

Corporate Details

Ordinary Shares:
780,917,069

Market Capitalisation:
~\$160 million

Cash and bullion at 31 Mar
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

Richard Hill
Chief Financial Officer

Pierre Malherbe
Company Secretary

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Strong metallurgical results pave way for substantial increases in production and mine life at Nullagine

Pivotal results show Millennium can process its fresh ore, which comprises a JORC resource of 850,000oz plus extensive additional mineralisation below existing pits

- Metallurgical test work on fresh ore returns high recoveries of more than 90 per cent, paving way for substantial increases in mine life and annual production at Nullagine
- Test work is based on five deposits at Nullagine; Results show fresh ore from two of these projects is free milling and can be treated through the existing CIL processing plant
- Gold associated with fresh ore at the three other projects is recoverable using conventional sulphide floatation to produce a precious metal concentrate
- Leading international consultants DRA Global and Entech engaged to assist with technical assessments including economic assessment on construction of a standalone bulk sulphide floatation circuit
- Results offer significant potential to unlock value from the existing 850,000oz of fresh ore in current Mineral Resource inventory
- Recent drilling also identifies additional high-grade mineralisation below numerous other deposits - up to 30 deposits at Nullagine are open at depth
- Conceptual underground studies on several projects well advanced

Millennium Minerals Limited (Millennium or Company – ASX: MOY) is pleased to announce the results of metallurgical test work which could underpin major increases in production and mine life at its Nullagine Gold Project in WA's Pilbara (**Figure 1**).

The results show that gold recoveries of well in excess of 90 per cent can be achieved from processing the fresh ore at Nullagine using either the existing CIL process or standard industry floatation techniques.

This means that the 850,000-ounce fresh ore Resource at Nullagine (**Appendix 1**) could be economic to process, something which could add many years to the project's life as well as increase annual production substantially from the current rate of ~85,000oz.



Gold production at Nullagine stems from processing oxide ore sources mined from a series of shallow open pits. However, this test work demonstrates that fresh material from at least two deposits at Nullagine, Shearers and Bartons, is free-milling and can therefore be processed through the existing CIL plant to generate recoveries in excess of 90 percent.

Tests conducted on the fresh ore from the Golden Gate, Little Wonder and Golden Eagle deposits show recoveries of more than 90 percent can be achieved using conventional sulphide flotation techniques.

Un-optimised flotation test work also shows that a precious metal concentrate can be produced from these projects. The next phase of metallurgical test work is aimed at optimising gold recovery and concentrate grades on existing metallurgical samples.

Millennium Chief Executive Peter Cash said the results had potentially far-reaching consequences for the Company on several levels.

“This a complete game-changer for Millennium,” Mr Cash said. “To be able to process the 850,000oz fresh ore Resource would have huge benefits for our mine life, production rates, costs and exploration upside.”

“The results are even more significant in light of the recent exploration results, which have identified extensive high-grade mineralisation below another 30 deposits. This mineralisation is outside the existing 850,000oz Resource and remains open at depth in every case.”

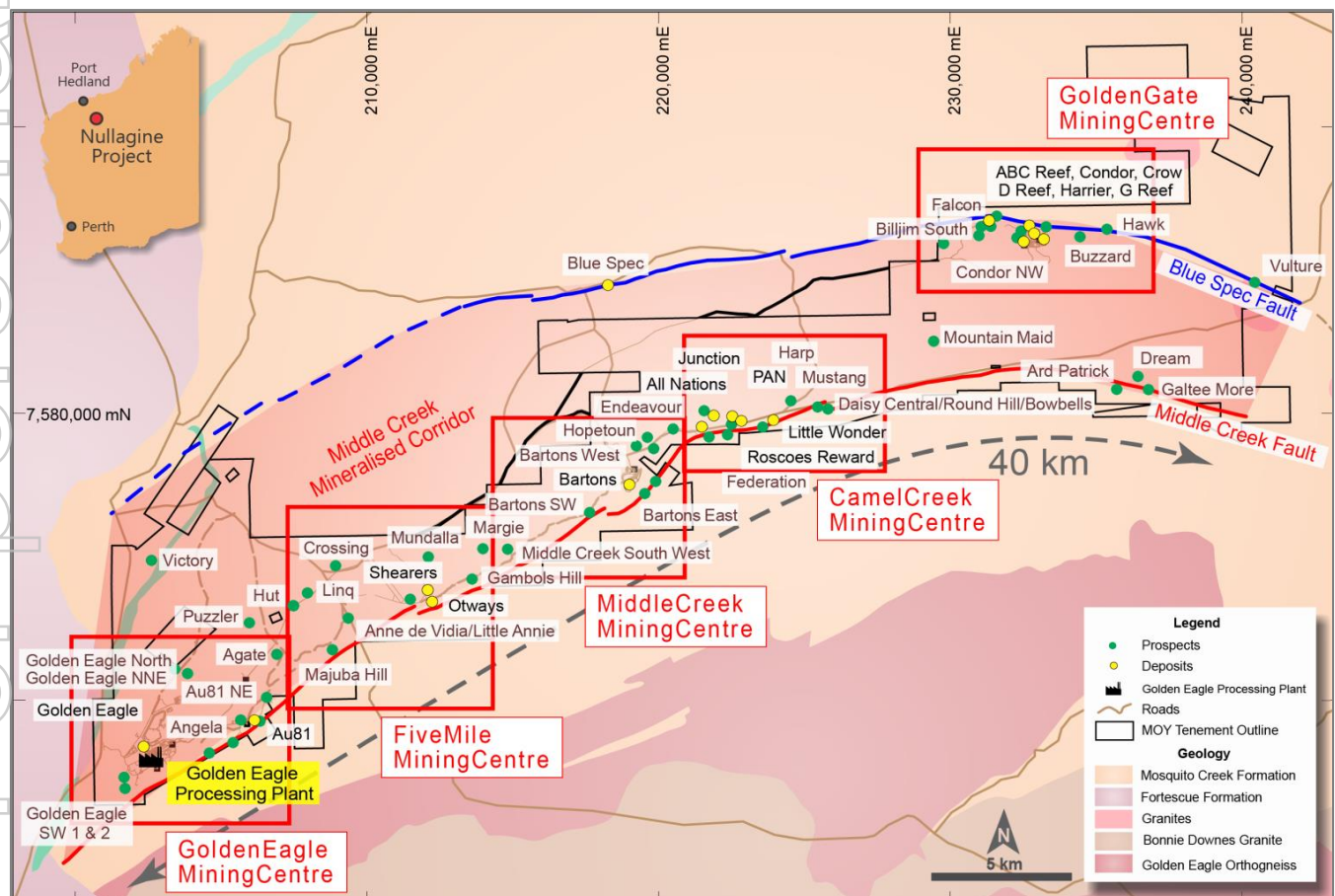


Figure 1: Nullagine Gold Project Location Plan over regional geology



Metallurgical test work study progress

The current test work is aimed at unlocking the full economic potential of Nullagine Gold project through developing economic processing pathways for fresh ore sources. The study is focused on optimising and improving metallurgical recoveries from fresh ore, assessing potential processing options and evaluating larger open pit and underground scenarios at Nullagine.

Millennium has engaged leading international consultants to assist with completion of the metallurgical test work and conceptual underground mining studies. This includes DRA Global as the lead processing and metallurgical consultants and leading underground mining and engineering experts Entech.

Five initial deposits have been assessed for their suitability for mining and processing of fresh ore through either the current CIL process at Nullagine or utilising industry standard floatation processing techniques.

The initial metallurgical test work results have been highly encouraging and importantly confirm that at three key projects, gold is associated with sulphides in the fresh ore and that these sulphides are recoverable using conventional sulphide floatation techniques.

Test work results from the Golden Gate and Golden Eagle deposit show gold and sulphide recoveries of greater than 90% have been achieved and would support production of a precious metal concentrate from these deposits.

The study is now assessing the baseline economics of treating fresh ore sources requiring floatation through a standalone, scalable 500,000 tonne-a-year bulk sulphide floatation circuit. In parallel, those deposits returning greater than 90 percent recoveries from fresh ore utilising the existing CIL process will be assessed for potential to fast track into production through larger open cut and/or underground operations.

Given these positive initial results, Millennium is now in the process of undertaking a preliminary assessment on a number of other prospective deposits across its significant tenure at Nullagine.

The company looks forward to providing further updates as this work progresses.

ENDS

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Appendix 1: 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 – Including Ounces in Fresh Ore

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.