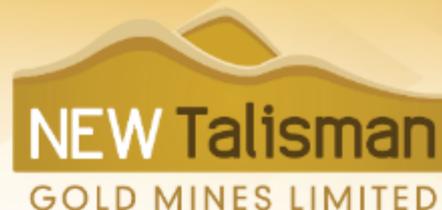


# Market Announcement

## For Immediate Release



### Quarterly Activities Report to 30 June 2019

New Talisman Gold Mines Limited

**Responsible,  
Environmentally  
Sustainable Mining**

ASX/NZX Code **NTL**

**Commodity Exposure**  
GOLD and SILVER

#### Board and Management

**Charbel Nader** Chairman/Independent Director  
**Matthew Hill** Chief Executive/ Managing Director  
**Murray Stevens** Non-Executive Director  
**Tony Haworth** Independent Director  
**Jane Bell** Company Secretary  
**Wayne Chowles** Chief Operating Officer

**Capital Structure**  
Ordinary Shares at 31/10/2019 2,692m

**Share Price**  
Share Price at 31/10//2019 (NZX) 0.9cps  
Share Price at 31/10//2019 (ASX) 0.8cps



#### New Talisman Gold Mines Limited

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Phone +64 27 5557737  
Website [www.newtalisman.co.nz](http://www.newtalisman.co.nz)  
Email [info@newtalisman.co.nz](mailto:info@newtalisman.co.nz)

## QUARTER HIGHLIGHTS

- Phase 1 Metallurgical testwork complete
- Positive results from gravity circuit
- Successful capital raise of 3.6M
- First gold and concentrate produced from pilot plant
- Terra Firma proposal under review

Following commissioning of the pilot processing plant in the June quarter, the Company focused resources on testing the plant in an attempt to reproduce the results achieved in preliminary tests conducted offshore. The ability to replicate the results, as was outlined at the recent AGM, is of primary importance to the consent, design and commissioning of a gold processing plant capable of processing the mines planned output.

The Company is pleased to announce that the results of this phase 1 testwork have been successful and have provided the confidence to proceed with the design and preliminary procurement stage of a commercial plant.

#### Key results

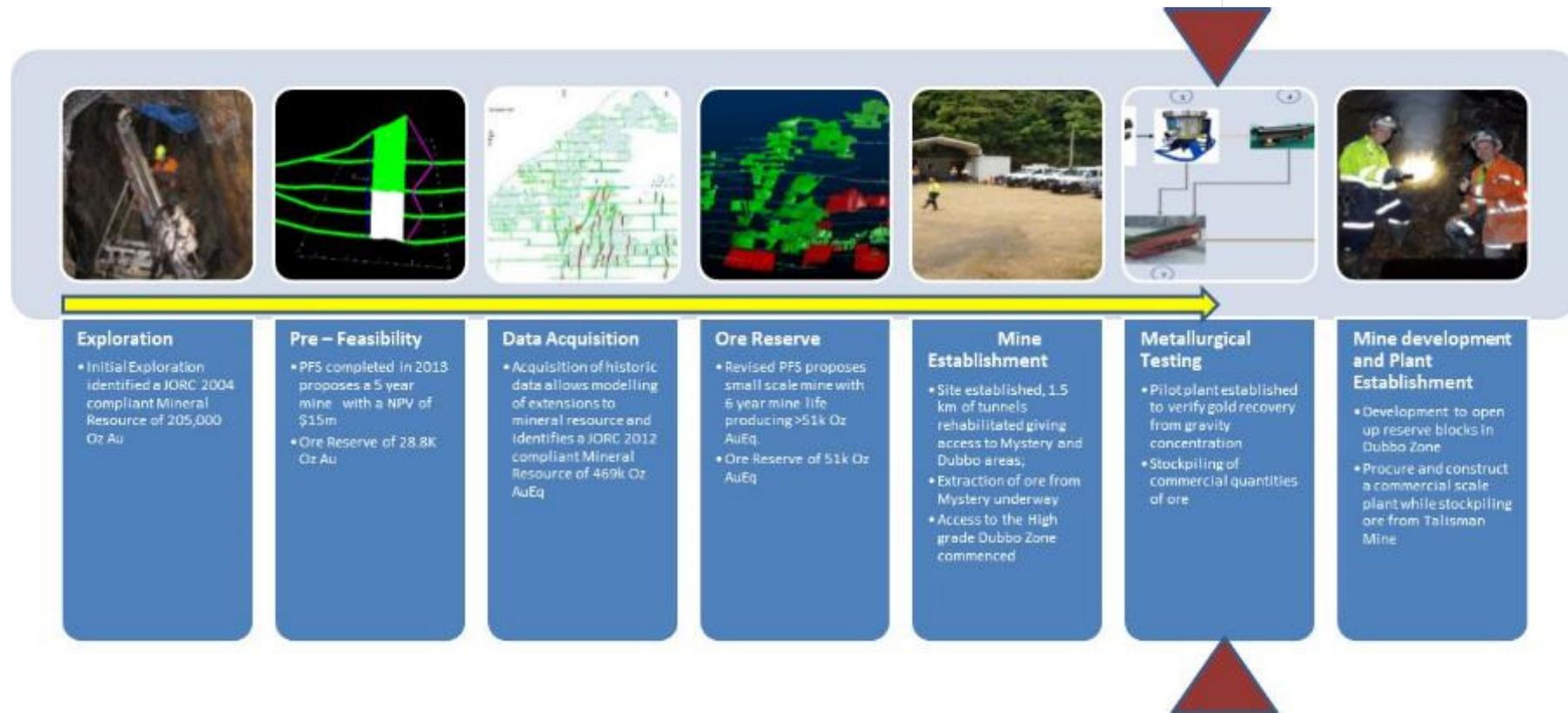
- On average 64% of the gold and 38% of the silver is recovered into 15% of the ore i.e. each tonne of ore treated yields 150kg of primary concentrate;
- The average feed grade for Maria Ore was 10.05 g/t and for the Mystery Vein 9.61g/t both measured through sampling of mill output;
- A primary concentrate grade of 41.5g/t was achieved for the Maria vein and 40.7g/t for the Mystery Vein;
- There was no significant difference in recovery between the two ore types;

The effectiveness of further processing concentrate over the shaker table was quantified through the treatment of approximately 40kg of primary concentrate in two batches which yielded 650g and 600g of secondary concentrate at grades of 989g/t gold and 4,120g/t silver, and 876g/t gold and 2800 g/t silver respectively. Approximately 1.8kg of this concentrate has been produced to date.



**TALISMAN MINE PROJECT**

The Diagram below shows the stages of development and evolution the mine has taken since Heritage commenced exploration activities through to mine development and planning.



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### Metallurgical Testwork Pilot Plant

Following grant of resource consent in early July commissioning of the plant was completed and processing of the high-grade samples taken from the Talisman Mine commenced early in the September quarter.

The pilot plant comprises scaled-down processing units (jaw crusher, rod mill, centrifuge, shaker table) that replicate the operations of a commercial plant to the same design as was used in metallurgical testwork carried out in South Africa, which uses the effect of gravity to separate gold and other metals from the host rock resulting in a metal concentrate, which can be treated further or sold directly, and inert tailings that can be disposed of in a number of ways without any environmental consequences. It is likely that these tailings will have a commercial value through use in industrial applications which will contribute towards the overall value of the project while at the same time relieving the company of the cost of disposal.

The process schematic is shown below.

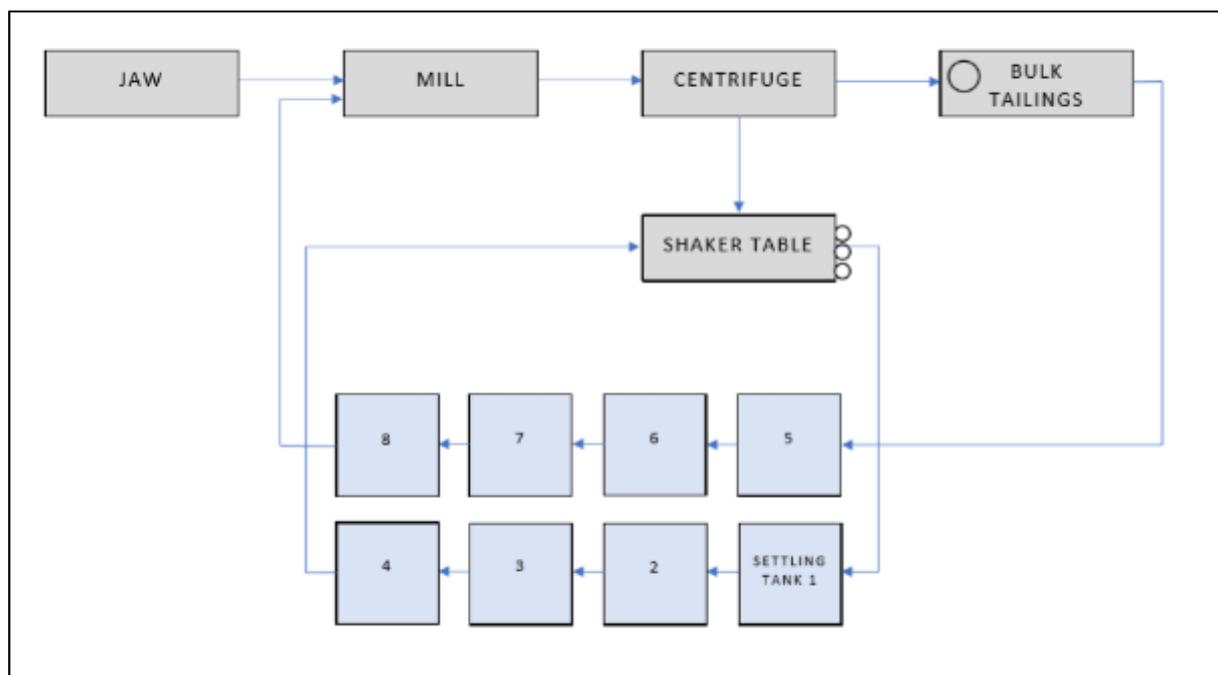


Figure 1: Process flow diagram

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Figure 2: Photographs of the mill and shaker table

The process for separating the metals is as follows:

- 1) Ore is passed through the crusher which breaks it down to sub 10mm particle sizes;
- 2) The crushed ore is passed through the rod mill where steel rods in a rotating drum break it down further to sub 150-micron sizes;
- 3) The ground ore is passed through a 150 micron screen before entering the centrifuge which rotates at between 25,000 and 50,000 rpm and uses the gravitational forces generated by that rotation to trap the heavier metallic elements into a primary concentrate while discharging the lighter clay and silica particles to waste;
- 4) The primary concentrate is passed over the shaker table which uses the effect of differing specific gravity to further separate metals from host minerals resulting in a cleaner secondary concentrate.

#### **Testwork Results**

Phase 1 of the testwork is now complete and promising results have been obtained, these are discussed in subsequent sections.

#### **Grind size**

A particle size analysis of samples taken of ore exiting the mill was carried out by SGS analytical laboratories. The results of these tests confirm that the mill is effective at achieving the desired grind

size with 98% of the ore less than 100µm and 96.1% less than 75µm.

Previous testwork has indicated that a grind size of 106 µm is sufficient to liberate the electrum (gold/silver alloy) from host rock.

### **Primary Recovery**

In order to quantify the effectiveness of gold recovery into the primary concentrate a total of nine test batches were run, six on ore sourced from the Dubbo Zone and three from Mystery. The results are as follows:

- On average 64% of the gold and 38% of the silver is recovered into 15% of the ore i.e. each tonne of ore treated yields 150kg of concentrate;
- The average feed grade for Maria Ore was 10.05 g/t and for the Mystery Vein 9.61g/t both measured through sampling of mill output;
- Concentrate grade of 41.5g/t was achieved for the Maria vein and 40.7g/t for the Mystery Vein;
- There was no significant difference in recovery between the two ore types;
- There was considerable variance between batches, with gold recovery ranging between 48% and 79% for Maria ore, and between 56% and 78% for Mystery ore. There is no relationship between feed grade and recovery, so this variance is attributable to the presence of coarse gold.

The results prove that the process is capable of producing a concentrate that can be sold directly to a third-party operator.

### **Secondary Concentrate**

The effectiveness of further processing concentrate over the shaker table was quantified through the treatment of approximately 40kg of primary concentrate in two batches which yielded 650g and 600g of secondary concentrate at grades of 989g/t gold and 4,120g/t silver, and 876g/t gold and 2800 g/t silver respectively. High levels of other metals such as iron, copper and zinc are reported in the concentrate. Approximately 1.2kg of this concentrate has been produced to date.

While there is significant opportunity to improve on the above results through varying of grind size etc. the results have provided the company with sufficient confidence in the process to proceed with the design and costing of a larger facility to cater for the needs of the project.

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### Underground operations

Detailed design and costing of the short decline from BM35 crosscut to access the Dubbo shoot approximately 7m below number 8 level is well under way. The decline, which will be developed on vein where possible, aims to intersect the high-grade ore block which is estimated to average more than an ounce of gold per tonne. The Block is in the area intersected by borehole TM002, drilled by NTL in 2004, which averaged 85g/t and 117g/t Ag over a 1.0m intersection on the Maria vein( please see <https://www.asx.com.au/asxpdf/20170712/pdf/43kl6294htcscp.pdf> for further details). Bullion generated from construction of this decline will contribute towards the cost of development and provide meaningful data on the geology of the area.

The decline will then be extended downwards in 7m lifts progressively exposing more of the ore body for sampling and delineation of extractive blocks. The work completed during the bulk sampling phase creates a solid platform for the Company's full scale mine plans contemplated in the Prefeasibility Study.



Based on the current plan, at an average extraction rate of 300tpm, the company expects to be in a position to generate an approximated average of 360 gold equivalent ounces per month during the two-year bulk sampling programme.

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### **Mystery Vein**

Updating of the mineral resource estimate for the Mystery vein, compliant with JORC 2012 reporting standards, is progressing well. The estimate which will inform further development and exploration of this vein system which poses the most significant potential for mine expansion given the positive results achieved on proving the extension of high-grade gold and silver mineralization.

The Mystery Vein was discovered in the 1980's and sits approximately mid-way between the historically productive Maria and Crown vein systems. It is believed that this vein had not been identified previously because of its location on the boundary between the two historic mining permits, although there is evidence that the vein may have been encountered in the lower levels of the Talisman Mine. The vein has been exposed over a strike length of some 50m and regular sampling carried out by New Talisman (then called Heritage Gold) identified samples on the face of Mystery with grades of up to 50 g/t. Recent check sampling of ore exposed at the drive face yielded grades of up to 40 g/t Au (please see <https://www.asx.com.au/asxpdf/20180508/pdf/43tvlpmv420f4f.pdf>.)

The Mystery vein shows similar geological characteristics to the adjacent veins and follows a similar north south strike direction, suggesting that this may be the same vein system worked at the historic Rhoderick Dhu Mine which is located roughly mid-way between the Talisman and Crown Mines around 100m below the current exposure on No 8 Level. Current activities at the Talisman prioritize enhancing the Company's understanding of the full extent of the vein given its potential to be a major contributor to mine life. Once the first leg of the Dubbo decline is complete and extraction of high grade ore has been established, blasting will recommence at the Mystery Vein establishing a secondary feedstock for the bulk sampling project and beyond.



*Figure 3 - the face of the Mystery Drive showing the extension of the vein before sidewall waste is removed*

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### **Resource estimate**

The technical team have been busily completing the final data update from the data acquired known as Talisman Deeps. The work once complete will be independently reviewed and a final JORC 2012 compliant resource for the Talisman mine will be complete. It is expected to have this technical work complete by the end of the financial year.

### **Corporate**

#### **Capital Raising**

During the period the company completed the capital raising and placement of shortfall resulting in the most successful SPP on the NZX by a mining company this year raising a total of 3.6M , further demonstrating the attractiveness to investors of NZ's only listed underground gold mining company Following completion of the capital raising which was offered to investors at 0.65 cents (\$.0065) with shares trading at 0.009 currently shareholders who participated have been well rewarded.

#### **Annual Review**

During the quarter the company completed its annual review meeting with NZPAM. At that meeting the agreed work programme for the previous 12 months had been completed. Stakeholders who attended the meeting were most supportive of the progress made and compliance with the permit conditions confirmed.

The board would like to take this opportunity to congratulate our company secretary, Jane Bell, on her appointment of the board of the New Zealand Institute for Minerals to Materials Research

### **Looking Ahead**

- The company has aligned with a local company to investigate the possibility of deploying digital electro seismic mapping underground to identify possible extensions of the vein systems within the mine and to assist with the mapping of unknown excavations. If successful, this innovative approach will greatly assist with identifying exploration opportunities and aid mine planning.
- During the current quarter the company advanced discussions with Terra Firma Mining Limited who have put forward a formal term sheet for the development of a commercial scale gold plant. The initial Term Sheet set out the terms upon which Terra Firma would seek resource consent for and construct and operate a gold plant. With the completion of phase 1 testwork the parties now have sufficient data to set out the finer design details and commercial terms with Terra Firma can be finalised which is likely to be in a form capable of execution by mid-November.
- During the quarter the company received a formal expression of interest from a mining group seeking to explore the potential for operating the mine on NTLs behalf. The board is currently reviewing the proposition set out in the expression of interest.
- Work continues on the resource consent application for full mining. It is expected that this application will be lodged in the next quarter to allow sufficient time for processing to ensure continuity of the operation on completion of the bulk sampling programme.

- The detailed planning and design work for the decline development into the Dubbo area is progressing well and will be completed over the next quarter.
- The company has received notification from the Department of Conservation that access to the Rahu permit area would be unable to be granted due to treaty settlement discussions. This was a matter discussed with NZPAM at the annual review and an alternative work program will be proposed given that treaty settlement issues do not allow the company to utilise the granted permit area which is the DOC area of the permit. The company will work with NZPAM and review the options for Rahu.

#### **Tenements Held**

Rahu Resources –EP90144 100% New Talisman

Talisman Mine – MP51326 100% New Talisman Gold Mines Limited

#### **About New Talisman Gold Mines Ltd**

New Talisman Gold is a dual listed (NZSX & ASX: NTL) with over 2250 shareholders who are mainly from Australia and New Zealand and has been listed since 1986. It is a leading New Zealand minerals development and exploration company with a mining permit encompassing the Talisman mine, one of New Zealand's historically most productive gold mines. The company has commenced prospecting and upgrading activities at the mine and advance the exploration project to increase its considerable global exploration target into JORC 2012 resources.

Its gold properties near Paeroa in the Hauraki District of New Zealand are a granted mining permit, including one of New Zealand's highest-grade underground gold mines, a JORC 2012 compliant mineral resource of over 469,000 ounces AuEq at an average above 15 g/t AuEq and a JORC compliant reserve statement. The Company owns 100% of the Rahu exploration permit, which lies along strike from the Talisman mine of which 80% was recently acquired from Newcrest Mining. The company will shortly commence exploration activities at Rahu.

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