



MILLENNIUM

MINERALS LIMITED

ABN 85 003 257 556

21 July 2009

Manager Company Announcements
Company Announcements Office
Australian Securities Exchange Limited
Level 4, 20 Bridge Street
SYDNEY NSW 2000

Via Electronic Lodgement

Dear Sir/Madam,

Nullagine Gold Project Shows Promise

Millennium Minerals Limited (“Millennium” or “the Company”) is reviewing and updating the detailed feasibility study completed in 2007 on its wholly owned Nullagine Gold Project in the East Pilbara District of Western Australia (Figure 1). The improvement in the Australian dollar denominated gold price dramatically improves project economics and it is now the Company’s view that the current economic outlook makes a compelling case for development of the project.

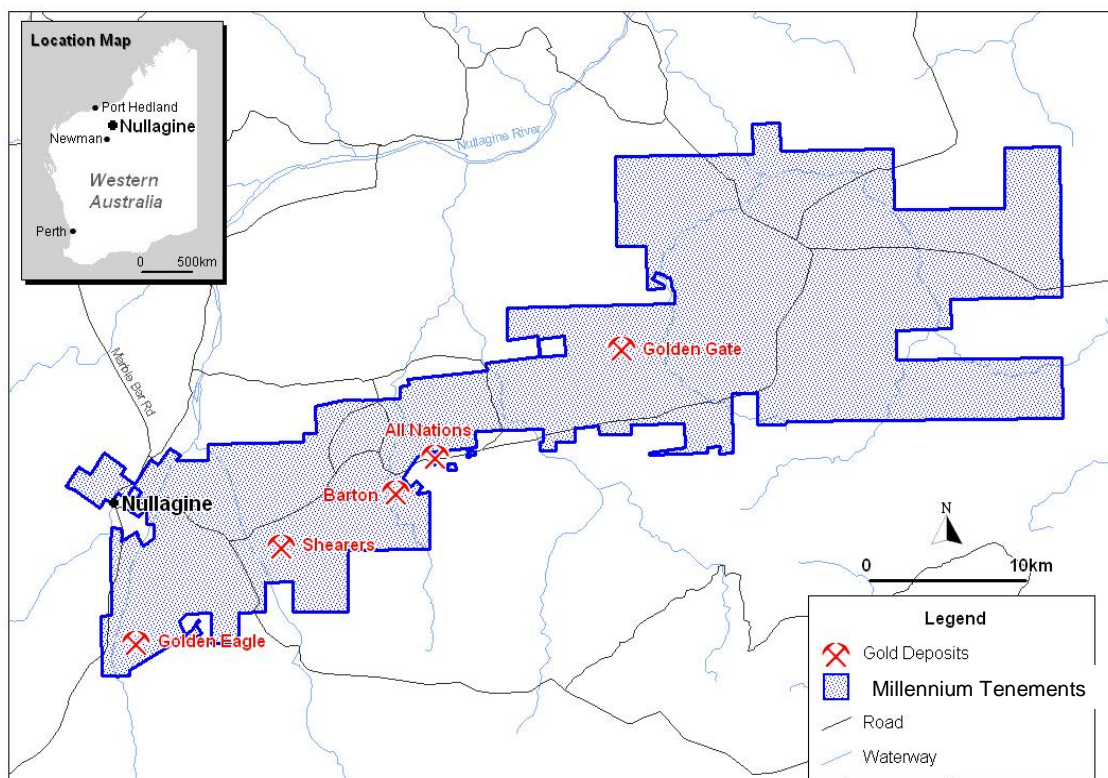


Figure 1: Nullagine Location Plan

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The Nullagine Gold Project is a 1.1 million ounce gold Mineral Resource that was subject to a detailed feasibility study completed in early 2006 and revised in early 2007 contained within 5 deposits on granted mining leases. The largest deposit is Golden Eagle located approximately 10 km south of the township of Nullagine and contains 69% of the total Mineral Resource inventory. Much of the permitting and design work for a 1 million tonne per annum Carbon-In-Leach (CIL) processing facility has been completed providing for an early start to development when a decision to mine is made.

The Company has re-examined the basic economics of the Project in light of the improvement in the Australian dollar denominated gold price. The current Mineral Resource estimate for the five project areas now totals 27.63 Mt @ 1.23 g/t Au using a 0.5 g/t Au lower cut-off grade for approximately 1.1 million ounces of contained gold. This is expected to increase when the Mineral Resource estimates are finalised shortly for the Golden Gate satellite deposits, namely Falcon, Condor, Crow, Harrier and G Vein.

A total of 22.16 Mt at 1.26 g/t Au is contained within the Measured and Indicated Mineral Resource categories (Table 1). This represents approximately 80% of the total Mineral Resource for the Nullagine Gold Project.

The Company has re-scoped the 2007 base case feasibility study which indicates the potential for an 8-10 year operation milling 1 Mt annually through a CIL processing plant. The scoping study was based on a series of pit optimisations of the five deposits. The spot gold price used for the study was US\$900/oz and operating cost inputs were internally updated from the 2007 feasibility study base numbers with the US\$/A\$ exchange rate set at 0.7. The optimisations were conducted on the Measured and Indicated Resources only (22.16 Mt @ 1.26 g/t Au). Various studies were undertaken to assess the potential for CIL stand-alone, heap leach stand-alone and a base CIL operation with heap leaching of medium to low grade material that will be mined and otherwise treated as waste. All cases demonstrated favourable technical and economic outcomes sufficient to warrant completion of the feasibility update and final optimisation studies ahead of an investment decision.

The base case option (excluding the Golden Gate satellite deposits) selected for final update of the feasibility study is a nominal 1 million tonne per annum operation targeting over 500,000 ounces over a mine life of 8-10 years. This case ignores the potential for heap leaching some of the lower grade material (see below). Depending on the final Ore Reserve established and whether a parallel heap leach operation is possible, a higher throughput rate may be justified and this option will be included in the current studies.

In parallel with this study, the potential for heap leaching the medium to low-grade material will be assessed. The scoping study showed that were this material able to be processed the overall waste to ore stripping ratio of the project could be significantly reduced (under 2:1). The key work to be completed on the base case includes updating mining and processing operating costs inputs and development capital to provide the basis for Ore Reserve definition and project financing. An independent review of the process design is in progress and will be combined with assessment of the availability of process plant equipment. The Company is targeting process equipment and plant that is available now to set in place rapid development for when the decision to mine is made.

These studies will be completed in August and Millennium will report the results at that time.

On behalf of the Board of
Millennium Minerals Limited

Brian Rear
Chief Executive Officer

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Qualifying Statement

This release may include forward-looking statements. These forward-looking statements are based on Millennium's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Millennium, which could cause actual results to differ materially from such statements. Millennium makes no undertaking to subsequently update or revise the forward-looking statements made in this release, to reflect the circumstances or events after the date of this release.

Competent Persons Statements

The reported Mineral Resource has been compiled by Mr Nic Johnson. Mr Johnson is a Member of the Australian Institute of Geoscientists and an employee of Hellman & Schofield Pty Ltd. He has sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking, to qualify as a Competent Person as defined in the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves' of December 2004 ("JORC Code") as prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia. The Competent Persons listed consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

About Millennium Minerals Limited

Millennium Minerals Limited is an emerging metals company focused on the exploration and development of a large tenement portfolio in the East Pilbara region of Western Australia. The high-quality portfolio encompasses a large gold inventory and a secondary molybdenum project

The Company's flagship asset, the Nullagine Gold project, is located south east of Port Hedland in Western Australia's richly mineralised East Pilbara region, and lies approximately 10 kilometres from the town of Nullagine. The Nullagine Gold project offers the Company a significant opportunity to explore and develop a million ounce open pitable gold resource providing a valued return to shareholders during a time of economic uncertainty.

Table 1: Nullagine Gold Project Mineral Resource Estimate July 2009

Deposit	Cut-off Grade (g/t Au)	Measured		Indicated		Inferred		Total		Ounces (Au)
		Mt	Grade (g/t Au)	Mt	Grade (g/t Au)	Mt	Grade (g/t Au)	Mt	Grade (g/t Au)	
Golden Eagle	0.5	11.43	1.26	4.60	1.02	4.04	1.00	20.07	1.16	749,000
Shearers	0.5	0.59	1.09	1.04	0.87	0.40	0.90	2.03	0.93	61,000
Bartons	0.5	1.33	1.47	0.85	1.48	0.37	1.70	2.55	1.51	125,000
All Nations	0.5	1.11	1.30	0.19	1.04	0.14	1.10	1.45	1.25	58,000
Golden Gate (ABCD Reef)	0.5			0.58	3.24	0.11	2.6	0.68	3.12	69,000
Little Wonder	0.5			0.44	1.13	0.4	1.2	0.85	1.17	31,000
Totals	0.5	14.46	1.28	7.70	1.22	5.46	1.1	27.63	1.23	1,093,000

Notes

1. Figures in Table may not sum due to rounding.
2. The Mineral Resources were estimated using Multiple Indicator Kriging methodology for grade estimation.
3. The Golden Gate satellite deposits namely Falcon, Harrier, Crow, G Vein and Condor are being re-estimated and will be reported on in the next four weeks.
4. The table excludes royalties payable to third parties