

Corporate Details

Ordinary Shares:
780,917,069

Market Capitalisation:
~\$145 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

Richard Hill
Chief Financial Officer

Pierre Malherbe
Company Secretary

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Production on track to return to steady-state levels in current half as investment in longer-term growth ramps up

Millennium making strong progress in its strategy to develop sustainable, consistent operations at Nullagine

Key Points

- June Quarter gold production of 18,983oz at AISC¹ of A\$1,386/oz
- The result was in line with the revised guidance following interruptions to mining and haulage activities due to heavy rain earlier in the Quarter
- Free operating cash flow for the Quarter of \$7.6m
- This strong performance resulted in cash and bullion of \$27.7m at 30 June – unchanged from 31 March despite investing \$2.6m in capital expenditure, \$5.4m on exploration drilling and \$1.2m on expansionary studies
- Production for the six months to 30 June totalled 35,526oz at an AISC of A\$1,374/oz
- Forecast production for the six months to 31 December is 41,000 – 43,000/oz at an AISC of A\$1,360 – 1,390/oz
- Revised guidance for the full-year ending 31 December of 75,000 – 80,000oz at an AISC of A\$1,360 – \$1390/oz – down from original guidance of 80,000 – 85,000oz at an AISC of A\$1,190 – \$1,230/oz due to several factors including weather interruptions during the first half
- Increased forecast costs in the current half due to Millennium's decision to undertake a single large cut-back of the Bartons deposit, replacing smaller satellite deposits from the previous mine schedule
- This strategy is consistent with Millennium's wider objective to move away from smaller open pits at Nullagine and towards larger, more sustainable ore sources
- As part of this approach, Millennium is pressing ahead rapidly with the expansion study aimed at processing its +850,000oz fresh ore resource inventory
- Metallurgical test work on fresh ore has returned high recoveries of up to 90%, paving the way for substantial increases in mine life and annual production



Millennium Chief Executive Peter Cash said the Company had succeeded in offsetting some of the impact of the rain seen earlier in the Quarter with an outstanding performance in the month of June.

This, combined with the expected return to normalised production in the current half, had limited the extent to which the full-year production guidance had been revised.

"We now expect a return to normalised production levels in the current half as the benefits of the investment we are making in developing longer-term ore sources begin to flow.

"This investment reflects Millennium's strategy to put more emphasis on developing larger, longer-term ore sources at the expense of smaller, shorter-term open pits."

Mr Cash said that as part of this approach, the Company was bringing forward development of the higher-grade Majuba deposit and undertaking a single, large cut-back of the higher-grade Bartons pit.

"This strategy means we will incur additional costs in the September Quarter as we undertake the cut-backs and ramp-up production at these sources," he said.

"But the benefits of this longer-term planning will begin to flow through in the December Quarter with production increasing and costs falling."

Mr Cash said the growing emphasis on longer-term ore sources was also reflected in the Company's significant commitment to the ongoing expansion study aimed at unlocking the +850,000oz fresh ore Mineral Resource at Nullagine.

"We are moving rapidly to assess the potential of bringing this large Mineral Resource into our mine plan because it will give us a substantial increase in mine life and production rates," he said.

"We are generating very encouraging metallurgical results and we believe there is immense scope to grow the mineral inventory below many of the existing deposits."

Mine Safety, Environment and Community

Safety

There were zero lost-time injuries and one alternative duty injury recorded for the Quarter.

The 12-month moving average for the Lost Time Injury Frequency Rate (LTIFR) is 0.00, the Total Reportable Injury Frequency Rate (TRIFR) is 10.03, and the Damage Frequency Rate (DAMFR) is 97.48 – which is under current industry averages for Western Australia (as reported by the Department of Mines & Petroleum (DMP)).

Environment and Heritage

No reportable environmental incidents occurred during the Quarter.

Native Vegetation Clearing Permit (NVCP) applications submitted for Project One (extension to current mining areas at Little Wonder, All Nations, Roscoes Reward and for a new resource area at Round Hill) and Project Two (Majuba, Crossing, Hutt, Agate and Mundella) have been assessed by the DMIRS with the permit application for Project One fully approved and Project Two now awaiting final public consultation.

Archaeological Heritage surveys by Traditional Owner Groups continued across the Project during the Quarter, with several areas cleared and approved for ongoing exploration and mining



activities. Employment positions were realized during the Quarter for both Traditional Owner Groups, with further opportunities to be offered next Quarter.

Community

Millennium values highly its role as a proactive member of the Nullagine township community and also maintains strong relationships within the broader community. The Company continues to work closely with several local service groups including schools, Police Force, Nursing Station and DFES as well as maintenance of the Nullagine airstrip.

More specifically in the recent Quarter, Millennium has been liaising with the Nullagine Remote Community School for the students to participate in site visits during September as part of their curriculum Social Science studies. In addition to this, the Millennium Corporate office recently had a 'drive' for clothes, educational books and sports equipment to distribute to the local Community Resource Centre in Nullagine.

Operational Activities Summary

The Company produced 18,983oz for the Quarter at a C1 cash cost of \$1,212/oz and an AISC of \$1,386/oz.

The mining schedule was negatively impacted by adverse weather events early in the Quarter. To compensate for this interruption, a greater-than-expected volume of low grade stockpiles were processed with additional costs being incurred as a result of de-watering activities, mobilizing additional mining fleets and increased haulage costs resulting from the modified mining schedule.

The processing plant continued to perform well with throughput for the Quarter of 535,382 tonnes being above design capacity.

A comparison of the operating results for the Quarter to the previous four quarters is provided in Table 1 below:

Table 1 – Quarterly Comparative Results

| Quarter ended | Jun-16 | Sept-16 | Dec-16 | Mar-17 | June-17 |
|---------------------------------|---------------|----------------|-----------------|---------------|------------------|
| Total volume mined (bcm) | 886,640 | 1,408,746 | 987,764 | 858,503 | 1,147,865 |
| Ore mined (tonnes) | 422,295 | 608,303 | 820,161 | 301,493 | 383,019 |
| Ore milled (tonnes) | 462,108 | 507,847 | 510,529 | 466,864 | 535,382 |
| Head grade (g/t Au) | 1.65 | 1.32 | 1.73 | 1.32 | 1.24 |
| Metallurgical recovery (%) | 91 | 91 | 69 ³ | 83 | 89 |
| Fine gold production (oz) | 22,760 | 20,018 | 20,381 | 16,543 | 18,983 |
| Gold sold (oz) | 22,908 | 19,006 | 19,488 | 16,909 | 18,144 |
| Gold sales revenue (\$ million) | 36.8 | 32.9 | 33.1 | 28.1 | 30.1 |



Management Changes

During the Quarter, the Company appointed highly-regarded senior mining executive Dean Will as Chief Operating Officer and Asareh Mansoori as General Manager – Operations. These two key appointments further strengthen the management team and will assist in driving the Company's next stage of growth.

Mr Will has held a senior executive position with Anglo American as Head of Mining and Technical Services since September 2014, where he was responsible for assisting and improving all major mining and technical service contracts with the global miner.

Prior to that he was a Contract Consulting Mining Engineer with Northern Star Resources Limited, Vice President – Contract Mining Services, Global Supply Chain with AngloGold Ashanti and Executive Director for Metals X Limited. Prior to that, he spent nine years as Chief Mining Engineer with the WA nickel miner Mincor Resources and also spent a number of years working for Homestake Mining both in the USA and Australia.

Ms Mansoori was until recently Mining Manager at the Nullagine Project, where she assisted in turning around the performance of the open pit mining operations over the past two years. Prior to joining Millennium, she was Mine Superintendent/Quarry Manager at Atlas Iron's Mt Webber and Mt Dove operations, Senior Mining Engineer at Catalpa Resources' Edna May Operations and held a range of senior roles within Newmont Mining Corporation in Australia.

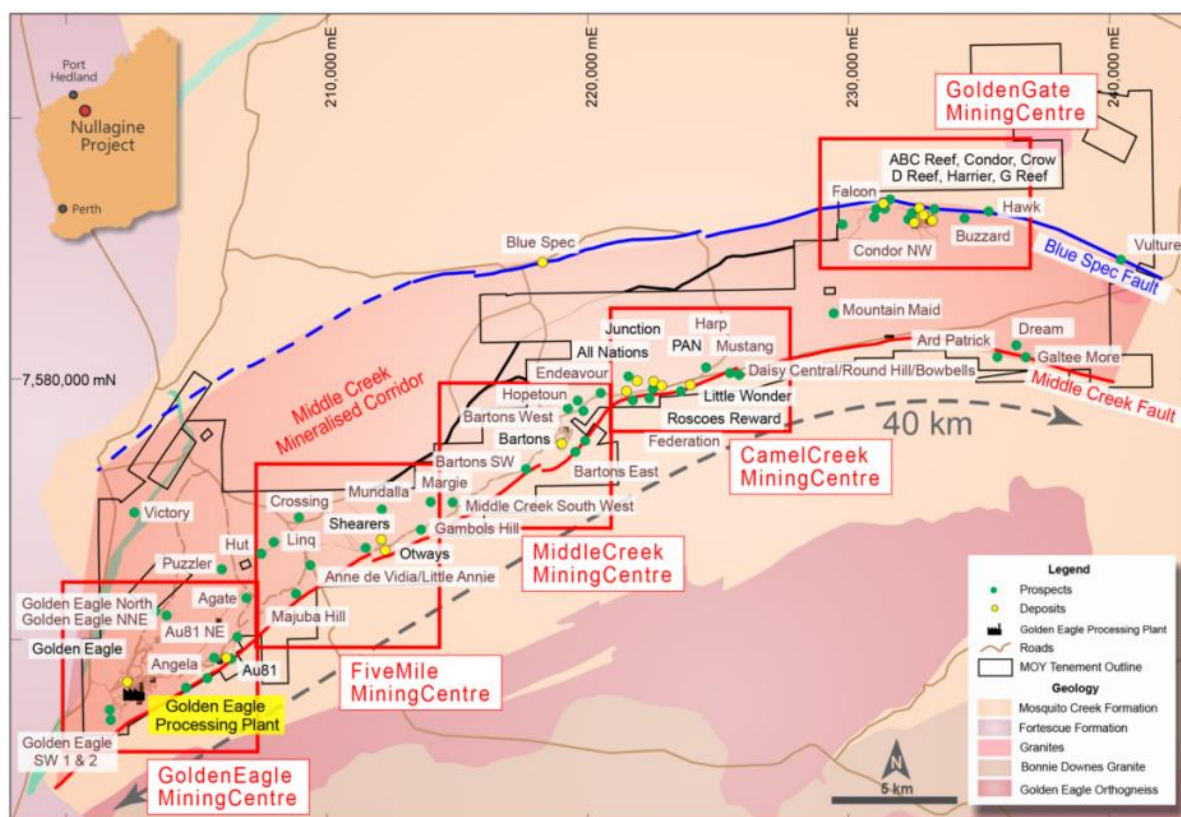


Figure 1: Nullagine Gold Project Location Plan

Corporate Activities

As at 30 June 2017, the Company held cash and bullion totaling \$27.7 million and remains debt-free.

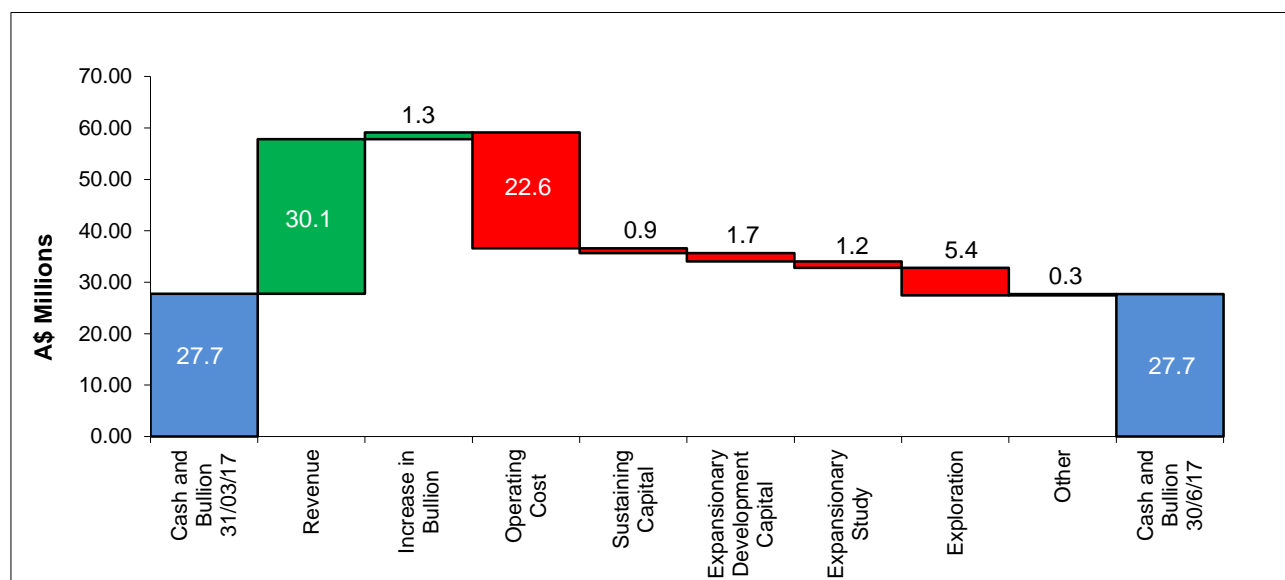


The Company generated \$7.6 million free cash flow for the Quarter before expenditure of \$5.4 million on exploration drilling, \$1.2 million on expansion studies and \$2.6 million on capital, including the camp upgrade to support expansionary activities.

Gold sales revenue for the Quarter totaled \$30.1 million, which was achieved at an average realised gold price of \$1,658/oz, consisting of 4,100oz sold at an average spot price of \$1,671/oz and 14,044oz delivered into the Company's hedge facility at an average price of \$1,654/oz. Bullion increased during the period by \$1.3 million to \$3.9 million.

At 30 June 2017, the Company's hedge book consisted of 24,000oz to be delivered by 29 June 2018 at an average forward gold price of \$1,662/oz with 18,000oz to be delivered prior to year-end.

Figure 2 – June 2017 quarter cash and bullion movements



Forward Guidance

Millennium had previously advised that guidance for the year ended 31 December 2017 was expected to be 80,000 – 85,000oz at an AISC of \$1,190 – \$1,230/oz. As a consequence of the factors previously notified which impacted operations during both the March and June Quarters, production for the six month period has been 6,500oz less than Guidance.

Given the recent success of exploration drilling, the Company has decided to fast-track a cut-back at the Bartons pit, as well as expedite mining at the higher grade Roscoes Reward and Majuba Hill deposits. This has resulted in a revised mining schedule which is expected to underpin the following production profile for the remainder of the year:

| | September Qtr | December Qtr | Revised 6 mth mine plan | Revised 12 mth mine plan |
|-----------------------|---------------|--------------|-------------------------|--------------------------|
| Production (oz) | 15,997 | 26,642 | 42,639 | 78,165 |
| C1 cash cost (A\$/oz) | 1,326 | 953 | 1,093 | 1,150 |
| AISC (A\$/oz) | 1,547 | 1,280 | 1,380 | 1,378 |

Variances in unit costs for the September Quarter compared with the December Quarter are expected due to the lower forecast head grade of 1.15g/t for the current quarter against 1.87g/t for the December Quarter and the large cut-back at Bartons, which has a forecast stripping cost of ~\$7.4 million, most of which is expected to be incurred during the September Quarter.



Millennium continues to commit significant capital investment to the Nullagine Project aimed at increasing its annualised production profile as well as extending mine life. During the September Quarter, the Company will undertake the following capital investments:

1. Additional maintenance on the processing plant in preparation for treating higher grade, fresh ores from the Bartons and Majuba Hill deposits;
2. The cut-back at Bartons, which has a forecast stripping cost of ~\$7.4 million, the majority of which is expected to be incurred during the September Quarter;
3. Infrastructure and expansionary capital of \$3.3 million (TSF and completion of camp expansion); and
4. Exploration activities and expansionary studies aimed at increasing the mine life at Nullagine, which will account for a total of \$7.7 million.

Millennium estimates that cash and bullion at 30 September is likely to be ~\$15.5 million; however, following the increased production expected in the December Quarter, this is forecast to increase to \$24 million by year-end.

Metallurgical Test work and Expansionary Study

The ongoing expansion study is aimed at unlocking the full economic potential of Nullagine Gold Project by 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 the 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.

Metallurgical test work completed to date on fresh ore has returned recoveries of up to 90% using either the existing CIL process or standard industry flotation techniques.

This means that a significant portion of the 850,000oz fresh ore Resource at Nullagine could be economic to process, thereby adding many years to the project's life, as well as potentially increasing production.

A preliminary study on the processing solution for these extensive fresh ore Resources at Nullagine is nearing completion with a full update to be provided during the first week of August.

Exploration Activities

During the Quarter, Millennium continued to generate outstanding drilling results across multiple deposits at Nullagine (**Figure 1**) as part of its ongoing strategy of delineating new prospects as well as progressing recent discoveries towards inclusion in its mineral inventory.

Highlights of activities carried out during the Quarter are provided below.

Bartons

Metallurgical results released on 4 May 2017 confirm that fresh ore from the Bartons deposit is free-milling and can be processed through the Company's existing CIL plant at Nullagine. This has led to a re-optimisation of the existing resource which has demonstrated that substantial additional ounces can be accessed via a cut-back (**Figure 3**).



In addition, further deeper drilling below the south-west end of the pit has intersected high grade gold mineralisation, including the following:

- **16m @ 5.91g/t Au** from 115m incl. **2m @ 31.95g/t Au** (BARD0104A)
- **8m @ 9.13g/t Au** from 118m incl. **3m @ 22.41g/t Au** (BARD0120)
- **8m @ 11.56g/t Au** from 87m incl. **3m @ 29.63g/t Au** (BARD0134)
- **6m @ 12.69g/t Au** from 115m incl. **2m @ 32.42g/t Au** (BARD0130)
- **4m @ 18.60g/t Au** from 65m incl. **2m @ 36.19g/t Au** (BARD0082)

In light of these results, Millennium carried out further drilling at Bartons to extend the known mineralisation and upgrade it into JORC Resource classification. Additional high grade results received to date clearly demonstrate that significant gold mineralisation extends further to the south-west from the current interpreted position of the main ore shoot with the most significant intersections including:

- **15m @ 8.26g/t Au** from 103m incl. **6m @ 19.53g/t Au** (BARD0221)
- **18m @ 2.98g/t Au** from 114m incl. **1m @ 18.15g/t Au** (BARD0213)
- **8m @ 5.48g/t Au** from 110m incl. **2m @ 14.90g/t Au** (BARD0214)
- **34m @ 1.68g/t Au** from 118m incl. **2m @ 7.37g/t Au** (BARD0216)
- **8m @ 3.14g/t Au** from 112m incl. **1m @ 13.50g/t Au** (BARD0219)

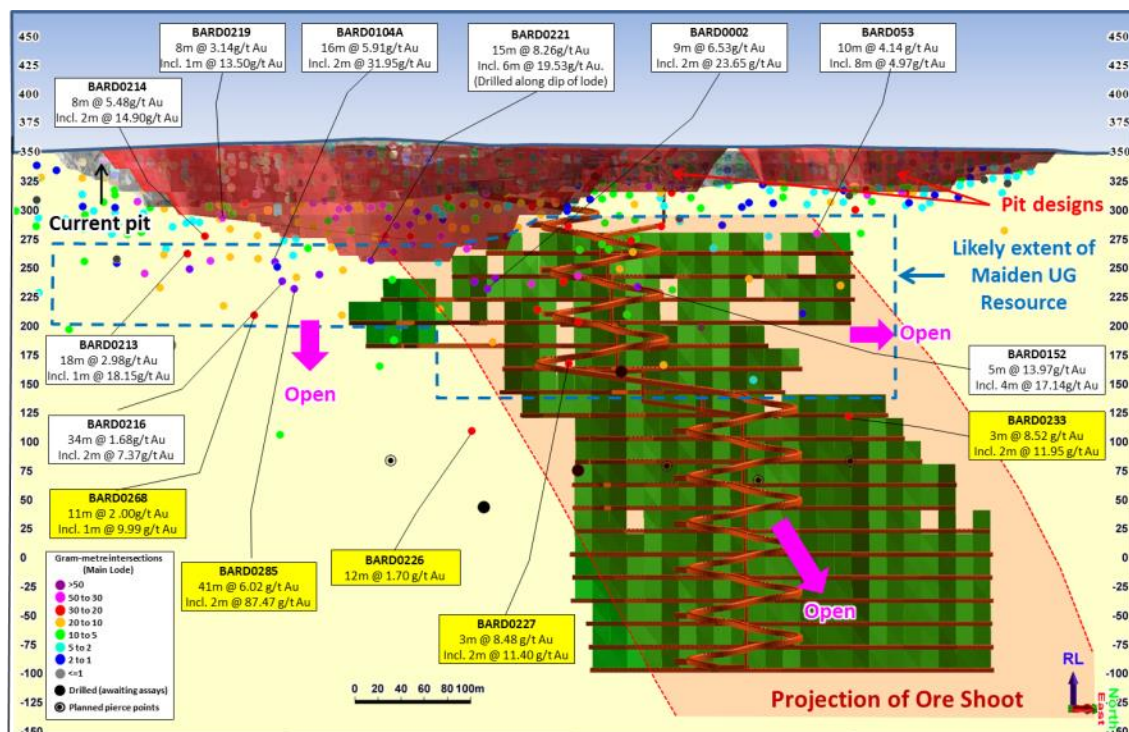


Figure 3: Bartons drilling pierce points, cut-back, and conceptual underground mine design

Subsequent to Quarter-end, the Company announced further significant high-grade results from ongoing drilling below the Bartons pit, as follows:

- **41m @ 6.02g/t Au** from 129m incl. **2m @ 87.47g/t Au with 1m @ 167g/t** (BARD0285)
- **3m @ 8.48g/t Au** from 213m incl. **2m @ 11.40g/t Au** (BARD0227)
- **3m @ 8.52g/t Au** from 270m incl. **2m @ 11.95g/t Au** (BARD0233)



- **7m @ 3.28g/t Au** from 138m incl. **1m @ 8.18g/t Au** (BARD0284)
- **11m @ 2.00g/t Au** from 158m incl. **1m @ 9.99g/t Au** (BARD0268)

Entech Mining has commenced an assessment of the viability of underground operations at Bartons with conceptual underground development and stope design constructed on the interpreted high grade down-plunge extension (**Figure 3**).

An expanded drill program is continuing to delineate the full strike extent of the high grade mineralisation, as well as to test the down-plunge continuity of the deposit at depth. Additional drilling results are expected in the coming weeks.

The Company also expects to announce its first-ever underground Mineral Resource for Bartons shortly and, with the cut-back on the existing oxide pit now already underway, this deposit will become an important part of the Company's mine schedule over the coming months.

Majuba Hill

Majuba Hill is located within the Five-Mile Mining Centre, approximately 10km from the processing plant (**Figure 1**). Mineralisation occurs on both north-east and north-north-east trending quartz veins dipping to the north-west.

Results returned from recent resource definition drilling have confirmed the continuity and the high grade tenor mineralisation at Majuba Hill. This has resulted in a larger pit design than initially anticipated and is expected to yield ~14,000oz at 1.91 g/t Au.

The mining schedule has now been amended to fast-track development of Majuba Hill with mining expected to commence in early August.

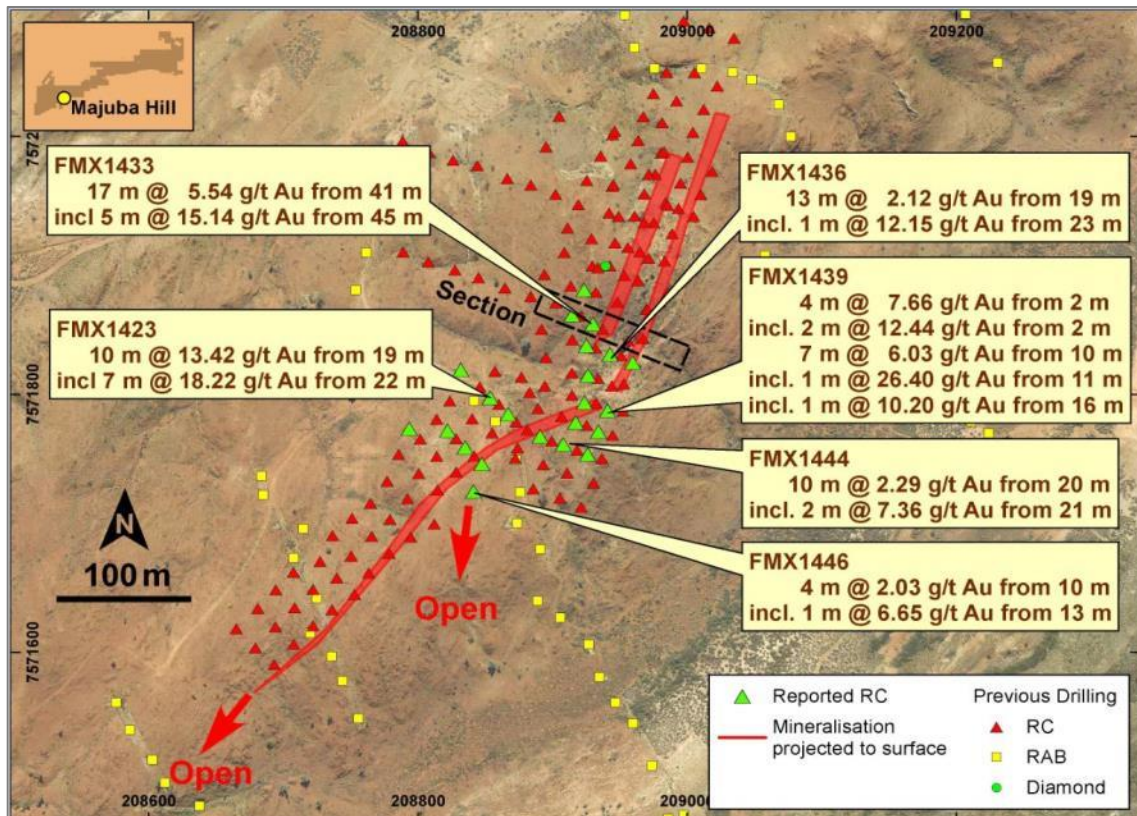


Figure 4: Majuba Hill location plan showing significant intercepts from RC drilling

Encouragingly, high grade mineralisation is open at depth and drilling programs are being planned to test for potential depth extensions amenable to future underground mining operations.



Results received from drilling completed during the Quarter include (**Figures 4 and 5**):

- **10m @ 13.42 g/t Au** from 19m incl. **7m @ 18.22 g/t Au** (FMX1423)
- **17m @ 5.54 g/t Au** from 41m incl. **5m @ 15.14 g/t Au** (FMX 1433)
- **4m @ 12.44 g/t Au** from 56m incl. **1m @ 48.20 g/t Au** (FMX1450)
- **7m @ 6.03 g/t Au** from 10m incl. **1m @ 26.40 g/t Au** (FMX1439)

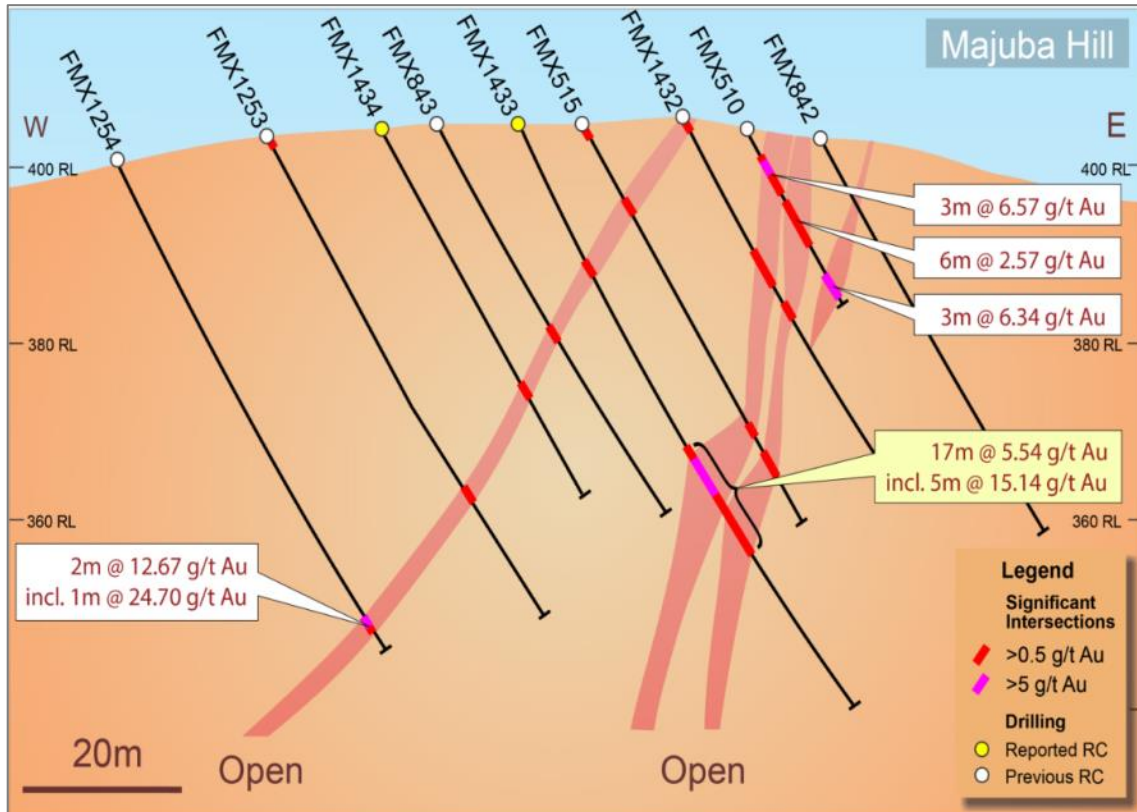


Figure 5: Section illustrates (location noted in Figure 6) results from the Majuba Hill prospect

Condor North-west

The Condor Northwest Project is located within the Golden Gate Mining Centre, approximately 36km from the processing plant (**Figure 1**). Initial drill results returned from this project were reported to the ASX on 25 January 2017.

Follow-up drilling was carried out to in-fill the previously intersected mineralisation and close-off the mineralisation to the north-west and south-east, (**Figure 4**). In addition, the proposed drilling tested for parallel veins in between those already defined. Significant intersections from follow-up drilling include (**Figure 6**):

- **10m @ 14.52g/t Au** from 9m incl. **5m @ 26.61g/t Au** (CORD049)
- **7m @ 11.14g/t Au** from 28m incl. **4m @ 18.33g/t Au** (CORD050)
- **3m @ 25.16g/t Au** from 18m incl. **1m @ 73.1g/t Au** (CORD072)
- **8m @ 5.48 g/t Au** from 59 m incl. **2m @ 7.37 g/t Au** (CORD041)

These results confirm the continuity of the near-surface mineralisation, and that mineralisation is open at depth. Additional drilling to follow-up these highly encouraging results will commence during the September Quarter.

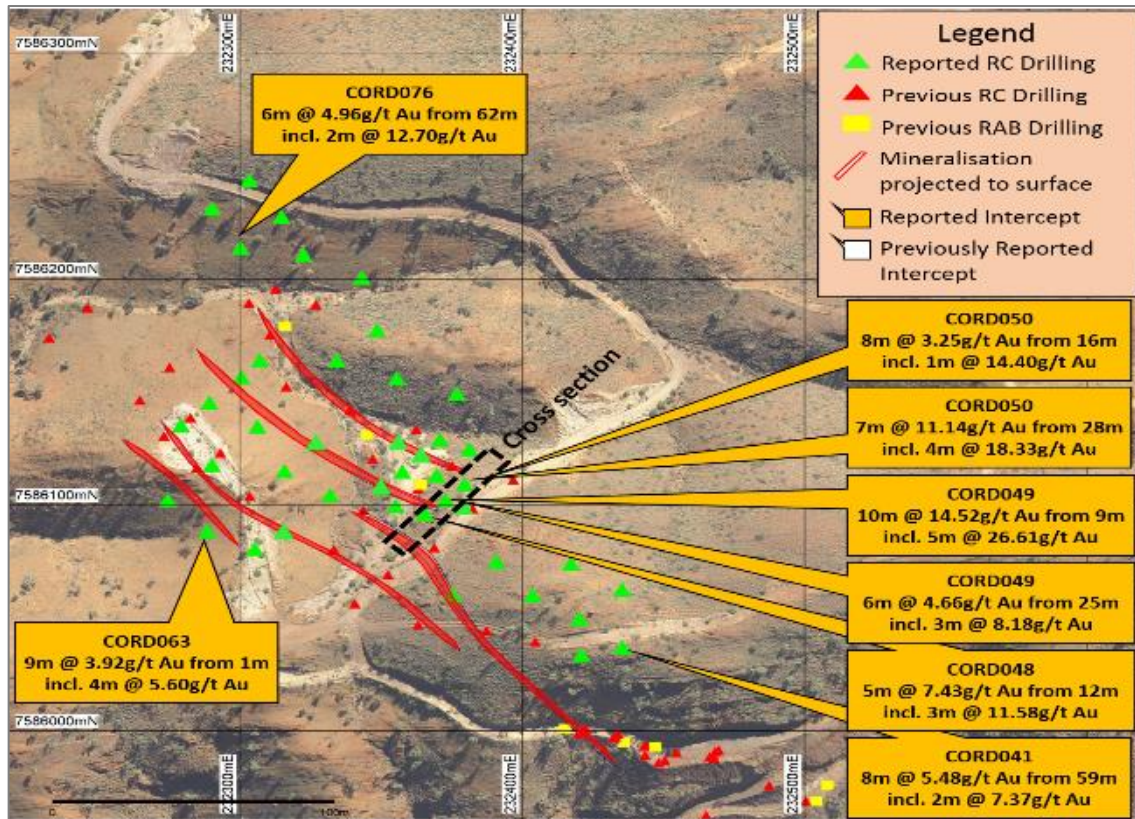


Figure 6: Condor Northwest location plan showing significant intercepts from RC drilling

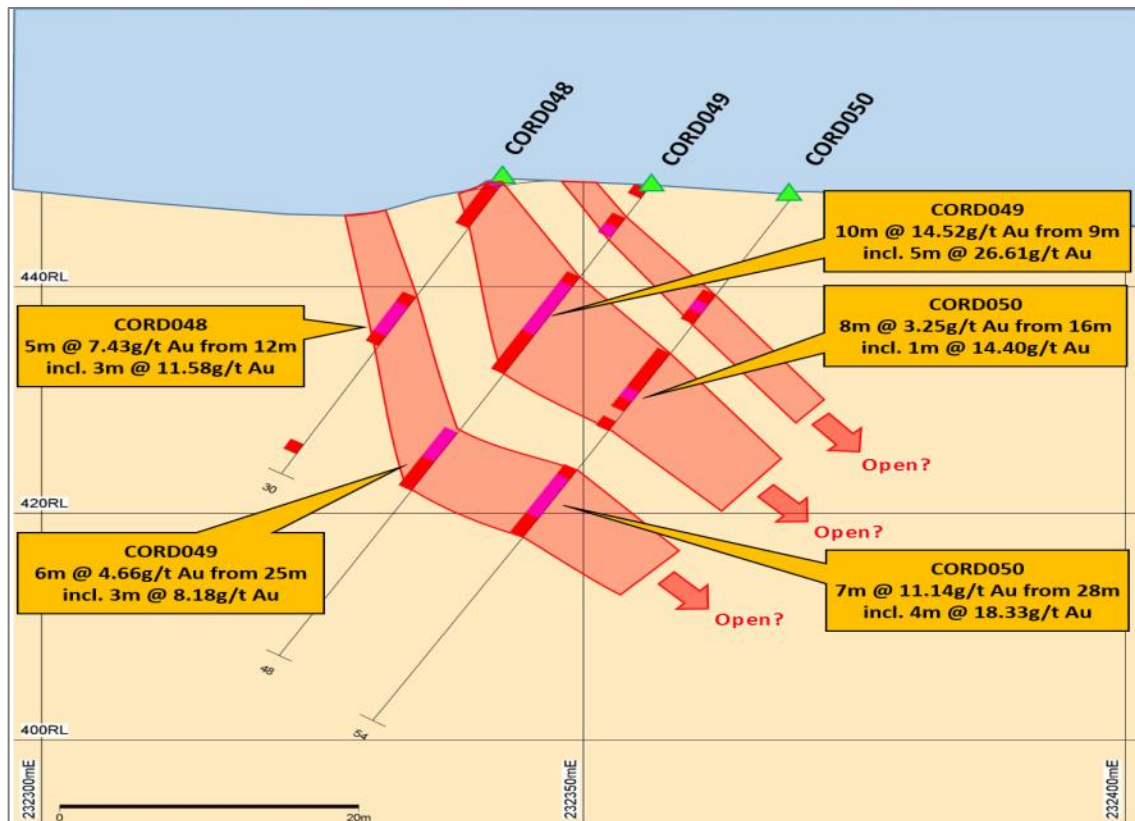


Figure 7: Section illustrates results from the Condor Northwest prospect (location noted in Figure 4)



Billjim South

Following on from an initial RC drilling programme in November 2016, a further programme of in-fill and extensional drilling has been completed at Billjim South which returned the following significant intercepts (**Figure 8**):

- **20m @ 5.64 g/t Au** from 6m incl. **13m @ 7.58 g/t Au** (BJSRD043)
- **7m @ 14.86 g/t Au** from 4m incl. **3m @ 31.57 g/t Au** (BJSRD0035)
- **4m @ 12.51 g/t Au** from 13m incl. **2m @ 23.43 g/t Au** (BJSRD044)
- **4m @ 7.08 g/t Au** from 5 m incl. **3m @ 8.98 g/t Au** (BJSRD0039)

Further work continues on the geological interpretation of the Billjim South project.

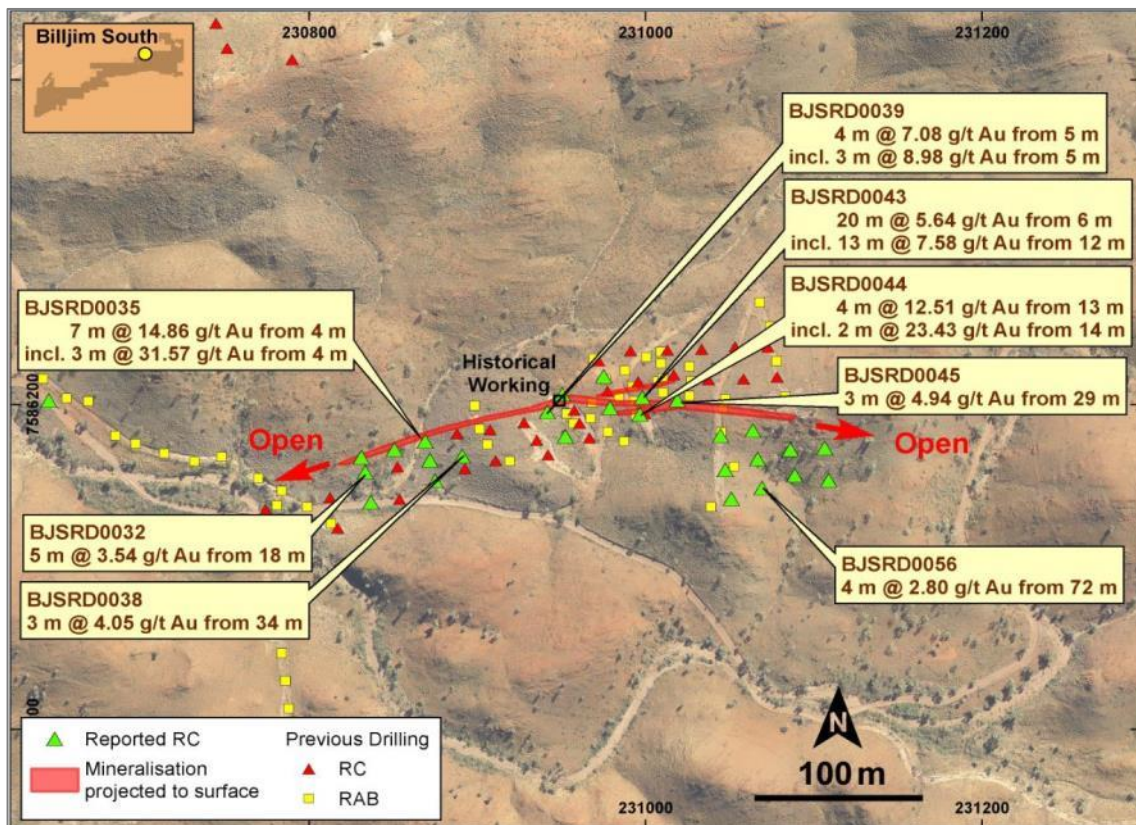


Figure 8: Billjim South location plan showing significant intercepts from recent RC drilling

Buzzard

Mineralisation at Buzzard is associated with two parallel north-west striking and steeply north-east dipping veins. Both these veins outcrop discontinuously over a strike length of ~250m. A drill programme was designed to follow up on mineralisation that was defined in previous drill holes (**Figure 9**). The most significant intersections returned include (**Figure 10**):

- **5m @ 5.02 g/t Au** from 19m incl. **2m @ 9.64 g/t Au** (BURD010)
- **7m @ 3.70 g/t Au** from 30m incl. **3m @ 5.67 g/t Au** (BURD013)
- **3m @ 8.29 g/t Au** from 49 m incl. **1 m @ 21.50 g/t Au** (BURD017)
- **5m @ 3.57 g/t Au** from 40m incl. **2m @ 6.42 g/t Au** (BURD013)

Given the mineralisation is open along strike and at depth and the strength of the results received to date, planning has already commenced for follow-up drilling programs.

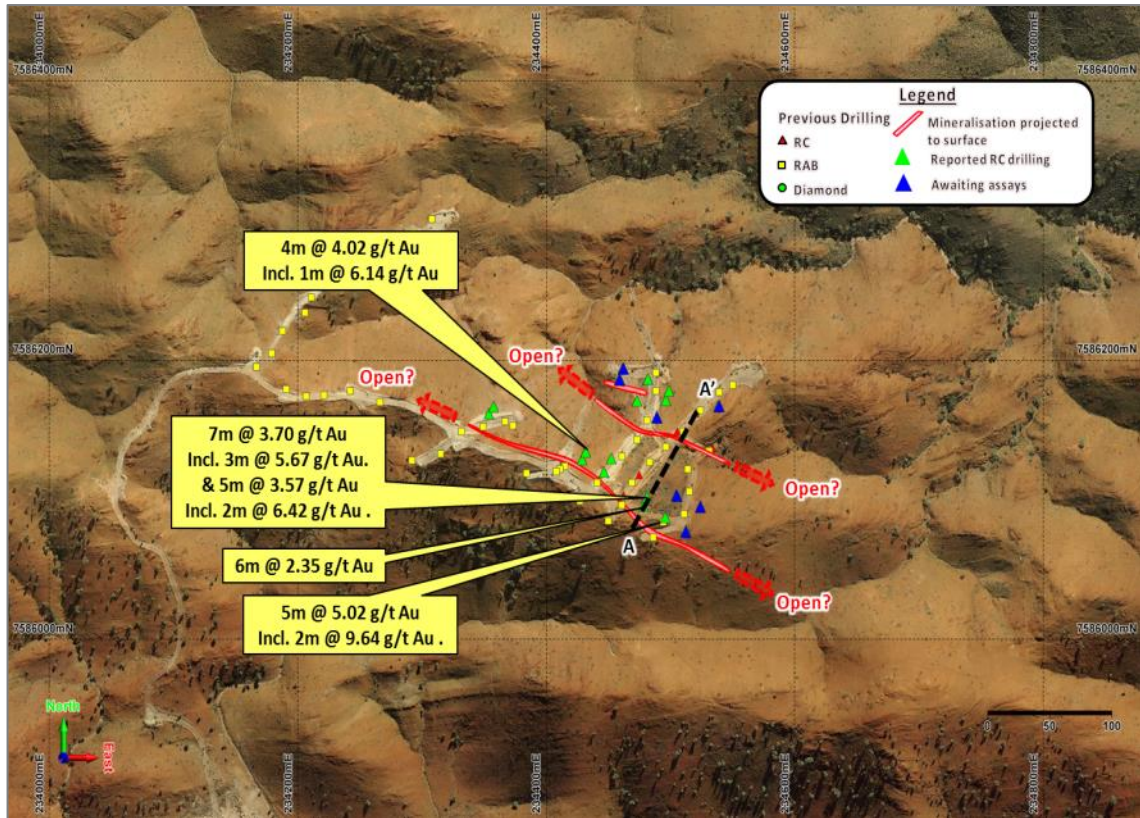


Figure 9: Buzzard location plan showing significant intercepts from RC drilling

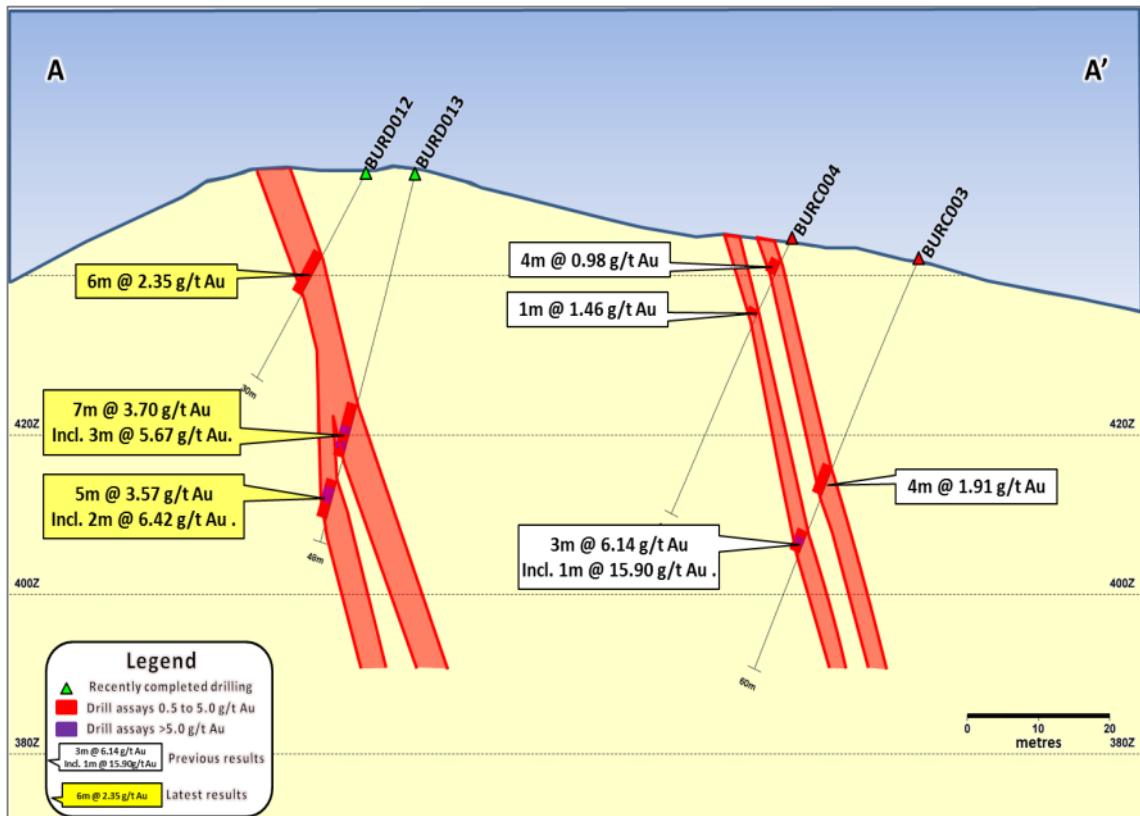


Figure 10: Section illustrates (location noted in Figure 10) results from the Buzzard prospect



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. Outstanding Drill Results continue to lay foundations for growth in mine life at Nullagine dated 26 April 2017;*
- 2. Millennium hits extensive mineralisation of up to 36g/t below Bartons deposit dated 11 May 2017; and*
- 3. Millennium on track to develop its first underground mine following more strong results dated 3 July 2017; and*
- 4. Millennium hits 41m at 6g/t including 2m at 87g/t in latest drilling at Bartons dated 24 July 2017,*

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 poured 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 construction of the new tailings dam and camp expansion, or 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 and accounting adjustments for movements in stockpiles, gold in circuit and waste stripping. It does not include capital expenditure, exploration, tenement management, royalties and corporate administration costs.*
- ³ *Lower recovery, but higher grade due to exploiting the transition / fresh material within the Golden Eagle pit.*

Unless otherwise denoted all currency units are Australian dollars.

All data provided is unaudited.