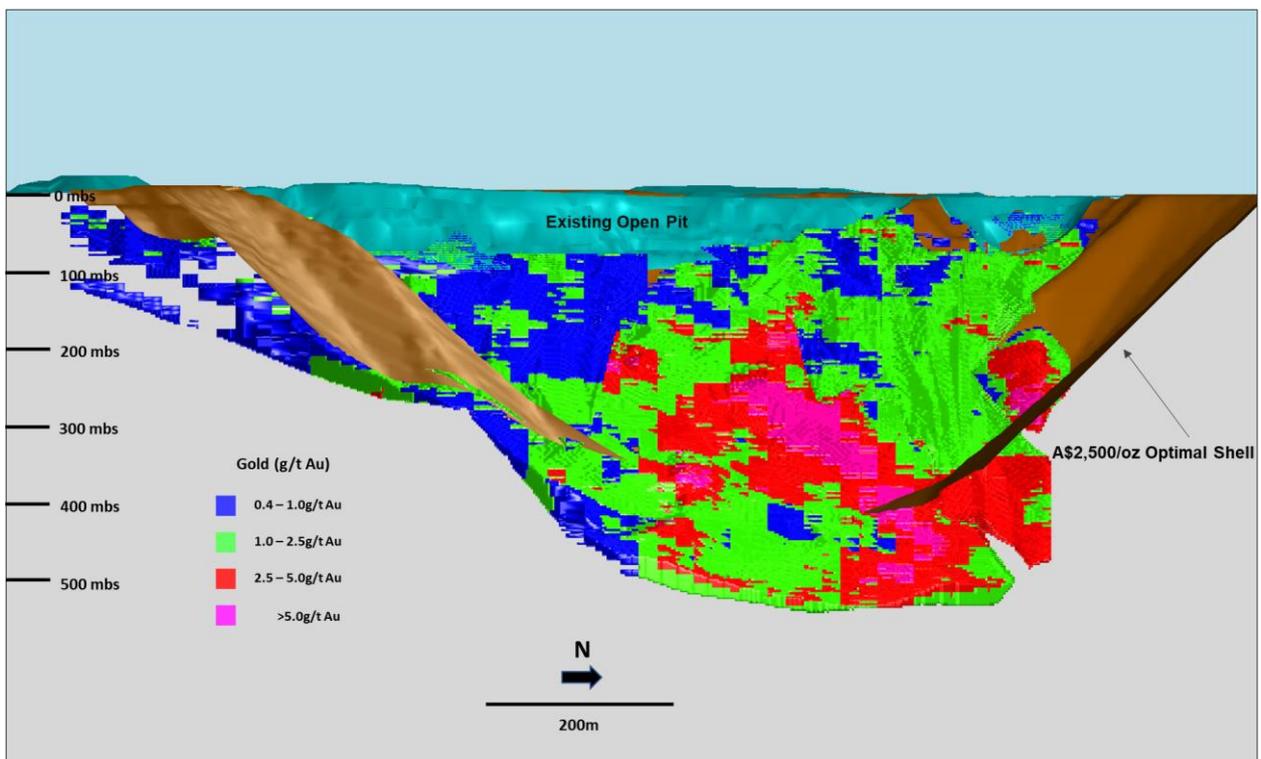
<sup>6</sup> Noting the existing underground Ore Reserves are no longer current, due to the change in reporting this new Mineral Resource estimate inside a A\$2,500/oz optimal pit shell. Refer to JORC Table 1 below for further details.



## Plan view of Tower Hill deposit



## Long section view of Tower Hill deposit





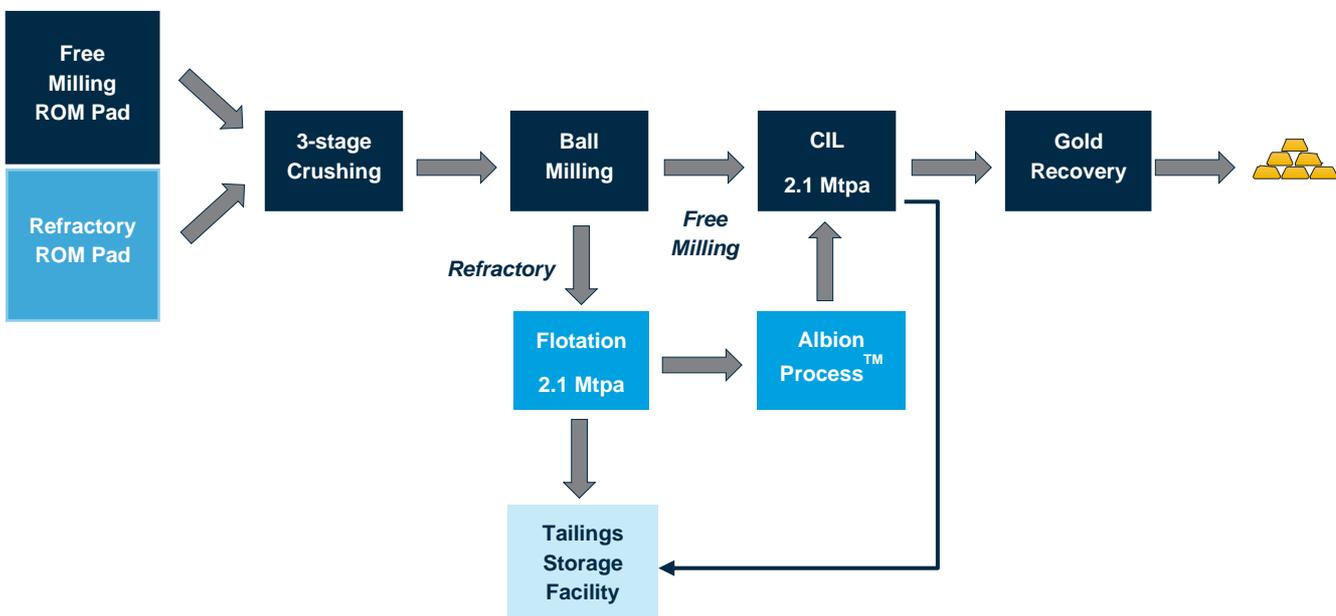
## Building a regional processing hub

Current PFS work has identified cost effective opportunities to expand the Leonora processing plant capacity from 1.4Mtpa to 2.1Mtpa<sup>7</sup>. St Barbara will progress the expansion of the Leonora processing plant to 2.1Mtpa at an estimated cost of ~A\$30 million. Aphrodite and Harbour Lights are refractory ore bodies and St Barbara intends to install the necessary plant to process this material at an estimated capital cost of ~A\$110 to 120 million<sup>7</sup>. The installation of refractory ore treatment capability was already being planned for processing of the Harbour Lights refractory orebody. The ability to process refractory ore will be unique to the Leonora processing plant, within a 200km radius, providing new opportunities for acquisition and discovery.

The comminution circuit modifications include upgrading the conveyor drives in the crushing circuit, the addition of a new ball mill in the grinding circuit and the addition of intertank screens through an expanded carbon-in-leach (“CIL”) circuit, including an extra leach tank.

With the installation of Glencore Technology’s Albion Process™ technology, the expanded plant is expected to be able to efficiently treat refractory ore. Metallurgical test work has already been conducted on Bardoc’s Aphrodite deposit and has been determined to be amenable to this processing option.

## Proposed plant flowsheet



The proposed upgraded Leonora processing plant is expected to alternate as required between free milling and refractory ore on a campaign basis. Both the free milling and refractory ores will be processed through a standard crushing and milling circuit. From there, gold from the free milling ore will be recovered through the upgraded gravity CIL plant followed by production of gold doré bars.

Refractory ore will be diverted after the milling process through the flotation circuit to recover gold in a sulphide concentrate (~5% of the mass). The concentrate will then be sent to the Albion Process™, before being returned to the upgraded gravity CIL circuit followed by production of gold doré bars.

The Albion Process™ is an established technology for processing of refractory ores such as those at the Harbour Lights and Aphrodite deposits. In comparison to traditional pressure oxidation processes, this process operates under atmospheric pressure, making it substantially lower in capital cost and operating costs. According to a recent Glencore study, operating costs are approximately a third lower than traditional pressure oxidation.

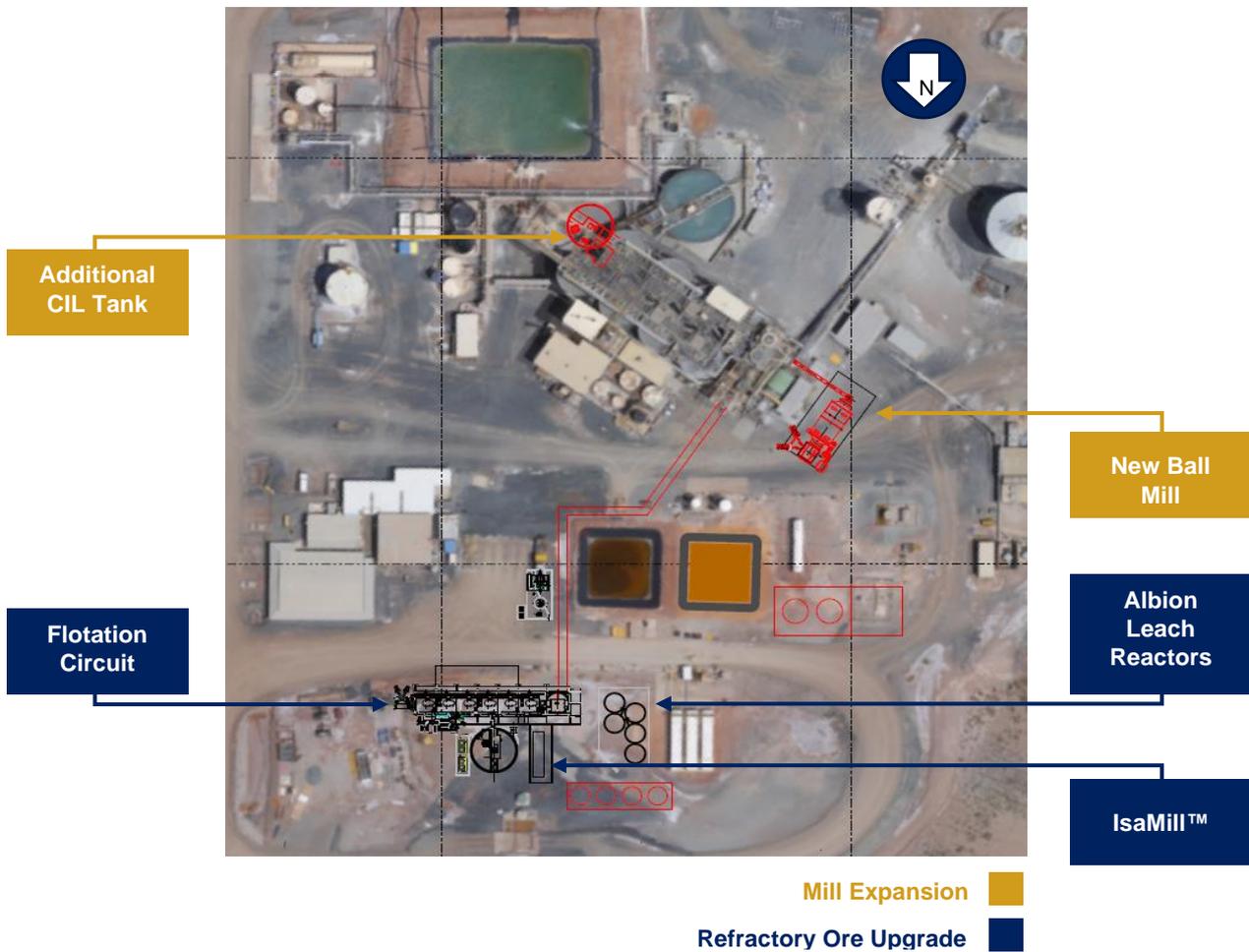
After the sulphide concentrate from the flotation circuit has been finely ground, it is then oxidised under atmospheric conditions in interconnected Albion Leach Reactors. The Albion Leach Reactor has been designed to achieve the oxygen mass transfer required for oxidation of the sulphide minerals at low capital and operating cost.

The process does not require any internal heating or cooling systems, which makes it significantly safer and cheaper to operate than traditional pressure oxidation processes. The vessel is allowed to operate at its equilibrium temperature, which is typically in the range 90–95°C. Heat is generated by the oxidation of the sulphide minerals and lost from the vessel by humidification of off gases. The oxidised slurry is then fed into the CIL circuit to undergo traditional leaching and carbon adsorption.

<sup>7</sup> Subject to the outcome of the PFS and final studies



## Proposed plant upgrades



## Targeted timeline<sup>8</sup>

Target Date	Event
December 2021	Execution of Scheme Implementation Deed for acquisition of Bardoc
April 2022	Anticipated implementation of Bardoc scheme of arrangement
Q4 FY22	Pre-Feasibility Study for Leonora mill expansion to 2.1Mtpa & Refractory ore processing complete
Q2 FY23	Feasibility Study for Leonora mill expansion to 2.1Mtpa & Refractory ore processing complete
Q3 FY23	Mobilisation of mining contractor for Aphrodite and Zoroastrian underground mines
Q3 FY23	Construction of Leonora expansion to 2.1Mtpa & Refractory ore processing commences
Q4 FY23	Construction of Zoroastrian underground mine commences
Q1 FY24	Construction of Aphrodite underground mine commences
H2 FY24	Zoroastrian underground mine first ore
Q4 FY24	Leonora mill expansion to 2.1Mtpa complete
H1 FY25	Aphrodite underground mine & Leonora mill refractory ore processing commences

<sup>8</sup> All dates are indicative and subject to change. All target dates relating to Aphrodite and Zoroastrian are subject to implementation of the Bardoc scheme of arrangement



## Organic growth plan fully funded<sup>9</sup>

St Barbara's growth initiatives, including those announced today in the Leonora province, will be funded by operating cash flow, supplemented by St Barbara's existing undrawn place syndicated debt facilities.

The syndicated debt facility has an accordion facility for US\$150 million to fund the Simberi Sulphide project which will be subscribed to following approval of the project. A further two facilities, cover the majority of the remaining projects:

- Facility A: A\$200 million
- Facility B: C\$100 million (C\$80 million drawn down as at 30 June 2021)

All debt facilities have a maturity date of 31 July 2025. When combined with these facilities, St Barbara's internal financial modelling indicates that free cash flow generated from operations over the relevant period will be sufficient to fund the upcoming capital investment profile over the 3.5 year period to the end of FY25. This includes:

- Simberi Sulphide Project: ~US\$170 million from FY22 to FY24
- Beaver Dam mine construction: ~A\$117 million from FY23 to FY24
- Zoroastrian Mine construction: ~A\$15 million from FY23 to FY24
- Aphrodite Mine construction: ~A\$30 million from FY24
- Leonora additional ball mill and debottlenecking: ~A\$30 million from FY23 to FY24
- Leonora mill Albion Process™: ~A\$110 to 120 million from FY23 to FY25.

## Briefing and audio webcast

Mr Craig Jetson, Managing Director & CEO, will brief analysts and investors on the Bardoc Acquisition and accelerated Leonora Province Plan at 11:00 am Australian Eastern Daylight Time (UTC + 11 hours) on Monday 20 December 2021.

### Analysts and institutional investors

Analysts and institutional investors can register for the briefing at <https://s1.c-conf.com/diamondpass/10018669-5ha112.html>

### Shareholders and media

An audio webcast will be available live and after the event on St Barbara's website at [stbarbara.com.au/investors/webcast/](http://stbarbara.com.au/investors/webcast/) or by [clicking here](#). The audio webcast is 'listen only' and does not enable questions.

### For more information

#### Investor Relations

Chris Maitland  
*Head of Investor Relations*

T: +61 3 8660 1914

M: +61 477 120 070

Kasun Liyanaarachchi  
*Manager Investor Relations*

T: +61 8 9380 7854

M: +61 499 538 252

#### Media Relations

Justine Fisher  
*Head of People, Communication & Corporate Affairs*

M: +61 416 196 403

### Authorised by

Board of Directors

---

St Barbara Limited ACN 009 165 066

Level 10, 432 St Kilda Road, Melbourne VIC 3004

Locked Bag 9, Collins Street East, Melbourne VIC 8003

T +61 3 8660 1900 F +61 3 8660 1999 [www.stbarbara.com.au](http://www.stbarbara.com.au)

ASX: SBM  
ADR: STBMY

<sup>9</sup> Subject to market and operating conditions including the granting of required permits. Financial modelling based on following key assumption: Gold price A\$2,267/oz, AUD:USD 0.75 AUD:CAD 0.92



**JORC Table 1 Checklist of Assessment and Reporting Criteria  
Section 1 Sampling Techniques and Data – Tower Hill**

<b>Criteria</b>	<b>Comments</b>
<b>Sampling Techniques</b>	Sampling boundaries are geologically defined and mostly one metre in length unless a significant geological feature warrants a change from this standard unit. Post 2007 St Barbara Limited (SBM) drilling used Reverse Circulation drilling to obtain 1m samples through the mineralised zone. Most samples were dry, but where wet samples were encountered they were allowed to dry before being split by company personnel. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw.
<b>Drilling Techniques</b>	SBM diamond holes typically used NQ (47.6mm) and HQ (63.5mm) sized core (standard double tubes). Core was oriented using Ace Core Orientation and Ezy Mark orientation tools. Drill holes were down hole surveyed by either north seeking gyro within the rods or by electronic multi-shot in open holes. Less than 10% of SBM holes were surveyed down hole using a Reflex Single Shot camera. RC holes used mainly 5½” reverse circulation face sampling hammers.
<b>Drill Sample Recovery</b>	Recovery of core from SBM drill holes was rarely less than 100%. Ore zone intersections are NQ and HQ (for geotechnical holes) sized diamond core using standard double tubes. Recovery information for historic holes is unavailable, although this data largely impacts the mined out portions of the project and is not material to the resource estimate.
<b>Logging</b>	All SBM holes were qualitatively and quantitatively logged for a combination of geological and geotechnical attributes. Pre-2007 holes were commonly logged for major lithology, alteration, vein minerals, and vein and sulphide percentage. Historic logging data was reviewed and deemed acceptable.
<b>Sub-sampling techniques and sample preparation</b>	SBM RC samples were recovered through a cone splitter to obtain mostly 1m samples from which 3 kg was pulverised to produce a 40g charge for fire assay. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw and was submitted for total pulverisation (85% passing 75 µm).
<b>Quality of assay data and laboratory tests</b>	Only limited information is available for holes drilled prior to 2007. SBM samples were analysed for gold using fire assay with a 40g charge and analysis by flame atomic absorption spectrometry. QC included insertion of 4 commercial standards per submission batch (4 commercial standards every 50 samples for diamond core), insertion of field duplicates every 40m and 2 blank control samples for every 100 samples. Sample pulp residues were submitted to an alternate laboratory. Results indicate that pulveriser bowls were adequately cleaned between samples, that analysis of gold was sound and re-analysis of pulps showed acceptable repeatability with no bias.
<b>Verification of sampling and assay</b>	SBM sampling data is recorded electronically which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on a secure company server. Statistical comparison of SBM (2007-2008) and pre-2007 assay results indicate that all data are compatible.
<b>Location of data points</b>	SBM holes were surveyed using a Real Time Kinetic (RTK) GPS system. Historical drilling was located using mine surveyors and standard survey equipment.
<b>Data spacing and distribution</b>	Average data spacing of between 40m N-S by 30m E-W (up to 80m by 60m) is available for the bulk of the Tower Hill Resource. Drilling data is sufficient to establish continuity of the mineralised lodes.
<b>Orientation of data in relation to geological structure</b>	Sampling is perpendicular to lode orientation and is well understood from past production.
<b>Sample security</b>	Company personnel or approved contractors only allowed on drill sites. Drill samples are only removed from drill site to secure sampling or core logging/processing facility; core logged and cut and consigned to accredited laboratories for processing.
<b>Audits or reviews</b>	Historical data was reviewed and extensively validated in 2003 including cross-checking data against original hard copy records where available. All data has been reviewed by a Competent Person who is satisfied that the data is sound and suitable for resource estimation.



## Section 2 Reporting of Exploration Results – Tower Hill

Criteria	Comments
<b>Mineral Tenement and Land Tenure Status</b>	The reported resource is completely located within M37/0055 which is 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting.
<b>Exploration Done by Other Parties</b>	Drilling of the resource by other parties is discussed in the previous section.
<b>Geology</b>	Gold mineralisation at Tower Hill is hosted within a moderately (35 - 50°) east-dipping quartz vein package adjacent to the contact of granite and strongly foliated ultramafic rocks. Quartz-gold vein lodes strike north to north-northwest with strike lengths of up to 600 m and widths from less than a metre to a vein package with a horizontal width of up to 50 m.
<b>Drill Hole Information</b>	No exploration results are presented.
<b>Data Aggregation Methods</b>	No exploration results are presented.
<b>Relationship Between Mineralisation Widths and Intercept Lengths</b>	No exploration results are presented.
<b>Diagrams</b>	No exploration results are presented.
<b>Balanced Reporting</b>	No exploration results are presented.
<b>Other Substantive Exploration Data</b>	No exploration results are presented.
<b>Further Work</b>	Future work will be reviewed pending updates to mining studies

## Section 3 Estimation and Reporting of Mineral Resources – Tower Hill

Criteria	Comments
<b>Database Integrity</b>	Information initially captured through hard copy logs was subsequently entered into spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on a secure company server. Validation of data included visual check of drill hole traces and basic checks for overlapping sample and geological logging intervals.
<b>Site Visits</b>	The Competent Person visited site when geological and resource models were reviewed between 2011 and 2013. Since this time no site visits have been completed as there has been no further field work.
<b>Geological Interpretation</b>	Mineralisation domain = MAIN was defined by quartz veining, the granite contact and structural controls as well as gold grade. Mineralisation domains = HW1, HW2 and HW3 were defined by quartz veining and gold grade.
<b>Dimensions</b>	Quartz-gold vein lodes strike north to north-northwest and dip moderately (30-50°) east with strike lengths of up to 600 m and widths from less than 1m to a vein package with a horizontal width of up to 50m. Mineralisation has been defined over a 1.1km strike length and has been tested to a maximum depth of approximately 525m below surface.
<b>Estimation and modelling techniques</b>	<p>Gold grade was estimated by ordinary kriging 1m composites constrained by lode boundaries for a parent block size of <math>x = 10m * y = 20m * z = 5m</math> using Surpac 6.3. Search parameters reflect the moderate NE plunge control of mineralisation:</p> <p>All Domains – Rotation <math>z = 29</math> degrees, <math>x = -26</math> degrees, <math>y = -24</math> degrees. Max. search distance = 200m. Major/Semi-Major anisotropy = 1.2; Major/Minor = 3. Min. samples = 12, Max. samples = 32</p> <p>A top-cut of 60g/t was applied to Domain = MAIN composite data prior to estimation. No top-cuts were applied to the HW domain composite data.</p>



	Model was validated by plotting composite and block model average grades against northing and were reasonable.
<b>Moisture</b>	Tonnages are estimated on a dry basis
<b>Cut-off parameters</b>	The model is reported at a 0.4g/t Au cut-off which is close to the expected marginal cut-off grade based on a A\$2,500/ounce gold price. The cut-off grade includes the following considerations: Mining Cost - \$3.67/t Processing Cost (inc G&A and sustaining capital) - \$23.90/t Processing recovery – 91.7% Pit slope angles of 41° footwall, 43° hangingwall
<b>Mining factors or assumptions</b>	The mining method is conventional open pit.
<b>Metallurgical factors or assumptions</b>	Processing recovery is 91.7%
<b>Environmental factors or assumptions</b>	The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenement and management measures are in place. Agreements will be required to relocate infrastructure related to the handling and transportation of nickel concentrate on the eastern wall of the pit
<b>Bulk density</b>	The dry bulk density is estimated to be between 2.0 - 2.8g/cm <sup>3</sup> . This is based on weighing whole core samples in air and water for 87 samples.
<b>Classification</b>	The variogram model shows that 90% of total sill is reached at approximately 100m down plunge and within 45m perpendicular (D2) to this. Based on this, the average data spacing of between 40m by 30m (up to 80m by 60m) for the bulk of the Tower Hill Resource below the pit is considered adequate to classify the majority of the resource as Indicated. The down dip extensions to the resource, which are based on limited data, are considered Inferred.
<b>Audits or Reviews</b>	The Tower Hill Resource was reviewed by Entech Mining Consultants in July 2021, who concluded that the model was suitable for open pit mining studies and recommended a review investigating sub-domaining of higher grade domains.
<b>Discussion of relative accuracy/confidence</b>	The resource estimate is a global estimate. Grade control drilling is completed in advance of development to improve local estimates of grade.



## Disclaimer

This announcement has been prepared by St Barbara Limited ("Company"). The material contained in this announcement is for information purposes only. This announcement is not an offer or invitation for subscription or purchase of, or a recommendation in relation to, securities in the Company and neither this announcement nor anything contained in it shall form the basis of any contract or commitment.

This announcement contains forward-looking statements that are subject to risk factors associated with exploring for, developing, mining, processing and the sale of gold. Forward-looking statements include those containing such words as anticipate, estimates, forecasts, indicative, should, will, would, expects, plans or similar expressions. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, and which could cause actual results or trends to differ materially from those expressed in this announcement. Actual results may vary from the information in this announcement. The Company does not make, and this announcement should not be relied upon as, any representation or warranty as to the accuracy, or reasonableness, of such statements or assumptions. Investors are cautioned not to place undue reliance on such statements.

This announcement has been prepared by the Company based on information available to it, including information from third parties, and has not been independently verified. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information or opinions contained in this announcement. To the maximum extent permitted by law, neither the Company, their directors, employees or agents, advisers, nor any other person accepts any liability, including, without limitation, any liability arising from fault or negligence on the part of any of them or any other person, for any loss arising from the use of this announcement or its contents or otherwise arising in connection with it.

## Competent Persons Statement

### Tower Hill results

The information in this report 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.

### Mineral Resource Estimates

The information in this report that relates to Mineral Resources (excluding, for the avoidance of doubt, Bardoc Gold Mineral Resource estimates) is based on information compiled by Jane Bateman, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Jane Bateman is a full-time employee of St Barbara Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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". Jane Bateman consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.