

# Market Announcement

## For Immediate Release

**NEW Talisman**  
GOLD MINES LIMITED

### 2020 Mineral Resource Estimate

New Talisman Gold Mines  
Limited

**Responsible,  
Environmentally  
Sustainable Mining**

ASX/NZX Code **NTL**

**Commodity Exposure**  
GOLD and SILVER

#### Board

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

**Capital Structure**  
Ordinary Shares at 23/06/2020 2,692m

**Share Price**  
Share Price at 23/06/2020 (NZX) 0.7cps  
Share Price at 23/06/2020 (ASX) 0.7cps



#### New Talisman Gold Mines Limited

ACN  
Address 541 Parnell Rd, Parnell,  
Auckland  
Phone +64 27 5557737  
Website [www.newtalisman.co.nz](http://www.newtalisman.co.nz)  
Email [info@newtalisman.co.nz](mailto:info@newtalisman.co.nz)

### ***HIGHLIGHTS***

- Updated Minerals Resource estimate complete
- Peer review of 2017 MRE and best practice recommendations adopted
- Peer review of 2019 MRE complete confirming JORC 2012 compliance
- Resulting resource places the Talisman Mine amongst the highest grade JORC 2012 compliant resources in the World

The Board of New Talisman Gold Mines Limited, (NTL) is delighted to announce the results of the latest Mineral Resource Estimate, (MRE) for the Company's 100% owned asset, the Talisman Mine. Additionally, the resulting review of the 2019 MRE by a world class independent expert has now been completed and the results outlined in this report.

Following completion of the 2017 MRE which increased the Talisman resource from a previous estimate in 2004 of 920,000t at an equivalent bullion grade of 7.8 g/t Au to 950,000t at 15 g/t equivalent bullion grade, an overall increase of 240,000 equivalent bullion oz, the company undertook to update the mineral resource estimate for the Maria and Mystery veins as new information became available. The update included all the previous resource areas with the exception of the Crown resource which remains at 31,000 equivalent bullion ounces.

This update includes all geochemical and geotechnical data and incorporates new survey data gathered by the Company during the reopening of the mine's No 8 level. It incorporates several recommendations made by GEOS Mining during their independent review of the 2017 MRE as well as those recommendations made by AMC following their review of the 2017 MRE also being adopted in the update undertaken in 2019.

Potential extensions to the current resources have also been identified within the main quartz vein host structures and proximal veins. These are in the process of being prioritized with the focus on those areas that can, with additional cost effective exploration, be developed into viable exploration targets and upgraded to an appropriate resource category under JORC 2012.

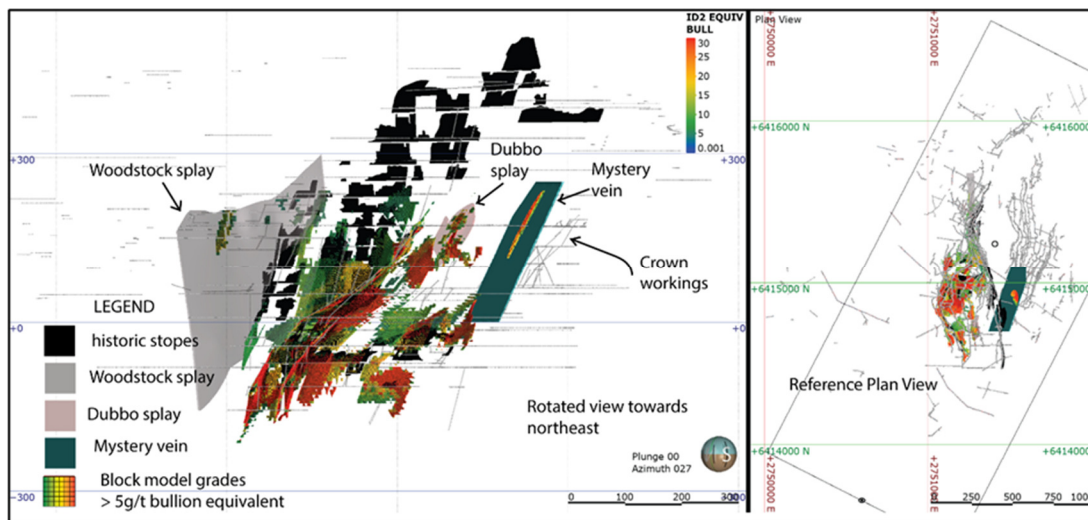
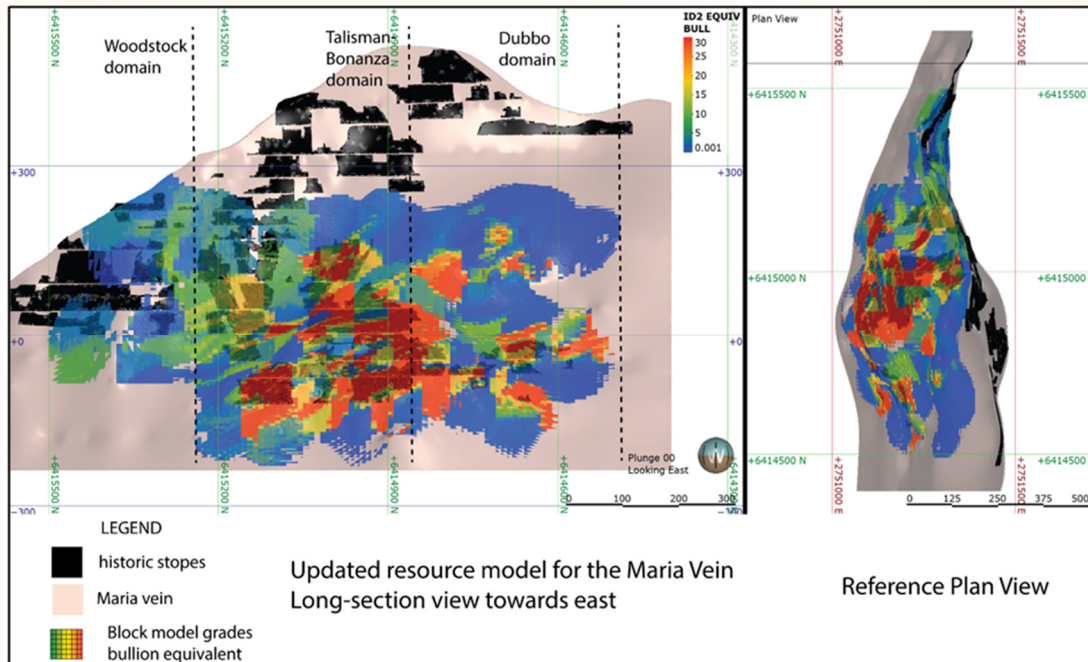
The resource update, report and data were submitted for independent peer review by Mr. Peter Stoker of AMC Consultants (Pty) Ltd. AMC are an internationally recognised consultancy. Mr. Stoker is past Chairman, and current Deputy Chairman, of the Joint Ore Reserves Committee (JORC) and is regarded as a world leading authority on the reporting of mineral resources.

AMC initially recommended alternative estimation techniques that it believed would further enhance the quality of the estimate. NTL adopted these recommendations and produced a second estimate for comparison. There was no material difference between the two estimates and AMC concluded that the first updated estimate was acceptable and suitable for public reporting by NTL. The results of the estimate are presented in the following table and the areas referred to shown in the accompanying diagrams.

Resource Category	Ore Zone/Vein	Tonnes	Grade g/t	Ounces Bullion equivalent
Indicated	Talisman Bonanza	29,000	4.3	4,100
Indicated	Dubbo	15,000	9.0	4,400
Indicated	Dubbo splay	4,300	19.0	2,600
Indicated	Woodstock	35,000	5.1	5,600
Indicated	Woodstock splay	22,000	5.1	3,600
<b>Total Indicated</b>		<b>110,000</b>	<b>6.0</b>	<b>20,000</b>
Inferred	Talisman-Bonanza	300,000	19.0	190,000
Inferred	Dubbo	150,000	23.0	110,000
Inferred	Dubbo splay	560	14.0	250
Inferred	Woodstock	62,000	5.6	11,000
Inferred	Woodstock splay	20,000	4.7	2,900
Inferred	Mystery	14,000	25.0	11,000
<b>Total Inferred</b>		<b>550,000</b>	<b>19.0</b>	<b>330,000</b>
<b>Total Resources (* Crown excluded)</b>		<b>660,000</b>	<b>17.0</b>	<b>350,000</b>
<b>*including 2004 Crown Resource</b>		<b>810,000</b>	<b>15.0</b>	<b>380,000</b>

Note: - Data sources include historic bullion samples, drill holes and underground channel samples

- Mineral Resources are reported on a 100% basis to a nominal 2.2 grams per tonne cut-off grade which was determined in 2017 based on estimates of mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices.
- Ounces are estimates of metal contained in the Mineral Resource and do not include allowances for processing losses.
- Tonnage and grade measurements are in metric units. Gold ounces are reported as troy ounces. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.



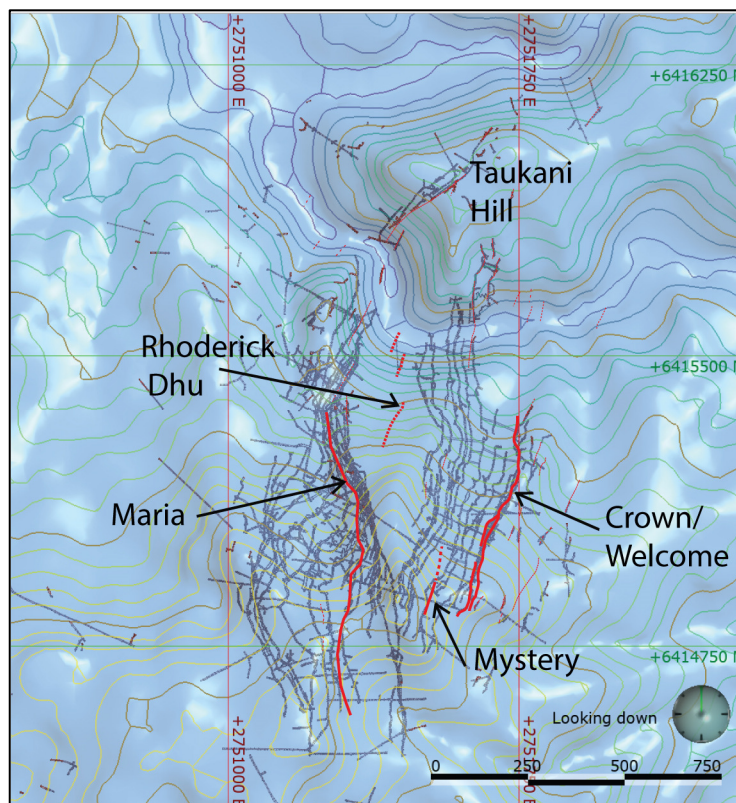
The updated resource estimate for the Maria and Mystery vein systems stands at 350,000 ounces of bullion equivalent, which is some 60,000 ounces gold equivalent less than the 2017 estimate of 410,000 ounces bullion equivalent, allowing for approximately 30,000 oz of estimated historic level depletion that was subtracted from the 2019 MRE but had been overlooked in the 2017 estimate, and excluding the 2004 Crown MRE. The Mineral Resource Estimate for the Crown/Welcome vein system, estimated previously at 31,000 equivalent bullion ounces and reported under a previous version of the JORC Code, remain part of the total Talisman Mineral Resource Inventory, which stands at 810,000t at 15g/t equivalent bullion grade for 380,000 equivalent bullion ounces. A revised assessment of the resource potential of Crown/Welcome, conforming to the reporting standards of the 2012 JORC Code, is planned for the future which will include the remaining data acquired in 2004. The decrease is attributed in part to larger than expected historical excavation of the BM37 stope within

the Dubbo Zone and associated challenging geotechnical environment that was encountered during rehabilitation of the mine in 2019.

New Talisman has continued to pursue the long held geological conceptual view that there is the potential for the Mystery vein to continue towards surface to intersect the Rhoderick Dhu Vein. The Company is greatly encouraged by the increased grade of the Mystery Vein, (14,000 tonnes at 25 g/t Au equivalent grade for 11,000 ounces inferred). This supports NTL's view of the future production potential of the Mystery and as part of the ongoing drive to production from this area, planned sampling in the next quarter will focus on increasing the resource quantum and level of confidence.

Revision of geological models confirmed that there are several potential exploration targets within the Maria vein, Crown/Welcome vein, in the footwall of Maria, and in the corridor between Maria and Welcome, where the Mystery vein may extend northward to connect with the Rhoderick Dhu quartz reef that outcrops near-surface some 600m to the north.

The northern strike extent of the Mystery vein remains untested, and represents an exploration target with resource potential of between 200,000t to 500,000t at between 10g/t Au and 20g/t Au. Note that this potential grade and tonnage, and the connection between Mystery and Rhoderick Dhu is conceptual in nature until it can be tested by step-out drilling, prior to which there is potential to track the southward extent of the Roderick Dhu vein, and other veins that crop out in the corridor between Maria and Welcome using lower-cost, surface exploration techniques.



## ***Technical summary***

### **1. Regional Geology**

The Talisman mining permit is located within the southern part of the Hauraki Goldfield, a 200-km long metallogenic zone of epithermal gold-silver and porphyry copper-gold mineralisation that extends from Great Barrier Island in the north to as far south as Te Aroha and Te Puke (see figure 1). The permit covers part of the historically mined Karangahake gold-silver deposit, which is one of the largest-known epithermal deposits of the Hauraki Goldfield and is hosted within hydrothermally-altered volcanic rocks of the Coromandel Volcanic Zone (CVZ).

Karangahake is located near the western fault-bounded margin of the Coromandel Volcanic Zone and is also at the south end of a north northeast-trending structural corridor that extends northward to Ohui and hosts several epithermal gold-silver deposits including Waitekauri, Maratoto and Komata.

### **2. Project Geology**

Gold-silver mineralization at Karangahake is hosted in quartz veins within a sequence of andesitic lavas, dacitic lavas and tuffs of the Coromandel Group and within quartz vein stockwork in overlying rhyolite of the Whitianga Group. Rhyolite on the summit of Mt Karangahake is correlated with rhyolitic tuffs that outcrop at the Rahu prospect some two kilometres to the north of Karangahake.

The volcanic rocks are underlain by greywacke basement, reported at 335m below sea level in a hole drilled in 1903.

In part the permit is deeply transected by the Karangahake Gorge and Waitawheta River, resulting in exposure of mineralization at surface over some 485 metres of vertical relief. Surface exposure in the gorge features prominent silicified ridges and bluffs, whereas elsewhere the permit is blanketed at surface to depths of up to eight metres by post-mineralisation ash cover.

### **3. Mineralisation**

The Karangahake epithermal vein deposit comprises a simple vein swarm, with fissure fill of narrow veins that trend northeast to north northeast and dip moderately to steeply west. Mapped quartz veins occur within a zone 3.5 x 2 km that includes at least 30 discrete veins up to 5m wide, and 50m to 1300m in strike length. The most prominent veins, the Maria and Welcome, average 1m to 3m and 0.5m wide and crop out over 1,300m and 1,100m, respectively. Veins are located within a broad hydrothermal alteration cell that extends over approximately 12 square kilometres and includes both Karangahake and Rahu.

A quartz vein stockwork is developed in the silicified and clay-altered rhyolitic cap on Mt Karangahake. A silicified and quartz-veined zone that is exposed within rhyolitic tuff on the Rahu Ridge area to the north of Karangahake is interpreted as the strike extension of the

mineralised system.

The Maria Vein has the largest recorded production of the Karangahake veins exceeding 700,000 bullion ounces, and has a vertical extent exceeding 700m. Its dip varies from 45°W to near vertical (80° W). In longitudinal section, there are four distinct ore shoots – Woodstock, Talisman, Bonanza and Dubbo. Historically, most of the ore came from the Talisman and Bonanza Shoots.

Within the Maria vein, there is strong vertical zonation of both primary vein and supergene mineralogy. An oxidized zone extends to the level of the Waitawheta River and is dominated by mesocrystalline quartz and manganese oxide. Localised colloform or crustiform banding of quartz, carbonate and sulphides and secondary enrichment of gold and silver are associated with high-grade ore.

The richest areas of the historic mine occurred below the oxidised zone and are localised within steeply-plunging ore shoots, particularly the Talisman and Bonanza ore shoots, associated with the steeper sections of the Maria vein, and separated by east southeast-trending faults. Primary quartz sulphide mineralisation occurs in the lower levels of the Maria vein as banded quartz-rhodochrosite-calcite-sulphide vein filling, described as a base metal carbonate association. The sulphide bands are composed of sphalerite, galena, pyrite, chalcopyrite, and electrum, and display the typical crustiform textures of epithermal ores.

The northern end of the Maria vein is exposed on Taukani Hill, and was worked to a limited extent in the historical Ivanhoe workings within the near-surface oxidised zone. Numerous other veins within the Talisman Mining Permit were prospected historically within the near-surface oxide zone and minor extraction of high-grade ore is recorded for several of these, including Adeline, Imperial and Earl of Glasgow. Substantial mining of approximately 200,000 ounces bullion was recovered historically from the linked Welcome and Crown veins, which are approximately parallel to the Maria Vein and have not been explored below the oxide zone.

The prospective corridor between the Maria and Welcome veins is between 400m to 600m wide and approximately 1 kilometre long and is largely unexplored. In a cross-cut extended between Maria and Welcome by Cyprus discovered the Mystery vein, which has potential to connect some 800m further north to the near-surface Roderick Dhu vein. Development work by New Talisman continues to extend the known extent of the Mystery vein northwards.

#### **4. Sampling Techniques**

##### **4.1. Historic sampling**

Historic channel sampling on the Maria Vein has been captured from long section stope plans created by the Talisman Gold Mining Company and dated 1919. Grades on these early plans are recorded as bullion value in pounds shilling and pence and sample intervals are recorded in feet and inches.

It is not possible to know exactly how the samples were taken however classical gravimetric fire assay techniques and channel sampling technics were well established by this time and on the balance of probability these are considered valid having been plotted on maps signed by the mine management of the day.

#### **4.2. Pre-2004 sampling**

Channel sampling pre-2004 is generally not well-documented, other than a small number of channel samples from the BM37 zone by Southern Gold that are documented in a 1991 report to the Crown.

#### **4.3. Post-2004 sampling**

NTL completed a programme of channel sampling of accessible areas to establish resources remaining in the 7, 7A, 8 Level of the Talisman Mine and the 5A level of the Crown Mine. This work was done using handheld electric powered diamond saws and resulted in around 920 channels samples being collected.

Channel samples were taken at a nominal 5m spacing along strike of veins where exposed. Sample widths across veins were determined by the geology of the vein width and do not exceed a 1.4 metre sample width.

Sample size was generally 5kg and collected in bins by chipping out each sample with a small pneumatic drill and by hand with cold chisels. The bins were cleaned between each sample to reduce chance of contamination.

Care was taken to ensure representative, equal-mass extraction along the entire channel. All drillcore was halved using a diamond saw. Mineralized intervals were sampled on nominal 1m lengths or to geological boundaries. The remainder of non-mineralised material was sampled on 2m intervals.

#### **4.4. Drilling techniques**

A drill program by NTL utilized an underground Longyear LM55 electric wireline rig with a LM75 power pack to drill 18 holes. Diamond coring was mostly triple tube HQT with a 1.5m core barrel or reduced to NQ (core size NQTT) where ground conditions dictated.

Drillcore was oriented using plasticine and holes surveyed with Eastman multi or single shot cameras every 25m and at end of hole. NTL also conducted a program of 5 holes drilled using a small conventional Kempe rig in the Woodstock section of the mine. Core size was LTK60. This core was not oriented and only collar positions were surveyed as holes were generally less than 15m.

#### **4.5. Sample recovery**

Core recovery for the Kempe rig holes averages 92.8% (55.55m total metres).

Core recovery for the 18 wireline holes averages 96.43% (1058.55m total metres)

### **5. Geological modelling**

Information from drill hole geology, surface and underground mapping and geochemistry is adequate to support confidence in geological continuity for the domains that have been estimated.

The geological understanding of the setting, the structural controls on mineralization continuity and geometry is sufficient to support estimation of Mineral Resources to the levels conferred by Resource Classification in accordance with the JORC Code 2012.

Geological interpretation of the Maria Vein and the ore zones within it have been updated in 2019 by compiling all mapping and drill hole data and by detailed digitizing of georeferenced historic mine plans, including vein positions, mapped vein widths and faults, on a level by level basis.

Vein positions were checked against several of the levels where NTL had its own data to check consistency as a back-up against the historic mapping and more recent mapping by modern explorers.

Mapped vein positions were wireframed in 2019 using Datamine and Leapfrog software to form enclosed vein models suitable for estimation purposes.

## **6. Estimation**

Estimates were restricted to hard-bounded domains based on 3D vein models.

A new wireframe model was created for the Maria Vein. Three separate ore shoots are recognized within the Maria Vein from historic mining, including the Dubbo Zone, the Talisman-Bonanza Zone, and the Woodstock Zone. Separate block models were created for each of the three Maria domains and estimated separately. The Mineral Resource Estimates also include minor splay veins from the footwall of the Dubbo section of Maria and from the hangingwall of the Woodstock section over a strike extent of 350m and 400m respectively between 345m and 40m RL. A footwall vein in the footwall of the Talisman-Bonanza section of Maria was prospected and mined historically but has no documented sample data available that could be included in the estimate. The Mystery Vein, which is located approximately 400m to the east of Maria, is included in the resource estimate over a strike extent of 270m and depth between 240m and 100m RL.

Historic mine plans give a detailed view of areas that were stoped in the historic Talisman Mine. Wireframe models of the stopes were created by digitising from historic long sections and the bullion equivalent content in them was interrogated, using the same parameters as associated vein domains. The estimated bullion mined from these stopes was subtracted from the overall resource bullion equivalent content.

Leapfrog EDGE software was used to complete inverse distance squared estimations for each domain. Each of these was validated by comparison with ordinary kriged estimation, for which the results were found to be closely comparable for all estimation runs. A further check estimate utilised a 2D estimation method with compositing across the full width of the vein and a high-grade restriction approach. The resulting check estimate was not materially different with respect to global estimate and contained metal.

Topcuts of 120g/t Au and 220g/t Ag were determined from combined analysis of histograms, probability plot inflections and the 97th percentile and were applied during estimation.

Interpolation parameters were based on variography, generally with an ellipsoid orientation of dip 45°, dip direction 288° and pitch 113° in the plane of the vein domain. A declustering function was used to reduce sampling bias. The estimation took account of localised variation in strike and dip of vein domains through a Leapfrog EDGE “variable orientation” function.



Estimation parameters were validated against outcomes by visual comparison with informing data in plan and section view and by inspection of the extent to which blocks were populated. An ordinary block model was created for the Mystery vein and all other models were sub-blocked.

Average distance to samples and minimum number of samples were used to define resource categories approximately based on drill spacing for Indicated categories and on ranges determined by variography.

Estimated grade has been reported as bullion equivalent based on the formula  $Bulleq = Au\ g/t + (Ag\ g/t \times 0.031609)$  in accordance with historic gold/ silver valuations. There is insufficient data for detailed modelling of gold: silver ratios or for modelling of density variation across the estimated domains.

### **7. Classification Criteria**

Resource classification is in accordance with the requirements of the 2012 JORC Code, to ensure appropriate account was taken of whether the nature, quality, amount and distribution of data are sufficient to allow confident interpretation of the geological framework and to assume continuity of mineralisation, and whether the estimates are supported by information sufficient to support detailed mine planning and technical studies.

Initial classification was based on minimum average distance to samples and minimum number of samples. The initial classification was then assessed as to whether the 2012 JORC Code criteria were met for each category and revised where appropriate.

### **8. Cut Off Grades**

Cut off grades were based on a preliminary assessment of the likely direct mining costs. A grade/tonnage curve was used to estimate the likely applicable cut-off grade to achieve the required ROM grade. This was determined as a 2.2 g/t Au for the Dubbo Talisman Zone and Woodstock Zones.

Full details of the methodology and approach taken to the resource modelling can be found in the accompanying Table 1 to this release.

### **Competent Persons Statement**

The information in the report to which this statement is attached that relates to Exploration Targets or Mineral Resources is based on information compiled by Jackie Hobbins, a Competent Person who is a Member of the Australian Institute of Geoscientists. She has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms Hobbins is an independent consultant employed by Hobbins Consulting Limited and has no financial interests in New Talisman Gold Mines Limited or any associated companies and was remunerated for this report on a standard fee for time basis.

---

**About New Talisman Gold Mines Ltd**

New Talisman Gold is a dual listed (NZSX & ASX: NTL) with over 2800 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, which has recently been updated to a JORC 2012 compliant mineral resource.



**JORC CODE, 2012 EDITION – TABLE 1**

**Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<p><i>Sampling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sampling and drilling techniques described in this table are for drilling and sampling conducted post-2004 by NTL. Sampling methodology is not well-documented pre-2004. A number of earlier exploration drillholes for which detailed methodology and QAQC are unavailable are included in the estimation data set for Indicated Resources including 18 holes drilled by Cyprus, 5 by NZ Goldfields and 1 by ACM. The basis for inclusion is that drilling, sampling and assaying are considered to have been conducted by reputable companies and assays were subject to standard laboratory QAQC.</li> <li>• For historic channel samples (pre-1920) no sampling or assay methodology or QAQC is available. Bullion grades from this early sampling have been used to estimate Inferred Resources on the basis that data is adequate to imply but not verify geological and grade continuity and there is a reasonable expectation of upgrading the resource with further exploration. Historic assay and sample information is recorded systematically on plans signed off by mine management of the day and is consistent with recorded production grades.</li> <li>• Post-2004 channel sampling of Levels 7, 7A, 8 and Woodstock of the Talisman Mine and 5A level of the Crown Mine was undertaken by NTL using handheld diamond saws.</li> <li>• Channel samples were taken at a nominal 5m spacing along strike of veins where exposed. Sample widths across veins were determined by geological boundaries. Where vein width is greater than 1 metre sample widths generally are 1 metre and no more than 1.4 metre.</li> <li>• Channels were cut to nominal dimensions of 5cm by 10cm to resemble half HQ diamond drill core to provide similar sample support for resource estimation purposes.</li> <li>• Sample size was generally 5kg and collected in bins by chipping out each sample with a small pneumatic drill and by hand with cold chisels. The bins were cleaned between each sample to reduce</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>chance of contamination.</p> <ul style="list-style-type: none"> <li>To ensure representivity, care was taken to ensure equal-mass extraction along the entire channel, including fine material.</li> <li>Post-2004, diamond core was halved using diamond saw. Mineralized intervals were sampled at nominal 1m lengths or to geological boundaries. Remainder of non-mineralised material was sampled on 2m intervals.</li> <li>Historic channel samples were taken from raises throughout the Talisman mine. Sample widths and bullion grades were recorded on long section plans signed by management. Details of sampling techniques were not recorded.</li> <li>Historic records (Jarman, 1911) describe secondary native gold between 11 Level and 12 Level. Petrographic observations of post-2004 drillcore samples described coarse gold (&gt;15 micron) as hosted within quartz matrix not subject to loss in fine fraction. Gold assay data for 74 post-2004 crush duplicate samples from Talisman drillcore has a correlation coefficient close to one (1) at 0.9989, however most of the duplicate set represents low grade samples and therefore does not provide adequate information about heterogeneity of high grade mineralisation. For the historic channel samples, given the lack of documentation of sampling techniques, there is potential for sample error resulting from coarse gold.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>Most post-2004 drilling was by underground Longyear LM55 electric wireline rig with a LM75 power pack (18 holes; 1058.55m).</li> <li>Diamond core HQTT to target depths, reduced to NQ (core size NQTT) where ground conditions dictated.</li> <li>All core was oriented using plasticine and holes surveyed with Eastman multi or single shot cameras every 25m and at end of hole. A small conventional Kempe rig drilled 5 holes for 55.55m in the Woodstock section at LTK60 diameter (KP series drillholes).</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond core recovery was measured and recorded by site geologists. Triple tube drilling maximizes sample recovery and integrity of the sample. For the Kempe rig, the conventional core was extracted carefully to minimize sample loss. Core recovery averaged 96 % for wireline drilling (18 holes; 1058.55m) and 93% for</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	conventional drilling (5 holes; 55.55m). There is no known relationship between sample grade and recovery that would indicate a sample bias.
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• For post-2004 drilling, all core was logged to a level of detail to support appropriate Mineral Resource estimation. A detailed regime of geological logging includes core orientations of structures, lithology, mineralization, structure, core photography, geotechnical logging undertaken by experienced geologists. All data were entered into spreadsheets using laptops producing descriptive and graphic logs.</li> <li>• Detailed geological descriptions are not available for channel samples.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Post-2004 drillcore was sawn in half, with one half taken for sampling, one half retained for reference logging, petrology, check logging, check sampling, metallurgy, geotechnical studies.</li> <li>• Underground channel samples were sub-sampled and prepared in the laboratory via industry standard methods (crushing using jaw/Boyd, followed by pulverizing to 75 microns in LM2/5).</li> <li>• Representivity of sub-sampling was ensured by using a set of QA measures recommended by independent consultants RSG Global who reviewed the procedures in 2004. Quality control included field duplicates (split from first coarse crush) which were taken every alternate 10th sample, and a preparation duplicate (split from fine grind) taken every alternate 10th sample. Results show good correlation between core duplicates/originals and coarse crush duplicates/originals. Correlation coefficient for 74 crush duplicate samples from Talisman is close to one (1) at 0.9989.</li> <li>• HQ half core is considered to provide a suitable sample support for mineral resource estimation purposes for the type of material. No heterogeneity studies were carried out to investigate the optimal sample size.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Post-2004 all assays were carried out by SGS in Waihi, using their standard sample preparation and analytical procedures and internal quality control procedures. All gold assays used a 50g charge fire assay with AAS finish and a detection limit of 0.01 ppm. This is a total</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<p>assay technique and considered appropriate.</p> <ul style="list-style-type: none"> <li>• The quality control procedures used include the following: Blanks of barren material were introduced every 30 samples, and certified reference materials, obtained from RockLabs were inserted every 10<sup>th</sup> sample. These showed that there were no issues (e.g. no contamination, and no statistically relevant bias between the certified mean of the CRMs and the laboratory mean of assays for those CRMs).</li> <li>• Assays for 24 earlier drillholes included in the estimation data set were carried out by certified assay laboratories, however detailed documentation of assay and QAQC methods is not available for these samples.</li> <li>• Historic underground channel samples are believed to have been assayed using fire assay technique that was standard practice at the time, and was generally carried out at the Thames School of Mines by specialist assayer, however there is no relevant documentation available for these samples other than bullion grades and sample widths.</li> </ul>
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Post-2004, approximately 10% of the samples from mineralized intervals were sent as umpire samples to Amdel Laboratories at the Macraes site in Central Otago for check sampling against the original SGS samples. These showed that there were no issues (e.g. no statistically relevant bias between the two sets of results) High-grade drillcore samples from the BM37 zone of the Dubbo shoot (Cyprus, 1989) were verified by follow-up channel sampling by Southern Gold in 1991. No QC was documented for historic sample results from the raise sampling programmes of the early 20<sup>th</sup> century, which are recorded as value in pounds, shillings and pence and plotted on mine plans signed by the mine manager of the day. Most of the historic channel samples have sample widths recorded indicating they were collected in a systematic manner.</li> <li>• Grades are consistent with those indicated in the Museum samples that are recorded by the then mine superintendent Mr Stanfield of the Talisman Gold Mining Company Ltd. Moreover, the recorded production from those levels and the tonnages recorded are broadly consistent with the depletions</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p>indicated by estimation of the mined stopes.</p> <ul style="list-style-type: none"> <li>• All sample positions were recorded to provide XYZ control for modelling purposes. The grid system used historically was Mt Eden Circuit (1949). NTL adopted NZMG (based on the NZGD1949 datum) and adjusted all earlier data locations to NZMG.</li> <li>• In 2005 a levelling exercise was initially conducted in 8 Level for survey control with a datum established outside No8 Level. A registered mine surveyor completed a full survey of 8 Level and sample locations were adjusted on the basis of this survey by company geologists</li> <li>• Post-2004 channel samples were located using peg ledgers and offsets. Each sample recorded collar position, sample length and orientation to create drill hole data. These data are expected to be accurate to cm resolution.</li> <li>• Each drill hole collar was surveyed and downhole surveys recorded at 25m intervals using Eastman single or multi-shot cameras.</li> <li>• Historic samples that have been used in the resource estimate were captured in 2017 from scanned historic mine plans and checked against existing databases. These were represented in the 2017 dataset as drillholes, with the origin of each sample length represented as a drillhole collar, which was then georeferenced in 2017 to intersect the hangingwall of the Maria vein wireframe. The wireframe vein model was updated in 2019, necessitating further migration of the bullion data points to ensure the sample data was located within the domain boundary. Migration was conducted solely in the horizontal plane, using a function in Datamine to project the “collar” points to the hangingwall of the Maria vein.</li> <li>• Survey and topographic control is considered adequate for the current purpose but will require further verification to upgrade resources to higher confidence classification</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity</li> </ul>	<ul style="list-style-type: none"> <li>• Data spacing and distribution is considered sufficient to establish the degree of geological and grade continuity appropriate for the estimation methods used and resource classifications applied.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Dubbo zone was drilled to 25m spacing.</li> <li>• HGL (post-2004) channel samples were generally taken across the backs of exposed veins at 5m intervals. The 5m spacing was adequate and gave comparable results to earlier 2.5m spacing. Where there was no exposure in the roof cut, channels were taken along the side walls where oblique veins crossed the drives. Where possible both sides of the drives were sampled to give a 5m separation.</li> <li>• Spacing for 2065 historic underground historic channel samples used in the estimate ranges from less than a metre to around 1.5m apart within raises; the raises are generally around 40 to 80m apart.</li> <li>• Straight 1m compositing was applied to remove any bias introduced by small high-grade samples. It is recognized that creation of 1m composites has created a positive bias in mean grade due to over-representation of samples exceeding 1m in length, and that potential bias could be further reduced by compositing to the full width of the vein. However, a check estimate completed in February 2020 that utilised compositing to the full width of the vein and back-calculation of block grade from estimated metal accumulation and estimated vein width, found that compositing method did not result in material change to the estimate.</li> </ul>
<p><i>Orientation of data in relation to geological structure</i></p>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Maria Vein trends north to northeast over its strike length and dips to the west ranging from 45 to 85 degrees. NTL channel samples where possible are oriented to be orthogonal to the strike of the vein being sampled. Where this is not possible the channel orientation is reflected in the survey information and is taken into account in the modelling software.</li> <li>• Drillholes were designed to drill orthogonal to the strike of the mineralized vein where possible. Due to restricted availability of drill platforms, several of the TM series holes in the Dubbo zone were drilled down-dip from the footwall side of the Maria vein, which introduces potential for sampling bias if grade is partitioned into structures within the vein such as banding. Examination of key intercepts in core photos indicated that drillholes were not drilled parallel to target veins or at unfavourably narrow angles of intercept. The true width of the vein is used in estimation.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Historic channel sample data had no survey information other than collar coordinates and channel sample length. A nominal orientation has been assigned in the databases at an azimuth of 095° and a dip of -20° reflecting the orientation of the main structures, based on the assumption that standard mine sampling practice in the early 20th century was well-developed for grade control sampling and would have been taken across the backs of the veins from hanging wall to footwall at right angles to strike and dip.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Post-2004 samples were collected on site by NTL personnel, either senior field technician or site geologist, transported to NTL's core and sample handling facility in Waihi. Here samples were prepared for dispatch to the assay laboratory. At night the facility was locked and during the drill programme security patrols used. Once samples are prepared they are transported the approx. 100m to the SGS assay facility for preparation and analysis. NTL has a system of order and dispatch numbering for sample tracking. Once delivered to SGS their protocols for security apply.</li> <li>Modern drill sampling in the resource areas prior to New Talisman was conducted by reputable mining companies such as Cyprus Mines Corporation, NZ Goldfields and Australian Consolidated Minerals and assayed at ALS in Tauranga or SGS in Waihi. There is no evidence from the sample data recorded that there are any issues with data validity or security.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>An audit carried out by RSG Global in 2004 found that HGL sampling procedures were of a high standard; a brief review of the database found it generally appropriate and adequate for resource modelling purposes.</li> <li>An independent review by GEOS in 2018 found that "the (2017) estimations, the data and the resource models they are based on, meet the guidelines set out in the 2004 and 2012 JORC Codes and have no serious errors or issues associated with them".</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Note: no exploration results are reported.

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li>• <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The mine area is wholly owned by New Talisman Gold Mines Limited under Minerals Mining Permit 51326 which was granted on 03 December 2009 for a term of 25 years and expires on 02 December 2034. The permit area is 299.2 ha and lies within the Kaimai-Mamaku Forest Park which is Crown land administered by the Department of Conservation.</li> <li>• The Company operates under an access arrangement with the Minister of Conservation with an authority to enter and operate.</li> <li>• In addition, the Company holds a resource consent issued by the District Council to carry out bulk sampling of up to 20,000 m<sup>3</sup> per annum.</li> <li>• Tenure is secure at time of reporting.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Talisman permit area was held as a mining license by NZ Goldfields and predecessors from 1971 to 1992. During this time, they focused on small scale production from 8 level but also completed substantial surface and underground exploration in their own right. They had a number of joint venture partners during the term including, Homestake Mines, Cyprus Mines Corporation, ACM Minerals, and Waihi Gold. Cyprus Mines did the most extensive work driving around 300m further along 8 Level from historic workings and completing 51 drill holes. In 1991 NZ Goldfields went into voluntary liquidation and the mining license was bought by two former directors who formed a private company known as Southern Gold just prior to the mining license expiring.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Karangahake mineral deposit is a low-sulphidation epithermal gold silver vein system with an overall strike length of around 4km of which approx. 1.5km lies within the NTL mining permit. The deposit comprises several major veins, the most significant of which are the Maria Vein in which the Talisman Mine is developed and the Welcome-Crown Veins. Historic mining has exploited the deposit for around 1km along strike and up to 700m from surface outcrop to the deepest 16 level. Fluid inclusion studies suggest the current highest level of exposure has seen 300m of erosion from the paleosurface.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• In 2017 New Talisman Gold Mines Ltd compiled an extensive database of geological and geochemical data for the project from historic data and newly acquired data based on geological mapping, geochemical sampling and surveying that has been used to inform the current mineral resource estimate.</li> <li>• NTL previously identified key representative drill hole information that is tabulated in the following table</li> </ul>

Criteria	JORC Code explanation	Commentary
----------	-----------------------	------------

Hole No	East NZMG	North NZMG	RL (masl)	From (m)	To (m)	Length (m)	Gold g/t	Silver g/t	Gold Equiv	Area
BH07	2751319.2	6414884.0	172.97	0.00	1.55	1.55	14.33	2.82	14.42	Bonanza
BH08	2751378.4	6414905.3	172.75	6.55	8.00	1.45	2.12	7.33	2.35	Bonanza
BH09	2751341.5	6414939.4	172.97	8.40	11.80	3.40	2.57	19.98	2.86	Bonanza
BH10	2751341.5	6414939.4	172.97	9.15	10.50	1.35	3.85	55.20	5.59	Bonanza
BM37	2751299.5	6414703.1	177.30	11.40	13.20	1.80	682.44	2094.00	748.63	Dubbo
BM38	2751299.7	6414702.1	177.30	10.00	12.00	2.00	12.16	9.10	12.45	Dubbo
BM38				16.00	17.00	1.00	21.70	718.00	44.40	Dubbo
BM39	2751299.4	6414704.0	177.30	14.55	15.85	1.30	36.08	467.00	50.84	Dubbo
BM40A	2751300.8	6414702.1	176.10	16.00	17.00	1.00	3.30	4.10	3.43	Dubbo
BM40A				22.25	23.30	1.05	4.58	21.40	5.26	Dubbo
BM43	2751320.0	6414686.4	179.00	25.50	26.90	1.40	2.06	167.00	7.34	Dubbo
TM002	2751317.6	6414687.9	177.26	46.30	49.10	2.80	40.86	91.71	43.76	Dubbo
TM006	2751310.3	6414686.4	177.19	35.90	36.80	0.90	3.98	200.00	10.30	Dubbo
TM007A	2751324.0	6414686.4	176.55	61.00	62.00	1.00	3.94	134.00	8.18	Dubbo
TM009	2751296.5	6414727.8	177.23	7.00	8.00	1.00	2.08	3.90	2.20	Dubbo
TM010	2751309.1	6414723.0	176.35	32.80	37.05	4.25	1.62	18.83	2.22	Dubbo
TM010				33.80	34.55	0.75	3.93	26.00	4.75	Dubbo
TM011	2751309.1	6414723.0	175.65	56.50	58.00	1.50	8.95	131.53	13.11	Dubbo
BH11	2751358.1	6414911.2	172.87	23.65	25.20	1.55	1.92	4.80	2.07	Woodstock
BH16	2751284.0	6415278.9	165.16	0.00	6.50	6.50	7.85	117.90	11.57	Woodstock
BH19	2751211.5	6415487.2	196.22	31.50	35.00	3.50	2.42	29.39	3.35	Woodstock
BH2	2751246.8	6415355.7	164.35	25.95	27.15	1.20	2.31	12.50	2.71	Woodstock
BH20	2751237.2	6415451.2	196.22	12.60	13.40	0.80	3.85	5.00	4.01	Woodstock
BH26	2751279.8	6415227.4	28.60	26.80	28.60	1.80	4.26	20.56	4.91	Woodstock
BH4	2751260.2	6415328.6	164.53	11.90	12.85	0.95	3.08	10.22	3.40	Woodstock
KP001	2751288.7	6415256.6	165.28	6.10	14.70	8.60	1.39	8.31	1.65	Woodstock
KP002	2751283.7	6415278.7	165.16	4.50	5.10	0.60	3.20	74.00	5.54	Woodstock
KP002B	2751283.7	6415279.1	165.54	4.95	7.80	2.85	13.35	103.75	16.63	Woodstock
KP003	2751293.6	6415240.0	166.04	5.90	10.55	4.65	1.61	4.45	1.75	Woodstock
KP004	2751309.1	6415221.8	166.17	4.00	7.20	3.20	3.19	3.01	3.29	Woodstock

<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated</i></li> </ul>	<ul style="list-style-type: none"> <li>Channel samples are recorded as drillholes which along with drillhole data were length weighted down hole.</li> <li>A lower cut-off of 0.5g/t Au was applied to determine significant intersections. Occasionally short intervals below cut off are incorporated where it does not result in the interval overall falling below cut-off.</li> <li>Where high grade samples form part of an overall intersection of lower grade material these also reported separately so as not to misrepresent the overall width of intersection of significant grade.</li> </ul>
--	--	--

Criteria	JORC Code explanation	Commentary
	<p><i>and some typical examples of such aggregations should be shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>For instance; Hole TM002 assayed equivalent bullion grade of 2.22g/t over 4.25m and included 0.75m at 4.75g/t equivalent bullion.</li> <li>It was decided to use bullion equivalent grades and apply these to all samples taken in the modern era as well as the historic samples. This was due to the fact that the 2263 historic channel samples are all expressed in bullion values. Production data gold silver ratios vary considerably, and it was not possible to assign arbitrary silver grades to the bullion values with any degree of certainty.</li> <li>With respect to the modern samples that record both gold and silver values it was an easy matter to convert these to gold equivalents using the same gold and silver values that applied at the time of mining in the late 19th and early 20th centuries.</li> <li>The gold price remained constant during the period that recorded production data is available at £4-6s-0d, (£4.25)/oz or USD20.47/oz. Silver values ranged from USD0.49 to USD1.03. An average of USD 0.65 as chosen and a ratio of 0.031609 was factored to give gold equivalence based on the formula <math>[Au\ g/t + (Ag\ g/t * 0.031609)]</math>.</li> </ul>
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (egg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>Only down hole lengths are reported. While generally holes transect the mineralized zones at right angles the downhole intervals can be slightly oblique.</li> <li>Differences in down hole intervals and true width are factored into the resource estimate based on the estimation methodology.</li> </ul>
<p><i>Diagrams</i></p>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Data was initially captured on paper logs and then entered into excel spreadsheets by NTL using standard logging templates to ensure consistency of data capture.</li> <li>Databases have been peer checked on a number of occasions over the duration of the permit.</li> <li>Data validation processes within Leapfrog Geo were used in 2019 to identify and correct minor errors in drillhole data prior to the estimation process.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Site visits</i>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core photos for key intervals have been inspected by the Competent Person and compared with drillhole records</li> <li>• The Competent Person has visited the mine site and has viewed channel sampling practice and the recently rehabilitated BM37 zone on 8 Level.</li> </ul>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Underground mining both in the early 20th century and more recently has provided a large database of detailed mapping and grade control sampling, which has informed the geological interpretation to date. The level of detail provides confidence in the interpretation and limited potential for alternative interpretations that could impact significantly on the estimation. A limited amount of exploration drilling post-1920 has also contributed to the interpretation.</li> <li>• The geologic interpretation utilises available log data, assay data, underground face and backs mapping and digital core photos, all of which were systematically collected and validated. Vein intercept points are a combination of mapping data points exported from Datamine and additional drillhole intercept points created in Leapfrog. Vein and solids are created in Leapfrog and validated against drilling and mapping. Where applicable, splay veins and faults are trimmed against the main Maria vein structure prior to estimation. Gold mineralisation is confined to quartz veins and is not disseminated in wall rock; therefore, the main vein boundaries are coincident with assay intervals, and are used to create hard-bounded domains for estimation.</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>• <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Maria Vein model is over 1300m long and extends to depths of up to 350m below sea level, based on early boreholes (1920) that intercepted the Maria Vein at least 100m below 15 Level. The resource model does not extend above 345m RL, based on the extent of sample data provided by NTL.</li> <li>• The Mineral Resource Estimates include minor splay veins from the footwall of the Dubbo section of Maria and from the hangingwall of the Woodstock section over a strike extent of</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>350m and 400m respectively between 345m and 40m RL. A footwall vein in the footwall of the Talisman-Bonanza section of Maria was prospected and mined historically but has no documented sample data available that could be included in the estimate. The Mystery Vein located approximately 400m to the east of Maria, is included in the resource estimate over a strike extent of 270m and depth between 240m and 100m RL.</p>
<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Leapfrog software has been used in combination with Datamine to construct the 3D geological models. Estimation has utilized Leapfrog EDGE software using appropriate inverse distance and ordinary kriged techniques as discussed below.</li> <li>• Topcuts of 120g/t Au and 200g/t Ag were determined from combined analysis of histograms, probability plot inflections and the 97th percentile and were applied during estimation.</li> <li>• Interpolation parameters are listed below and were based on variography, generally with an ellipsoid orientation of dip 45° dip direction 288° and pitch 113° in the plane of the vein domain. A declustering function was used to reduce sampling bias. The estimation took account of localised variation in strike and dip of vein domains through a Leapfrog “variable orientation” function. Estimation parameters were validated against outcomes visual comparison to informing data in plan and section view and inspection of the extent to which blocks were populated.</li> <li>• An ordinary block model was created for the Mystery vein and all other models were sub-blocked, as described in the table below. Both tonnes are reduced by approximately 14% when compared to an earlier 2017 estimate by NTL and contained metal (bullion equivalent) is reduced by 20%. The reduction is attributed to variations due to introduction of compositing, top-cutting and revision of vein boundaries to more closely to historic mapping data. A significant reduction of contained metal in the BM37 shoot is largely attributed to mined depletion that was exposed during recent rehabilitation of the mine in 2019 and was previously</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>unrecorded.</p> <ul style="list-style-type: none"> <li>Block size was generally 5m x 10m x 5m, sub-blocked to 0.5 x 1m x 1m. Average distance to samples and minimum number of samples were used to define resource categories approximately based on drill spacing for Indicated categories and on ranges determined by variography.</li> <li>Maximum, intermediate and minimum search ranges adopted were generally 60 x 40 x 10m for pass 1 and 80 x 80 x 10m for pass 2 for most domains, or 20 x 20 x 10m for pass 1 and 60 x 40 x 15m for pass 2 for the Dubbo footwall and Mystery veins, for which available sample data is restricted to drilling and recent channel sampling.</li> <li>Estimated grade has been reported as bullion equivalent based on the formula <math>Bulleq = Au \text{ g/t} + (Ag \text{ g/t} \times 0.031609)</math> in accordance with historic gold/ silver valuations. There is insufficient data for detailed modelling of gold: silver ratios or for modelling of density variation across the estimated domains.</li> <li>All estimates were restricted to hard-bounded domains based on detailed 3D vein models.</li> <li>The extent of the inferred resource is validated to some degree by comparison to the extent of historic stoping. Estimated average grade is comparable to recorded average production grade.</li> <li>Potential deleterious metals have not been identified at this stage.</li> </ul>
<i>Moisture</i>	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>Tonnages are based on dry bulk density.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Cut off grades were based on a preliminary assessment by NTL of the likely direct mining costs.</li> <li>A grade/tonnage curve was used to estimate the likely applicable cut-off grade to achieve the required ROM grade. This was determined by NTL as a 2.2g/t Au-eq lower cut.</li> </ul>
<i>Mining factors or</i>	<ul style="list-style-type: none"> <li><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable,</i></li> </ul>	<ul style="list-style-type: none"> <li>The updated Mineral Resource Estimation does not take rigorous account of mining-related assumptions, but relies</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>assumptions</i>	<i>external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i>	on the evaluation of possible mining methods, minimum dimensions and mining dilution that was reported by NTL in 2017.
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li><i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>NTL reported in 2017 that metallurgical studies to date show that expected recoveries are likely to equal or exceed 95%.</li> <li>The deposit is typical of the low sulphidation deposits in the Waihi Gold District which are by and large amenable to direct cyanidation, gravity separation of free gold and/or flotation concentrate cyanidation.</li> <li>There is no evidence at this stage of any deleterious minerals that would impact on processing.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li><i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>The deposit lies on DOC land under MP51326 granted to New Talisman Gold Mines Ltd.</li> <li>Consents for bulk sampling up to 20,000m<sup>3</sup>/annum have been granted for an initial 2-year period once bulk sampling commences.</li> <li>The local authorities have consented small and large scale mining projects in the District over the last 25 years including NTL's Talisman project in 2013.</li> <li>Provided the Company prepares sufficient environmental data to back up any development proposal it will be dealt with by the authorities on its merits.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></li> <li><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>The bulk dry density used in the estimate is 2.5 g.cm<sup>-3</sup>.</li> <li>This is based on 211 determinations of vein and wall rock samples. These were sorted into 41 vein samples that had a dry density of 2.53g.cm<sup>3</sup>.</li> <li>All densities were determined on a wet, dry and particle density basis by the University of Auckland Geology Department and took into account voids and porosity.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Classification</i>	<ul style="list-style-type: none"> <li>• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> <li>• The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>• Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>• Confidence categories have been assigned in accordance with the JORC Code 2012, taking appropriate account of all relevant factors and the result appropriately reflects the Competent Person's view of the deposit</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>• An independent review by GEOS in 2018 found that "In general the (2017) Mineral Resource Estimates (MREs) on the various mineralised zones of the Talisman project have been competently done and procedures used to incorporate historical results into the overall database are reasonable, within the limitations and constraints from the lack of detail in the data collection and reporting of procedures."</li> <li>• An independent review by AMC in 2020 found that the resource estimate completed by HCL in November 2019 for the Talisman resource was suitable for public release under the 2012 JORC Code. AMC also found that a check resource estimate completed by HCL in February 2020 essentially gave effect to alternative techniques recommended by AMC. AMC concurs that the February check estimate resulted in no material change to contained metal and in general resulted in no material change to the November 2019 global estimate.</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate steps have been taken to optimize the relative accuracy of the global estimates through geological control, through conservative application of appropriate upper and lower grade ranges, through compositing and declustering the data to minimize bias and through the use of appropriate variogram modelling to guide search parameters. Validation steps that provide qualitative confidence in the estimate include visual comparison of estimated grades to informing data, comparison of ID<sup>2</sup> and OK estimation results for all</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li data-bbox="472 248 1234 400">• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li data-bbox="472 408 1234 496">• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<p data-bbox="1312 248 2029 644">estimation runs and comparison of estimated average grade to historical average production grade. In February 2020, HCL completed a check estimation that utilized alternative estimation techniques recommended by AMC, including application of a high-grade restriction rather than conventional top-cut, compositing of samples to the full width of the vein, flattening the data to a 2D plane prior to variography and estimation, and back-calculation of block grade from estimated metal accumulation and vein width. Changing the estimation methodology resulted in no material difference to estimated metal content or in the global estimate, which provides further qualitative confidence in the estimate.</p>