



30 July 2019

Corporate Details

Ordinary Shares:
891,186,531

Market Capitalisation:
~\$102 million

Cash, bullion and available financing facilities at 30 June 2019:
\$14.3 million

Debt at 30 June 2019:
\$25 million

ASX Code: MOY

Board of Directors

Greg Bittar
Non-Executive Chairman

Bruno Lorenzon
Non-Executive Director

Tim Kennedy
Non-Executive Director

Peter Lester
Non-Executive Director

Management

Peter Cash
Chief Executive Officer

Ray Parry
Chief Financial Officer and Company Secretary

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June 2019 Quarterly Activities Report

- **Production for the June Quarter of 15,180oz, with 34,716oz poured in the first half of the year – in line with revised guidance.**
- **Positive upward trend in gold production over the Quarter, with monthly production increasing from 4,173oz in April to 6,575oz in June.**
- **AISC of A\$1,840/oz for the June Quarter reflects previously announced delays in the ramp-up at Bartons Underground and commissioning of the sulphide plant – both of which have now been fully resolved.**
- **Corresponding improvement in AISC seen through the quarter as gold production increases, with AISC of A\$1,435/oz for the month of June.**
- **Millennium on-track to deliver improved production and lower costs over the remainder of CY2019, with forecast production in the second half of 46,000-54,000oz.**
- **Mine production from Bartons Underground successfully ramped up to design run rates, with production now underway from four stoping areas.**
- **Stage 1a expansion of sulphide plant completed late in the Quarter, with gold production from sulphide ore now underway.**
- **Early analysis indicates that all components of the expanded sulphide circuit are performing in line with or exceeding feasibility expectations.**
- **Strategic review underway to further improve mine scheduling and operational performance and to identify operating cost savings, with a potential transition to an owner-operator business model now being actively assessed.**
- **\$20m Mezzanine Debt Facility secured from major shareholder, IMC Group, to provide interim working capital, with \$10m drawn-down at Quarter-end.**

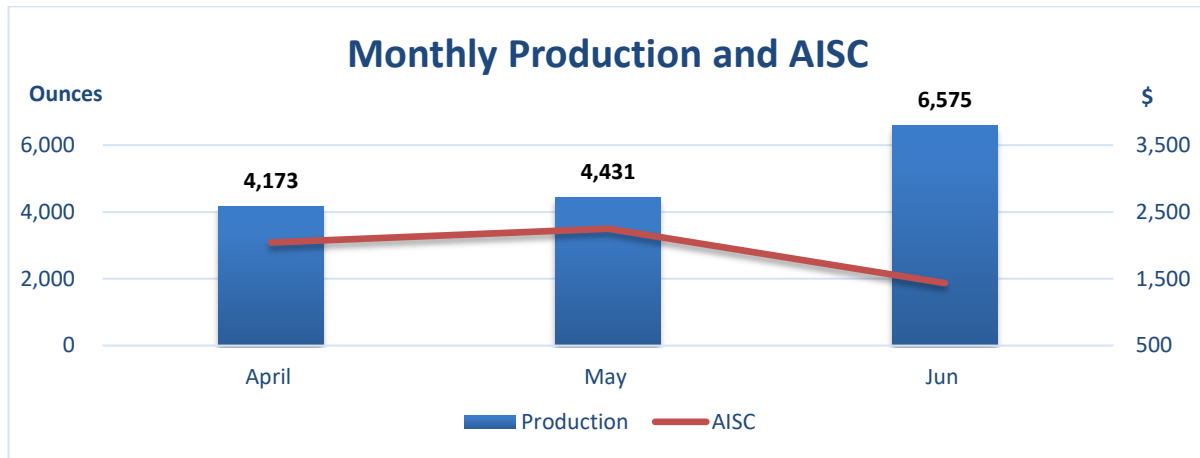
Millennium Chief Executive Peter Cash said the June Quarter had been an important period for the Company, with the successful ramp-up of the Bartons underground mine and commissioning of the Stage 1a sulphide plant expansion delivering a pleasing upward trend in gold production over the reporting period.

“Our operating performance over the June Quarter indicates we’re now back-on-track at Nullagine, with a steady increase in gold production over the period as we successfully ramped up underground mining at Bartons, and delivered first gold production from sulphide ore in late June,” he said.



“Production and costs for the Quarter were in line with revised guidance – impacted by the previously-announced delays in the delivery of our two key growth initiatives – however our production performance in June and July shows we’re now well positioned for a positive second half.

“I would like to commend the Millennium team for their exceptional work in re-optimising the mine schedule and delivering this strong turn-around performance over the past three months.



“Bartons Underground is now performing in line with expectations, with four stoping fronts now in operation and grade profiles in accordance with the mine plan.

“In addition, successful commissioning of the ultra-fine grind mills, which represent the Stage 1a sulphide plant expansion, has delivered a positive uplift in gold recovery across all ore types.

“There’s no doubt that the past 14 months have been a challenging period, with the Company incurring significant capital costs totalling \$67 million to implement important growth initiatives in both mining and processing. Millennium is now in a strong position to take advantage of the current strength in the Australian dollar gold price and deliver robust operating margins.

“We also have a wide-ranging strategic review of our mine schedule and operating strategies in progress. Part of this review is considering how we might achieve a step-change in our cost base by switching to full owner-operator mining in the Open Pits as opposed to the current hybrid Contractor/Owner Operator model. We expect to present the results of this review later in the September Quarter.”

Mine Safety, Environment and Community

Safety

There were no lost-time injuries, one medically treated injury and no alternative duty injuries recorded for the quarter.

The 12-month moving average for the Lost Time Injury Frequency Rate (LTIFR) has decreased to 1.12. The Total Reportable Injury Frequency Rate (TRIFR) has risen slightly to 7.83 due to the one injury for the quarter.

The Company’s focus in the June Quarter was to assist and support the Sulphide Plant Expansion Project, with the Safety Team working alongside the contracting and operational teams to deliver a safe project.

Environment and Heritage

A site inspection across the Nullagine operations was conducted by Officers from the Department of Mines, Industry Regulation and Safety (DMIRS) during the Quarter, with guidance provided to the Company on future improvements to compliance and environmental impact assessment.



Environmental Survey work and preparation of a site-wide Mining Proposal continues, with promising exploration targets and future underground opportunities highlighted for proposed development envelopes.

The development and review of the Company's Mine Closure Plan continued during the Quarter, with proposed submission in the September 2019 Quarter providing future opportunity for larger scale rehabilitation works to be targeted.

Community

Millennium has been working closely with the Nullagine Remote Community School to assist in continued education outside of the local region through programs to continue students' development for life after school.

The Company continued its support for the development of skills for life after school, providing financial support and assistance with the organisation of education visits for a school excursion to Perth, which took place in May 2019. The school attended two universities, a private boys' school and a co-educational school, as well as the WA Institute of Sport and SCITECH for some educational and fun programs.

For the first time this year, Millennium also took part in the National Indigenous and Torres Strait Islander Day in the communities of Nullagine and Marble Bar, and proudly donated educational 'show bags' to all the children.

Millennium has also maintained its commitment to the Nullagine Police Station's after-school educational and 'fun time' programs through the donation of an array of musical instruments and associated learning equipment.

Millennium continues to work with these departments and the local shire of East Pilbara to maintain the Company's involvement in the local area for the benefit of communities surrounding Nullagine.

Bartons Underground

During the June Quarter, stoping commenced on the 210 Level and continued on the 245 Level from both the northern and southern ends. Stopes mined in the June quarter are shown in dark blue in Figure 2 below, while the stopes in pink were mined during the March Quarter.

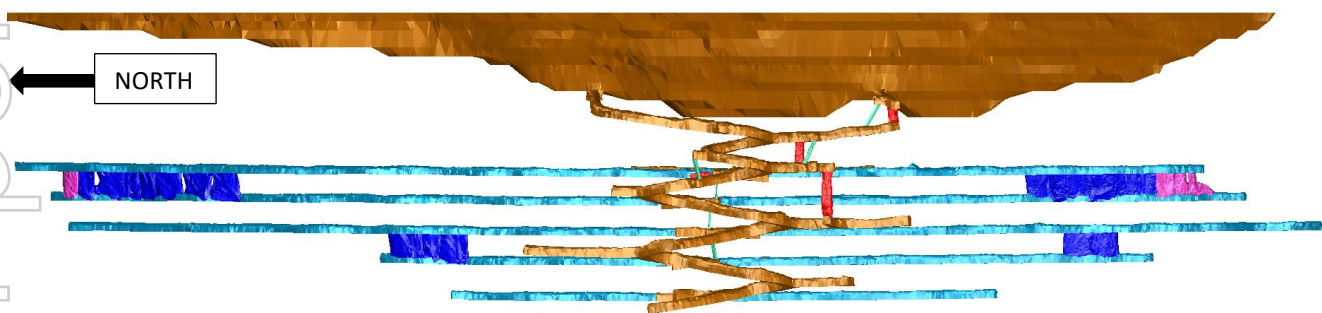


Figure 2: *Bartons Underground Project Long Section showing mine development to date (blue).*

Sulphide Expansion Project

The sulphide expansion project is broken into three distinct phases:

- **Stage 1a:** Concentrator and fine grinding circuit (commissioning underway);
- **Stage 1b:** Installation of the INOX process as the concentrate transitions from a pyrite-dominant to a blended pyrite / arsenopyrite ore (commissioning Quarter 4); and
- **Stage 2:** Pressurised in-mill oxidation (PINOX) to facilitate processing of arsenopyrite-dominant ore (Expected early 2020 subject to mine schedule).

Commissioning of the Stage 1a upgrade commenced in April, initially comprising commissioning of the sulphide concentrator and the stockpiling of scavenged concentrates, followed by



commissioning of the PSS Ultra-fine Grind (UFG) Mills over 19-24 June which enabled gold to be recovered from the sulphide concentrate.

With the ramp-up of the concentrate production since commissioning of the circuit, the operation has been able to achieve targeted levels of concentrate production for sustained periods. Metallurgical optimisation of the circuit is ongoing to best match the mass pull and concentrate grade to suit the capacity of the UFG milling circuit.

Results to date have provided concentrate grades of 3-6g/t Au from CIL tailings of ~0.3-0.4g/t Au. Overall, plant tails have been reduced by an average 0.10g/t Au, with improvements available as the higher concentrate mass pulls are achieved and UFG throughput is ramped-up over the September Quarter.

Test work on circuit concentrates indicate that gold recoveries from the ground concentrates (predominantly pyrite) are in the expected target range (70-80%) for the concentrate grade and grind size generated from the UFG mills. An optimisation program is underway for the UFG milling circuit to maximise power draw, mill feed pump performance and grind size / recovery balance such that the operations can maximise the gold recovered from the CIL circuit tailings.

The Company expects to commence installation of the Stage 1b expansion in September 2019.

Operational Activities Summary

The Company produced 14,870oz for the quarter at a C1 cash cost of A\$1,601/oz and an AISC of A\$1,840/oz.

Production was primarily sourced from the Au 81, Golden Eagle and Agate pits. Stopping ore was first delivered from Bartons Underground in mid-March, with production continuing during the quarter. Stopping is now occurring in four locations over two levels.

The mining rate at Nullagine in the June Quarter was a monthly average of approximately 322,000 Bank Cubic Metres (BCM). This is in line with the open pit operating strategy for FY19.

Mill throughput averaged 167kt per month over the Quarter. Recoveries improved through a combination of less transitional ore processed and the sulphide plant coming online. Ore treated through the month was predominantly from the Agate and Au81 pits plus Golden Eagle Pit and Bartons Underground.

The grade of the open pit material processed during the quarter was slightly lower than the budgeted grade of 1.42g/t, representing a shortfall of 20 percent. Bartons underground has seen higher than planned dilution in some mining areas. This is a focus in the coming quarter to reduce overbreak. In the open pit, increased dilution occurred in the Au 81 Mining Area due to the narrow vein lodes.


Table 1 – Quarterly Comparative Results

		Sep-18	Dec-18	Mar-19	Jun-19
Total volume mined	<i>bcm</i>	1,818,484	1,569,118	1,052,086	965,223
Ore mined	<i>t</i>	529,152	602,871	498,493	356,695
Ore processed	<i>t</i>	523,614	458,174	521,052	502,216
Head grade	<i>g/t</i>	1.53	1.98	1.35	1.12
Metallurgical recovery	<i>%</i>	86.8	83.7	77	82.3
Fine gold production	<i>oz</i>	22,414	24,514	17,393	15,180
Gold sold	<i>oz</i>	21,945	22,782	20,008	13,760
Gold sales revenue	<i>\$M</i>	36.5	39.2	35.0	24.0
Cash Operating Cost	<i>\$/oz</i>	1,183	1,156	1,480	1,601
All-in Sustaining Cost	<i>\$/oz</i>	1,324	1,216	1,576	1,840

Cost Review

Millennium has initiated a comprehensive review of its business to identify opportunities to reduce operating costs.

As part of this review, the Company is assessing the merits of moving away from the current owner-operator hybrid model at the Open Pits in Nullagine, to a straight owner-operator model. The Bartons Underground will continue as a full Mine Contractor Operation.

This cost review is continuing and key outcomes are expected to be announced in the latter part of the September quarter.

Corporate Activities

As at 30 June 2019, the Company held cash and bullion of \$4.3 million.

During the Quarter, Millennium secured an 18-month, A\$20 million Term Loan Facility from its major shareholder, IMC Group, to provide interim working capital while the ramp-up of the Bartons Underground Mine and the sulphide plant expansion were completed.

Key terms of this facility were provided in the Company's ASX Announcements dated 24 May 2019, 5 June 2019 and 9 July 2019.

At Quarter-end, \$10 million of this Term Loan Facility had been drawn, with a further \$5 million drawn subsequent to the end of the Quarter on 9 July 2019.

Gold sales revenue for the Quarter totalled \$24 million, which was achieved at an average realised gold price of \$1,742/oz.

At 30 June 2019, the Company's hedge book consisted of 39,000 ounces to be delivered over the period July 2019 – June 2020 at an average forward gold price of \$1,796/oz. June quarter cash and bullion movements are shown in Figure 1 below.

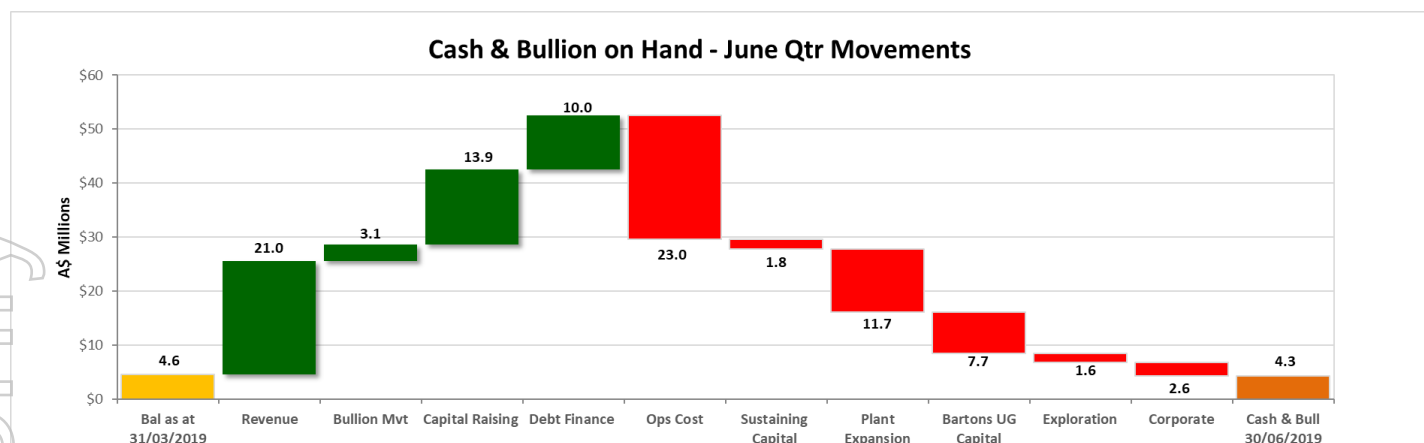


Figure 1: June 2019 quarter cash and bullion movements

Exploration

No field exploration activities were undertaken in the June Quarter to enable resources to be focused towards re-optimisation of the mine plan.

Exploration programs are expected to resume towards the end of August.

Planned Activities for the September Quarter

The focus during the September Quarter will be on completing the ramp-up of the Stage 1a sulphide plant expansion and optimising mill throughput, grind size and circuit operating costs. Installation of the Stage 1b components, comprising in-mill oxidation (INOX), is also scheduled to commence late in the Quarter to enable the Company to treat higher levels of arsenopyrite-dominant ore.

Approximately 50 per cent of ore processed over the remainder of CY2019 is expected to come from sulphide ore sources.

Exploration programs will recommence, with a focus on delineating the underground potential at Golden Gate, defining potential high-grade oxide targets and early stage work to expand the exploration pipeline.

The cost review that commenced during the June Quarter will also continue with the aim of identifying opportunities to reduce operating costs.

ENDS

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Competent Persons Statement – Exploration Results

The information relating to exploration results from the Nullagine project is extracted from the announcements titled:

1. First high-grade ore exposed at Bartons following outstanding progress with underground development dated 13 August 2018;
2. Millennium makes key exploration breakthrough at Nullagine dated 27 August 2018;
3. Outstanding new high-grade results of up to 54.9 g/t transform outlook for Golden Eagle dated 10 September 2018;
4. Millennium achieves 100,000ozpa production run-rate at Nullagine ahead of schedule dated 11 September 2018;
5. New high-grade intercepts of up to 42.35g/t upgrade discovery potential at Golden Eagle SW dated 17 September 2018;

all of which are available to view at www.millenniumminerals.com.au.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements relating to the drill results and that all material assumptions and technical parameters underpinning the drill results in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings as presented here have not been materially modified from the original market announcement.

Qualifying Statement

This report 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 report or to reflect the circumstances or events after the date of this report.

Notes

¹ All-In Sustaining Cost (AISC) per ounce sold represents: C1 Cash Costs, corporate administration costs related to operations, royalties, sustaining capital, development capital, tenement management of active mining tenements, rehabilitation and reclamation accretion, employee share payments provided to operational staff and production stripping adjustments and amortisation. It does not include expansionary development costs, including the sulphide plant expansion study, Bartons Underground development, corporate development costs, tenement acquisition expenditure, or exploration and evaluation expenditure of new deposits and projects.

² C1 cash cost represents the costs for mining, processing, administration, by-product credits, royalties and accounting adjustments for movements in stockpiles, gold in circuit and waste stripping. It does not include capital expenditure, exploration, tenement management and corporate administration costs.

Unless otherwise denoted all currency units are Australian dollars.

All data provided is unaudited.