

Corporate Details

Ordinary Shares:
780,917,069

Market Capitalisation:
~\$140 million

Cash and bullion at 30 June 2017:
~\$27.7 million

Debt:
NIL

ASX Code: MOY

Board of Directors

Greg Bittar
Non-Executive Chairman

Michael Chye
Non-Executive Director

Tim Kennedy
Non-Executive Director

Peter Lester
Non-Executive Director

Management

Peter Cash
Chief Executive Officer

Dean Will
Chief Operating Officer

Stacey Apostolou
Chief Financial Officer and
Company Secretary

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Completion of Expansion Study confirms mine life extension strategy

Millennium will now seek to progress to Feasibility Study on plan to establish +5 year mine life at +100,000ozpa

- **Expansion Study (Study) confirms Millennium's strategy to significantly extend its mine life and production based on the existing +850,000oz sulphide Mineral Resource base at its Nullagine Project in WA**
- **The Study shows that sulphide ores can be processed using an integrated CIL and flotation plant with a throughput capacity of ~1.5Mtpa for sulphide ore and 2Mtpa for oxide ore**
- **This increased throughput delivers significantly lower operating costs, allowing for increased conversion of Resources to Reserves and expanding the opportunities for adding to mine life at Nullagine**
- **Metallurgical testwork demonstrates the flotation circuit will produce a high-grade precious metals concentrate grading up to 60g/t gold**
- **Processing costs for free milling fresh ore expected to be approximately A\$19/t through the CIL circuit, with costs for fresh ore through the flotation circuit of approximately A\$27.50/t (delivered to smelter). This compares with current processing costs for oxide ore of ~A\$17/t**
- **Capital cost of achieving the new plant configuration is estimated in the range of A\$40 million - A\$46 million (including contingency)**
- **Millennium on track to achieve production guidance for the six months to 31 December 2017 of 41,000 – 43,000oz at an AISC of A\$1,360 - 1,390/oz**

Millennium Minerals Limited (Millennium or Company – ASX: MOY) is pleased to announce that following completion of its Expansion Study, it has confirmed the economic and technical strengths of the plan for an alternative processing route for its +850,000oz Mineral Resource base.

Millennium aims to establish a mine life of at least five years with an annual production rate of ~100,000oz. This compares with production guidance of 75,000-80,000oz for the full year to 31 December 31, 2017

Further to the Company's announcement on 1 August 2017, the Study found that Millennium's plan to integrate a flotation circuit capable of treating sulphide ores with the existing 2Mtpa CIL plant is technically and economically sound with the Study finding that:

- **Recoveries of up to 90%** would be achieved via conventional CIL treatment of fresh ore from at least two deposits, Bartons and Shearers, demonstrating they can be processed through the existing circuit; and
- **Recoveries averaging 89%** would be achieved from fresh ore sources (such as the Golden Eagle (86%) and Golden Gate (estimated at 90%) deposits) using conventional sulphide flotation techniques to produce a precious metal concentrate.



The additional requirements of the integrated flowsheet (see Figure 1 below) include installation of a ball mill for additional grinding of fresh ore (i.e. primary grind size of P80 = 63µm), a conventional flotation circuit and associated concentrate handling facilities.

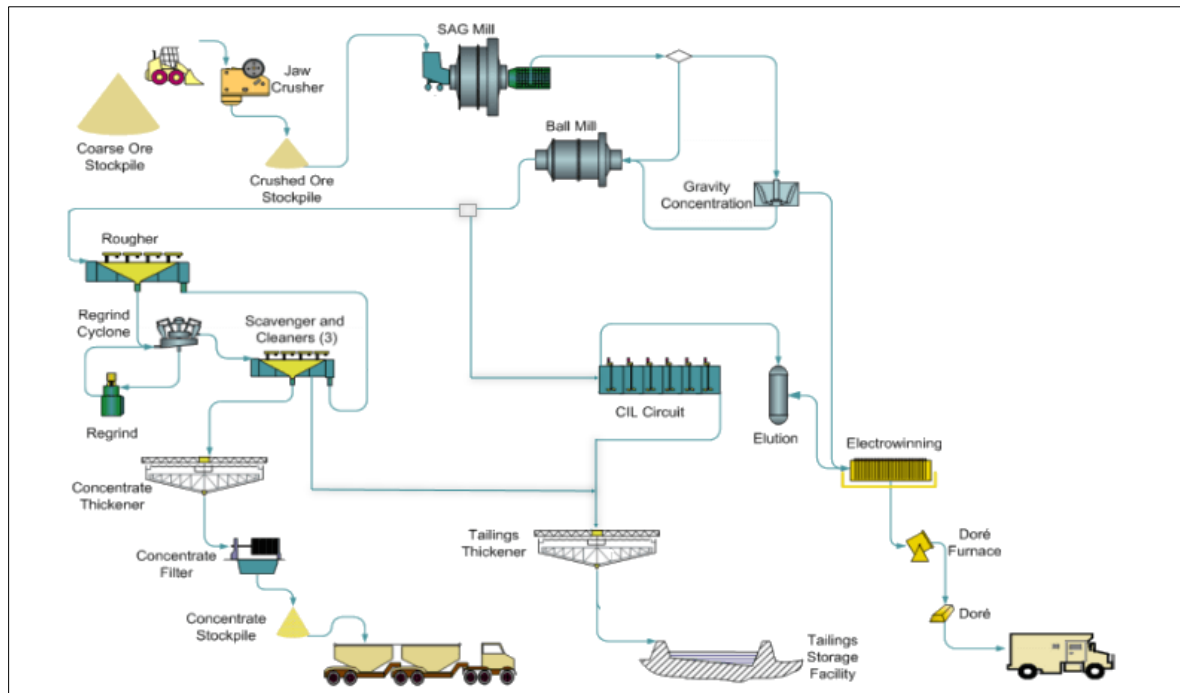


Figure 1: Conceptual integrated CIL / flotation circuit at Nullagine.

The Study confirms the capital expenditure required to fund the plant modifications is estimated to be in the order of A\$40 - A\$46 million, including contingency.

Processing costs for free-milling fresh ore are expected to be approximately A\$19/t, which compares to the current processing cost for oxide ore of A\$17/t. The processing cost for sulphide ore through the flotation circuit is estimated to be approximately A\$27.50/t.

Sulphide ore will be sourced from open pit deposits such as Golden Eagle, and from potential underground operations such as Golden Gate. Underground operations at Bartons will deliver free milling ore capable of being processed through the existing CIL plant. An additional ~30 deposits at Nullagine remain metallurgically untested and open at depth. Further mining studies and drilling programs are underway and will form part of the Feasibility Study to assess the full economic potential of these deposits.

Millennium Chief Executive Peter Cash said that considering the strong findings of the Study, the Company will now move to a Feasibility Study on the growth strategy.

"The Expansion Study supports our plan to establish longer mine life and increased production rates using the existing 850,000oz of sulphide Mineral Resource," Mr Cash said.

"The strong results mark another pivotal step in our plan, which is a potential game-changer for Millennium.

"There is also immense scope to significantly grow the Mineral Resource base below and along strike of the existing open pits.

"We believe there is significant upside for our shareholders from this strategy and we will seek to move forward with further studies and drilling programs to underpin the Feasibility Study for this expansion."

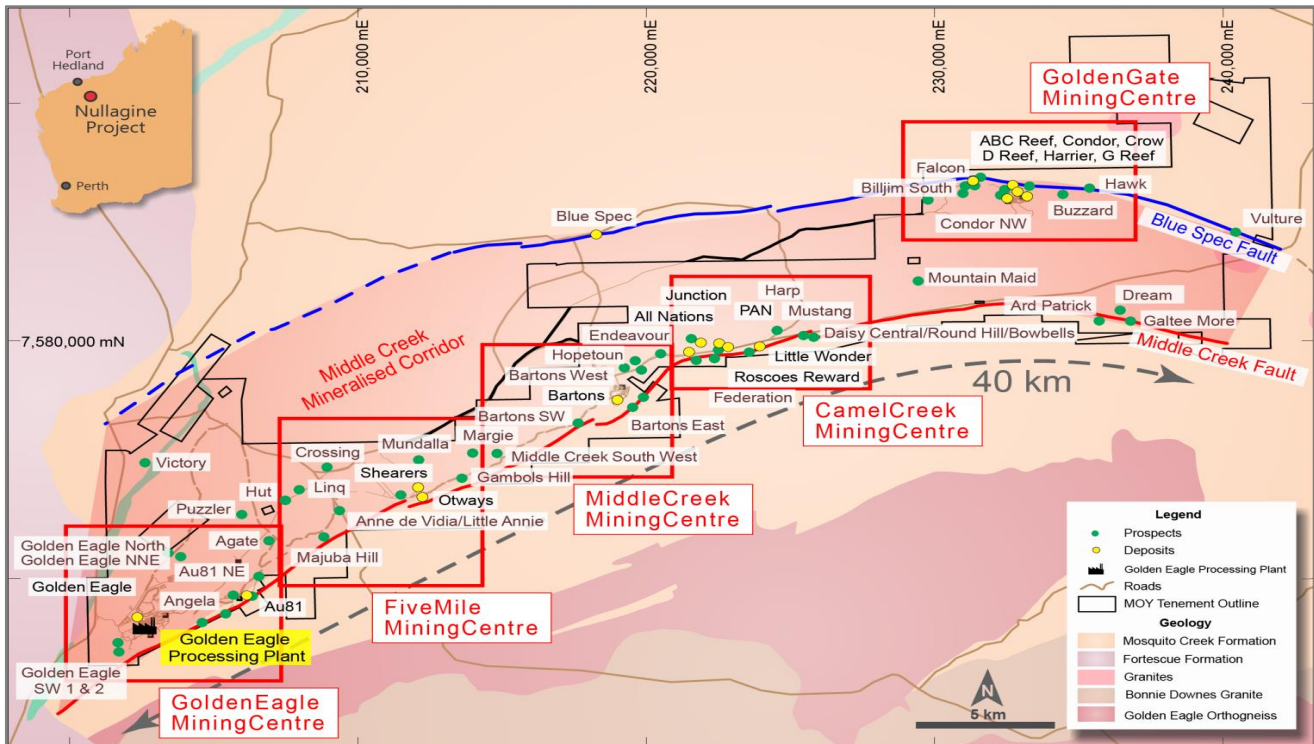


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Appendix 1: Nullagine Gold Project Location Plan over regional geology



Appendix 2: Mineral Resources and Ore Reserves

On 15 February 2017, the Company announced an updated Mineral Resources and Ore Reserves statement reported in accordance with the JORC Code 2012, which included the following:

December 2016 Mineral Resource estimate

Mineral Resource Category	Million Tonnes (Mt)	Grade (g/t Au)	Thousand Ounces (Koz)	Incl. Ounces in Fresh Ore (Koz)
Measured	11.02	1.3	459.7	283
Indicated	11.37	1.3	470.1	270
Inferred	9.37	1.2	350.6	294
Total	31.76	1.3	1,280.4	847

In accordance with Listing Rule 5.23, the Company confirms it is not aware of any new information or data that materially affects the information included in its announcement of 15 February 2017, and that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.