# Market Announcement

### For Immediate Release



### TALISMAN DEEPS SCOPING STUDY RESULTS

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 Exec Director
Tony Haworth Independent Director
Jane Bell Company Secretary
Wayne Chowles Chief Operating Officer
Ash Clarke Chief Financial Officer

Capital Structure Ordinary Shares at 20/03/2018 2,157m

#### **Share Price**

**Share Price** at 20/03/2018 (NZX) 1.6cps **Share Price** at 20/03/2018 (ASX) 1.4cps



#### **New Talisman Gold Mines Limited**

ACN Address

Address

Phone Website Email 541 Parnell Rd, Parnell, Auckland +64 27 5557737 www.newtalisman.co.nz info@newtalisman.co.nz

### **HIGHLIGHTS**

- Talisman Deeps scoping study shows strong business case for mine expansion;
- Exploration and staged development plan proposed.

#### Overview

The Talisman Mine, situated in Karangahake, New Zealand, is in the early stages of mine development. A Pre-feasibility Study on the project was completed in 2013 and updated in early 2018 following restatement of the mines mineral resource estimate in 2017 which saw an uplift in contained ounces from 204,000 ounces gold to 469,000 gold equivalent ounces.

The Prefeasibility Study, the results of which were released to the market on 26 June 2018, focusses on the high confidence mineral resources accessible from the mines No 8 Level, which has been fully rehabilitated, and indicates that the project has a Net Present value exceeding \$35m and will produce some 51,000 ounces over a six-year life.

Below No 9 Level, the Maria vein, the largest source of gold mineralisation in the area, is estimated to hold some 338,200 gold equivalent ounces which are classified as an inferred mineral resource and have not been considered for extraction in the current plan. There is considerable future potential for extraction of these ounces and, to gain a broad understanding of the technical and financial aspects of exploiting the deeper orebody, the Company commissioned a Scoping Study which is the subject of this release. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

The Talisman Deeps Project has been evaluated as a standalone project as it will require significant infrastructure, equipment and resources to access and exploit the orebody over and above that installed for the Talisman Project.

This Study has found that the orebody is likely capable of supporting a medium scale mine, producing on average 18,000 gold equivalent ounces a year over a nine-year life from 50,000 tonnes of ore a year. The project will require a \$25m investment in equipment and installed infrastructure and is estimated to yield a Net Present Value, at a 12% discount rate, of between \$11m and \$89m with an expected return of \$49m. Cost estimates are inclusive of a 25% contingency included to reflect the confidence level of the estimate.

Matthew Hill said "This is the next step in advancement of the Talisman Deeps project having completed a JORC 2012 compliant mineral resource estimate in 2017 demonstrating one of the highest grade resources in NZ. The study shows Deeps as a standalone project has significant potential."

\_\_\_\_\_\_

The study also sets out a broad exploration programme that will be required to upgrade the confidence level of the inferred mineral resources to measured and indicated.

This Scoping Study was commissioned to ascertain whether a business case can be made for raising the further funding needed to proceed to more definitive studies on the viability of the Talisman Deeps Project. It is a preliminary technical and economic study of the potential viability of the Talisman Deeps Project. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves. Further exploration and evaluation work and appropriate studies are required before NTL will be able to estimate any ore reserves or to provide any assurance of an economic development case.

The Scoping Study is based on the material assumptions outlined in this announcement. These include assumptions about the availability of funding. While NTL considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the Scoping Study, funding of in the order of \$19 million will likely be required. Investors should note that there is no certainty that NTL will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of NTL's existing shares.

It is also possible that NTL could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce NTL's proportionate ownership of the project.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

#### Resources

Resources in the Talisman Mine stand at 469,800 gold equivalent ounces as detailed in the following table.

<b>Mineral Resources</b>	Talisman Mine		
		Aueq	
Category	Tonnes	g/t	Ounces
Measured	102,800	17.4	57,480
Indicated	97,700	7.4	23,100
Inferred	750,000	15.9	389,200
<b>Total Resources</b>	950,500	15.1	469,800

These have been reported previously in releases to the market dated with full details of the methodology and can be found in the individual company releases of 12 July 2017, 25 July 2017 and 05 September 2017.

The resources that have been evaluated for this scoping study lie in the Dubbo and Bonanza Sections of the Maria vein mostly below 9 Level.

The Dubbo resource estimate shown in the following table stands at 312,800 gold equivalent ounces.

Dubbo			
Category	Tonnes	AuEq g/t	Ounces
Measured	13,000	96.9	40,700
Indicated	3,100	74.9	7,500

Total Resources	452,100	22.0	312,800
Inferred	436,000	18.9	264,600

Of these some 264,600 gold equivalent ounces are inferred and their location within the Dubbo Section of the Maria Vein are shown below in Figure 1.



Figure 1 showing position of inferred resources in the Dubbo Section. Over 25.1 g/t Aueq shaded in magenta, 10.1 to 25 g/t shaded red and 3.1 to 10 g/t shaded orange.

In the Bonanza Section there are 73,600 oz gold equivalent ounces inferred resources below 14 Level as tabulated below and shown in figure 2.

Bonanza			
Category	Tonnes	AuEq g/t	Ounces
	<del>-</del>	<u>-</u>	
Measured	-	-	-
Indicated	-	-	-
Inferred	97,000	23.6	73,600
Total resources	97,000	23.6	73,600

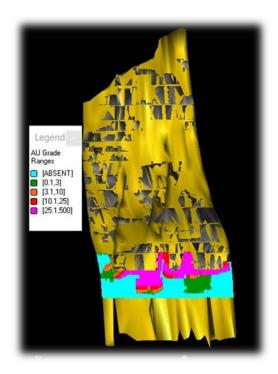


Figure 2 showing position of inferred resources in the Bonanza Section. Over 25.1 g/t Aueq shaded in magenta, 10.1 to 25 g/t shaded red and 3.1 to 10 g/t shaded orange.

These inferred resources total 338,200 gold equivalent ounces and for the purposes of this study have been used to develop the Production Target for the Talisman Deeps project.

The term Production Target is used here to describe the likely available tonnage for mining once modifying factors are applied to inferred mineral resource estimates. This term is distinct from the term Ore Reserves which is a JORC term applicable to the conversion of Measured and Indicated resources to Proven and Probable reserves.

It should be noted that there is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of measured or indicated mineral resources or that the Production Target itself will be realised.

At this stage of the project it is not possible to state which portion of the Inferred resource will be finally converted to reserves, however it is reasonable to assume losses for ore that is faulted out, a proportion of ore that is unpayable and losses for geotechnical and mining pillars. The Scoping Study has evaluated these factors as described in the following sections and the Production Target areas are shown in Figure 3 below.

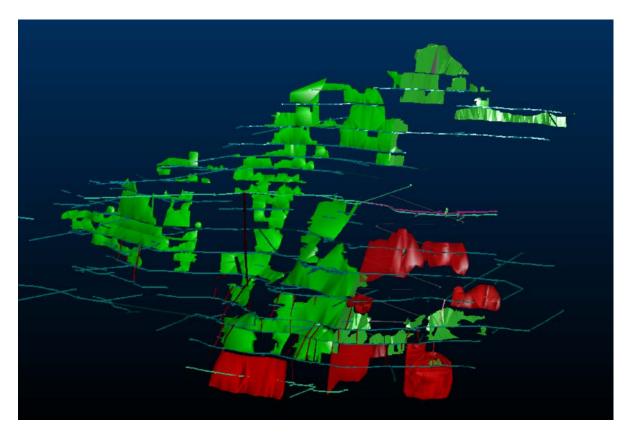


Figure 3 - Isometric view showing existing development, historic stoping (green) and production target blocks (red)

Of note is the fact that in the historical data no individual grades for gold and silver are reported and for consistency and data integrity and comparison with modern sampling it was decided to carry out the resource estimates using gold equivalents.

During the period of historical mining the gold price stayed constant at £4-6s-0d per oz, (USD20.47) while silver ranged from USD0.49 to USD1.03 per oz. Metallurgical recoveries once cyanidation was used were in the 95% plus range.

In order to make the comparisons between modern channel and drill hole sampling and historical sampling the ratio calculated used the formula Au equivalent = Au g/t +(Ag g/t \*0.31609).

#### Scoping Study Overview

New Talisman has completed this scoping study on the Talisman Deeps project that forms part of the planning process for evaluating the full economic potential of the Talisman Mine.

The 2012 JORC code defines a scoping study as an order of magnitude technical and economic study of the potential viability of Mineral Resources. It includes appropriate assessments of realistically assumed modifying factors that are necessary to demonstrate at the time of reporting that progress to a Pre-Feasibility study can be justified.

In the case of Talisman this is the first economic evaluation of the Talisman Deeps project and is treated as a standalone operation from the areas of the mine currently being developed for the bulk sampling programme and evaluated under the updated prefeasibility based on the measured and indicated portions of the ore body.

The Talisman Deeps project below 9 Level of the Maria Vein has inferred resources of 338,200 gold equivalent ounces. Because the resources are all in the inferred category they cannot be converted to reserves for economic analysis to the level of certainty appropriate for a pre-feasibility or feasibility study. Under ASX rules and the 2012 JORC code reporting standard only measured and indicated resources can be converted to proven and probable reserves.

#### Mine Design

The most likely option available to access the resources in the deeper areas of the mine is through an internal decline system, developed from Keillors Crosscut, established in host rock at a point midway between the Mystery and Maria veins. This system will provide access for men and materials and intake ventilation while at the same time providing a platform for exploration of the adjacent vein systems. This would allow a staged approach to the development of the mine with resources being exploited as they are proven up and generating revenue for the next stage of development. Such a decline system has the advantage that it can be extended as required although travelling distances will become longer over time.

The decline would be developed at a gradient of -8° and be staggered to follow the general plunge of the orebody which maintains a reasonably consistent distance for cross cuts to the vein on either side. Drilling will be required to pin point the location of the vein systems to ensure that the decline system does not inadvertently pass through the Mystery vein and sterilise ore.

Development of the main decline in the footwall of the Maria Vein presents the opportunity to systematically prove up the resources currently reported as inferred in the Dubbo Zone and the lower portions of the Bonanza Zone where nominal "ore blocks" or targeted production blocks have been defined for the purposes of this scoping study.

This programme will allow the resource category to be upgraded to measured and indicated, infill gaps in the data and allow some of the exploration potential identified as Exploration Targets to be moved into resource.

Additionally, the main drive will sit in the footwall of the southern part of the Mystery Vein and will provide the opportunity for drill testing the depth extensions of the Mystery Vein.

Figure 4is an isometric view of the Dubbo and Bonanza resource blocks, potentially mineable portions, planned decline system and proposed drilling.

Drill holes have been planned on 50m spaced lines at 50m centres on vein.

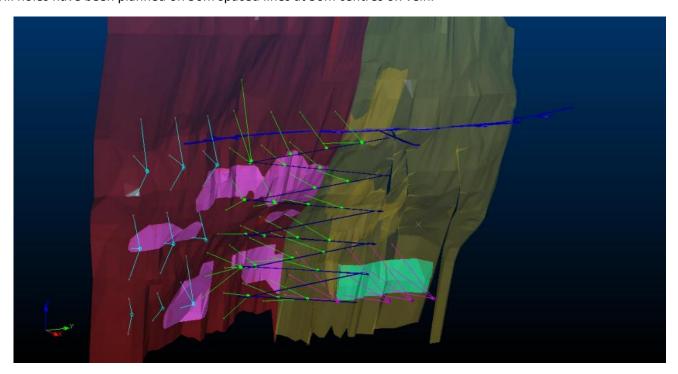


Figure 4- Perspective view from footwall side of Dubbo 'ore' (pink), Bonanza 'ore' (cyan), vein model and proposed drilling. 8 Level and planned decline are shown in blue

The following assumptions were made in determining the likely production target:

#### **Mining Factors**

**Cut off grades** - these were based on an 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. These cut off grades have been calculated for each portion of the resource depending on the individual grade/tonnage relationship of the block.

**Mining Method** - Sub-level stoping is selected as the most appropriate mining method which offers the flexibility to adapt to both mechanised and traditional drill and blast techniques. Costs and tonnage for excavations required to access each zone, appropriate to the intended method, have been factored based on output from the pre-feasibility study design work;

**Dilution** – Planned dilution of 15% has been included in the modelled stope wireframes. An additional 6% of total stope tonnage has been allowed as "unplanned dilution" to allow for scaling etc.

**Fault losses-** a 10% discount to resources is applied to account for ore that will be lost through faulting and other geological discontinuities;

**Mine Recovery** – a 10% loss of metal has been allowed for in the calculations to account for ore permanently locked up in stopes.

**Minimum Mining Widths** - No minimum mining widths have been applied as all veins modelled are equal to or exceed 1.0m in width which is acceptable for removal by the envisaged mining method. Visual inspection of existing stopes indicates that stope widths of <0.6m are attainable within this environment.

**Utilisation of Exploration Targets** - The study has focused primarily on extracting ore contained within the identified Inferred Resources. No exploration targets are included in the production target.

**Engineering Infrastructure requirements** - Preliminary design of all supporting infrastructure including power supply, compressed air and water reticulation, ventilation and ore transport is considered and quantified in the study.

#### **Metallurgical Factors and Assumptions**

The study proposes gold recovery via a gravity concentration and flotation system. This is supported by testwork carried out on Talisman ore by Pocock and Simpson in December 2017 and announced to the market on 22 March 2018. This testwork concluded that gold recovery exceeding 94% is achievable through this process. A recovery factor of 90% is applied in the study to reflect the likely lower silver recovery through the process.

#### **Environmental**

The company currently hold resource consent for a bulk sampling programme, this consent considers the likely environmental impact of the operation and concludes that the effects would be no more than minor. The effects of the larger operation are similar to those inherent in the bulk sampling project and no further adverse effects are likely.

#### Infrastructure

Talisman is situated within a well-developed area with sufficient accommodation available. The site has a reasonable infrastructure as a result of being an active mine for more than a century. The hard stand area is connected to the main tarred road via a gravel road considered adequate for truck sizes up to 10t. 11kVa power is available to site but will need to be reconnected, sufficient water is available on site to support the mines requirements

#### Costs

Costs associated with provision of capital infrastructure were derived from cost estimates compiled for the Pre-Feasibility study and factored to take account of additional volumes and excavation sizes. Operating costs were estimated from first principle based on costs for employment, personnel training, security, consumables, transport, administration, power, water and other services.

#### **Commodity Prices**

Forecast commodity prices have been taken from Consensus Economics Inc.'s Energy & Metals Consensus Forecasts, which surveys more than 40 energy and metals analysts every month for a range of commodity price forecasts. Long term nominal annual average forecasts for gold range from US\$1,334/oz in 2018 to US\$1,374/oz in 2022, with longer-term (2023-2027) averaging US\$1,440/oz.

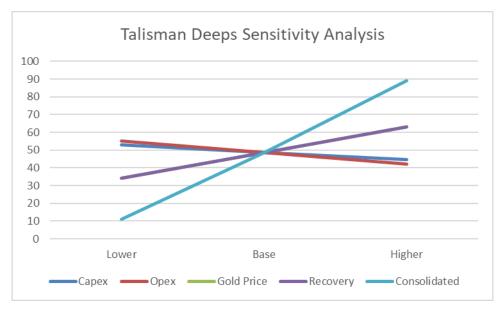
A comparison was made with forecasts drawn from The Economy Forecast Agency, while there were variations in annual forecasts, overall, the two forecast sources resulted in insignificant difference to the financial model.

Key project metrics – Gold Price, Opex, Capex and production- were varied in the following ranges:

- Gold price -10% to +10%
- Capex -20% to +20%
- Opex -10% to +10%
- Production -10% to +10%
- A consolidated assessment with all variables in the low and high ranges.

The results of the above are tabulated below and depicted graphically in Figure 5. This analysis indicates that even with all variables negative (gold price and production below expectations, all costs above expectations), the project meets the hurdle rate of 12%.

	NPV <sub>12</sub> % (NZD millions)		
	Lower Base High		Higher
Capex	52.9	48.7	44.5
Opex	55.3 48.7 42.		
Gold Price	34.3	48.7	63.1
Recovery	34.2	48.7	63.2
Consolidated	11.1	48.7	89.2



#### **Competent Persons Statement**

The information in this report that relates to exploration results, exploration targets and mineral resources is based on information compiled by or supervised by Mr Murray Stevens and Mr Wayne Chowles. Mr Stevens is a consulting geologist and director of New Talisman Gold Mines Ltd, who is a corporate member of the AuslMM. Mr Stevens has sufficient experience which 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".

Mr Chowles is a Mining Engineer and member of the AusIMM. Mr Chowles is a full-time employee of New Talisman Gold Mines Limited, he has sufficient experience which 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".

Both Mr Chowles and Mr Stevens consent to the inclusion in this report of the matters based on his information in the form and context in which it appears.

#### **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 and 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 New Zealand's highest-grade underground gold mine, a JORC 2012 compliant mineral resource of over 427,000 ounces au/eq at an average above 15 gt AU/eq and a JORC compliant reserve statement. The company owns 100% exploration permit Rahu, 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.

#### **Cautionary Statement for Public Release**

Certain information contained in this public release may be deemed "forward-looking" within the meaning of applicable securities laws. Forward-looking statements and information relate to future performance and reflect the Company's expectations regarding execution of business strategy, business prospects and opportunities of New Talisman Gold Mines and its related subsidiaries. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance are not statements of historical fact and may be forward-looking statements. Forward-looking statements are subject to a variety of risks and uncertainties which could cause actual events or results to differ materially from those expressed in the forwardlooking statements and information. They include, among others, the accuracy of mineral reserve and resource estimates and related assumptions and inherent operating risks. There are no assurances the Company can fulfil forward-looking statements and information. Such forward-looking statements and information are only predictions based on current information available to management as of the date that such predictions are made; actual events or results may differ materially as a result of risks facing the Company, some of which are beyond the Company's control. Although the Company believes that any forward-looking statements and information contained in this press release is based on reasonable assumptions, readers cannot be assured that actual outcomes or results will be consistent with such statements. Accordingly, readers should not place undue reliance on forward-looking statements and information. The Company expressly disclaims any intention or obligation to update or revise any forward looking statements and information, whether as a result of new information, events or otherwise, except as required by applicable securities laws. The information contained in this release is not investment or financial product advice.

# Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Channel sampling of Levels 7, 7A, 8 and Woodstock of the Talisman Mine and 5A level of the Crown Mine was undertaken 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 the geology of the vein width. Where vein width is less than 1 metre samples restricted actual vein width. Where greater than a metre sample widths generally are 1 metre and no more than 1.4 metre sample width.</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 chance of contamination.</li> <li>To ensure representivity, care was taken to ensure equal-mass extraction along the entire channel.</li> <li>Diamond core sampling, based on determination of mineralization from logging, all core halved using diamond saw, mineralized intervals sampled on nominal 1m lengths or to geological boundaries. Remainder of non mineralised material sampled on 2m intervals.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul> <li>Underground Longyear LM55 electric wireline rig used with a LM75 power pack.</li> <li>Diamond core all HQTT to target depths. In rare instances where ground conditions dictated the drill diameter was reduced to NQ and core size was NQTT.</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.</li> <li>Some 5 holes were drilled using a small conventional Kempe rig in the Woodstock section.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Core size was LTK60 core which is larger than NQTT core and slightly less than HQTT drill core.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Diamond core was measured by drillers on site on a run by run basis and again by site geologist who recorded run length, measured core recovered and calculated recovery. These data then entered into spreadsheets and the drill database.</li> <li>Use of triple tube coring maximizes core recovery and ensures maximizing core integrity.</li> <li>In the case of the conventional core from the Kempe rig, core was carefully extracted from the core barrel to maximize core integrity.</li> <li>No known sample bias is likely to have occurred using the sample techniques employed.</li> <li>Core recovery for the Kempe rig holes averages 92.8% (55.55m total metres).</li> <li>Core recovery for the 18 wireline holes averages 96.43% (1058.55m total metres).</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>A comprehensive system of logging procedures were used to a level of detail to support appropriate Mineral Resource estimation.</li> <li>Core logging follows detailed regime of geological logging, noting core orientations of structures, lithology, mineralization, structure, core photography, geotechnical logging undertaken by experienced field geologists and senior geologists.</li> <li>All data were entered into spreadsheets using laptops producing descriptive and graphic logs.</li> <li>All ~1,100m of core was logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul> <li>Core 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>Representivity of sub-sampling was ensured by using a set of QA measures recommended by independent consultants RSG Global who reviewed the procedures.</li> <li>Quality control included field duplicates,(split from first coarse crush) which</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/secondhalf sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>were taken every alternate 10th sample, and a preparation duplicate, (split from fine grind) taken every alternate 10th sample.</li> <li>Results show good correlation between core duplicates/originals and coarse crush duplicates/originals.</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> <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> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>All assays including the drill data used from past explorers were carried out by certified assay laboratories. NTL used 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 0.01ppm. This is a total assay technique and considered appropriate.</li> <li>The quality control procedures used include the following:         <ul> <li>Blanks of barren material were introduced every 30 samples, and certified reference materials, obtained from RockLabs were inserted every 10th 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>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)</li> <li>No QC was included for historic sample results from the raise sampling programmes of the early 20th century, which are recorded as value in pounds, shillings and pence and plotted on mine plans signed by the mine manager of the day.</li> <li>Not possible to know what validation process was used on historic data. However, plans are signed by the mine manager of the day.</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>These samples are from the zones modelled and recorded on the mine plans</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.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Initially, significant intervals were calculated manually but subsequently checked and revised using the compositing functions in CAE software product Down Hole Explorer and also within Datamine Studio EM software. This has been carried out by company personnel and independently.</li> <li>With regard to the historic samples it is not possible to know what validation process was used at the time. However, plans are signed by the mine manager of the day. In addition, a series of samples from the deep levels of the Bonanza Zone are located in Auckland Museum.</li> <li>These samples are from the zones modelled and recorded on the mine plans.</li> <li>The historic channel samples all have sample widths recorded indicating they were collected as proper channel samples 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.</li> <li>Moreover, the recorded production from those levels and the tonnages recorded are broadly consistent with the depletions modelled from NTL's assessment of the mined stopes.</li> <li>NTL have taken a conservative approach; while the data density of the historic sampling would be sufficient to allow classification as Measured Resources NTL have elected to classify them in the Inferred category.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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>	<ul> <li>A levelling exercise was initially conducted in 8 Level for survey control with a datum established outside No8 Level.</li> <li>All samples were surveyed to ensure proper XYZ control for modelling purposes.</li> <li>All channel samples were surveyed using peg ledgers and offsets. Each sample recorded collar position, sample length and orientation to create</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>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>A full mine survey using a registered mine surveyor was completed and all sample point surveys adjusted accordingly on the basis of this survey.</li> <li>Historic samples that have been used in the resource estimate were captured from scanned historic mine plans and checked against existing databases. These were then georeferenced to match the geological model wireframe. In most cases collar positions were within 1 to 2 metres of the wireframe and were adjusted accordingly.</li> <li>Grid system used historically was Mt Eden Circuit.</li> <li>NTL used NZMG(1949) and converted all earlier data to this grid system.</li> <li>Topographic and survey control is considered adequate for the purpose that the data is being used.</li> </ul>
Data spacing and distribution	<ul> <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 appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Channel samples were generally taken across the backs of exposed veins were available at 5m intervals. The spacing was determined by comparing earlier data taken by the previous mine owners at 2.5m intervals along strike. It was found that the 5m spacing was adequate and gave comparable results.</li> <li>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>A 25m grid drill pattern was designed in the Dubbo zone where NTL drilled the majority of its holes. The pattern was designed to extend beyond known assay data points in earlier drill holes and channel samples and to infill where appropriate to get the required density of data for resource estimation.</li> <li>The 2263 historic channel samples are generally close spaced ranging from less than a metre to around 1.5m apart. They are mostly taken up raises with raises generally around 40 to 80m apart.</li> <li>In the Dubbo Zone 767 historic channels range from 0.15m to 3.65m and average 1.03m wide.</li> <li>In the Talisman and Bonanza Zone 1374 historic channels range from 0.15m</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>to 3.65m and average 1.14m wide.</li> <li>In the Woodstock Zone 122 historic channels range from 0.15m to 2.44m and average 1.29m wide as single value assay intervals averaging just over a metre and compositing was not deemed appropriate.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <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 channels orientation is reflected in the survey information and is taken into account in the modelling software.</li> <li>Drill holes were designed to intersect mineralised structures orthogonal to strike and dip where possible. In some instances, access issues meant that holes had to be drilled from the hanging wall side and hence some intersections were oblique but again this is accounted for by the software to reflect true width.</li> <li>Historic channel sample data had no survey information other than collar coordinates and channel sample length. The Competent Persons take the view 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. Hence, historic samples are oriented in the databases at an azimuth of 0950 and a dip of -200 reflecting the orientation of the main structures.</li> <li>Sampling bias based on the knowledge of the structure is considered unlikely.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples are 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 are prepared for dispatch to the assay laboratory. At night the facility is locked and during the drill programme security patrols used.</li> <li>Once samples are prepared they are transported the approx. 100m to the SGS assay facility for preparation and analysis.</li> <li>NTL has a system of order and dispatch numbering for sample tracking.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>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, Australian Consolidated Minerals, (Waihi Gold) and Freeport MacRohan 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>
Audits reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>RSG Global reviewed the QAQC procedures for the Talisman project in 2005 and these same procedures. These procedures involve survey control, check sampling, use of standards and blanks and umpire sampling at independent laboratories. This is in addition to assay laboratories own internal QAQC.</li> </ul>

# Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <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 m3 per annum.</li> <li>Tenure is secure at time of reporting.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <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</li> </ul>

Criteria	JORC Code explanation	Commentary
		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.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <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.</li> <li>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>
Drill hole Information	<ul> <li>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:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> <li>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.</li> </ul>	<ul> <li>New Talisman Gold Mines Ltd has 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 in the development of the resource model.</li> <li>There are a total of 2685 drill hole, recent channel and historic channel collar points in the database and 7117 assay data points. These include 109 drill hole collars and 4100 drill assays, 505 recent channel sample collars and 931 channel assays.</li> <li>Compiled in the following tables are some of the key drill hole sample information.</li> <li>Due to the large amount of data it is impractical to tabulate it all in this set of tables. A full list of the database is appended to the technical report entitled "TALISMAN DEEPS PROJECT, MINERAL RESOURCE POTENTIAL AND ESTIMATES, MINERALS MINING PERMIT 51326"</li> <li>Key representative drill hole information is tabulated in the following tables</li> </ul>

Criteria	JORC Code explanation	Comn	nentary								
		Hole No	East NZMG	North NZMG	RL (masl) F	rom (m) T	o (m)	Length (m)	iold g/t	Silver g/t	Sold Equiv Area
		BH07	2751319.2	6414884.0	172.97	0.00	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		12.16	9.10	12.45 Dubbo
		BM38				16.00	17.00		21.70	718.00	44.40 Dubbo
		BM39	2751299.4	6414704.0	177.30	14.55	15.85		36.08	467.00	50.84 Dubbo
		BM40A	2751300.8	6414702.1	176.10	16.00	17.00		3.30	4.10	3.43 Dubbo
		BM40A				22.25	23.30		4.58	21.40	5.26 Dubbo
		BM43	2751320.0	6414686.4	179.00	25.50	26.90		2.06	167.00	7.34 Dubbo
		TM002	2751317.6	6414687.9	177.26	46.30	49.10		40.86	91.71	43.76 Dubbo
		TM006	2751310.3	6414686.4	177.19	35.90	36.80		3.98	200.00	10.30 Dubbo
		TM007A	2751324.0	6414686.4	176.55	61.00	62.00		3.94	134.00	8.18 Dubbo
		TM009	2751296.5	6414727.8	177.23	7.00	8.00		2.08	3.90	2.20 Dubbo
		TM010	2751309.1	6414723.0	176.35	32.80 33.80	37.05 34.55		1.62 3.93	18.83	2.22 Dubbo
		TM010 TM011	2751309.1	6414723.0	175.65	56.50	58.00		8.95	26.00 131.53	4.75 Dubbo 13.11 Dubbo
		BH11	2751309.1	6414723.0	173.63	23.65	25.20		1.92	4.80	2.07 Woodstock
		BH16	2751338.1	6414311.2	165.16	0.00	6.50		7.85	117.90	11.57 Woodstock
		BH19	2751204.0	6415487.2	196.22	31.50	35.00	_	2.42	29.39	3.35 Woodstock
		BH2	2751211.3	6415355.7	164.35	25.95	27.15		2.31	12.50	2.71 Woodstock
		BH20	2751237.2	6415451.2	196.22	12.60	13.40		3.85	5.00	4.01 Woodstock
		BH26	2751279.8	6415227.4	28.60	26.80	28.60		4.26	20.56	4.91 Woodstock
		BH4	2751260.2	6415328.6	164.53	11.90	12.85		3.08	10.22	3.40 Woodstock
		KP001	2751288.7	6415256.6	165.28	6.10	14.70		1.39	8.31	1.65 Woodstock
		KP002	2751283.7	6415278.7	165.16	4.50	5.10		3.20	74.00	5.54 Woodstock
		KP002B	2751283.7	6415279.1	165.54	4.95	7.80		13.35	103.75	16.63 Woodstock
		KP003	2751293.6	6415240.0	166.04	5.90	10.55		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
Data	In reporting Exploration Results, weighting averaging techniques,	• Ch	annel sar	nples are	erecord	ed as c	rillho	les which	n along	g with o	drillhole data
	maximum and/or minimum grade truncations (eg cutting of high	we	re length	weighte	d down	hole.					
aggregation	grades) and cut-off grades are usually Material and should be stated.		_	_			nlied ·	to deterr	nina ci	gnifica	nt
methods					_	-	-			_	
	<ul> <li>Where aggregate intercepts incorporate short lengths of high grade</li> </ul>										corporated
	results and longer lengths of low grade results, the procedure used for	wh	ere it no	t result ii	n the int	erval c	veral	I falling b	elow	cutoff.	
	such aggregation should be stated and some typical examples of such	• WI	nere high	grade sa	amples f	orm pa	art of	an overa	ll inter	section	n of lower grad
	aggregations should be shown in detail.		_	_	-	-					sent the overal
					-		-		. 10 1111	si ehi e:	Sent the overa
	<ul> <li>The assumptions used for any reporting of metal equivalent values</li> </ul>	wie	dth of int	ersectior	n ot sign	iiticant	grade	€.			

Criteria	JORC Code explanation	Commentary
	should be clearly stated.	<ul> <li>For instance; Hole TM002 assayed 2.22g/t Au_equiv over 4.25m and included 0.75m at 4.75g/t Au_equiv.</li> </ul>
		<ul> <li>It was decided to use gold 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. We know that from 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 [Au g/t+(Ag g/t*0.031609).</li> </ul>
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <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>
Diagrams	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.	These are presented in the Public Report that this table accompanies and in the full Talisman Deeps supporting documentation.
Balanced reporting	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	<ul> <li>All significant results above the cutoff grade of 0.5g/t Au are reported in the tables above and in the accompanying Public Report. All results can be found in the spatial data package that accompanies this Report.</li> </ul>

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<ul> <li>Exploration Results.</li> <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> <li>A comprehensive summary a previous exploration results, consultant reviews, geophysics, surface sampling, geological mapping is presented in the accompanying Report.</li> <li>Various metallurgical test work has been carried out that show the ore is amenable to cyanide extraction and not refractory. As the project moves into the bulk sampling phase more metallurgical work will be conducted and the results used to optimize recoveries.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg 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> <li>Further drill testing and channel sampling to increase the resource is planned. This will involve underground drilling and sampling drives during the bulk sampling programme. This will be part of the feasibility programme that has been initiated with mine support and infrastructure being established currently.</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
Database integrity	<ul> <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> <li>Data was initially captured on paper logs and then entered into excel spreadsheets 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 Excel and in Datamine Studio EM were used during the estimation process.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Mr Stevens has been involved with the project at several stages since 1992 and is familiar with surface geology, underground geology, historic core and NTL drill core. He managed the underground sampling programmes and geological modelling including the historic geology and sample data and is familiar with all aspects of the mine.</li> <li>Mr Chowles has been the General Manager of operations since 2012 and is</li> </ul>

Criteria	JORC Code explanation	Commentary
		the author of the reserves statements and prefeasibility studies He is currently implementing the bulk sampling programme at the mine and is very familiar with all aspects of the project.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>There is enough continuity based on drill hole geology, surface and underground mapping, geophysics and geochemistry to have confidence in the continuity of the geology for areas estimated.</li> <li>Geological interpretation of the Maria Vein and the ore zones within it have been determined by compiling all mapping and drill hole data completed by NTL and by detailed digitizing of georeferenced historic mine plans including vein positions and mapped widths, including faults on a level by level basis.</li> <li>The Competent Person has reviewed alternative geological interpretations and these are not considered to have any adverse impact on the MRE.</li> <li>The geology has formed the basis to create domains to constrain the MRE process.</li> <li>Vein positions and variability were checked against several of the levels where NTL had its own data to check consistency.</li> <li>This was used as the basis for constructing sections at 10m and 20m intervals along strike interpreting the position and vein thickness of the Maria Vein along its known strike length.</li> <li>These were then wireframed to and verified to form enclosed vein models suitable for estimation purposes.</li> <li>Historic data points had been previously captured by lan Brown and associates in the late 1980s. These data were converted to NZMG coordinates and imported into Datamine Studio EM software. Their positions were checked against digital stope plans and against historic long sections of stope plans showing the raise sample positions.</li> <li>Position adjustments were made to ensure data points lay on the raise positions within the model. This included re-projecting channel collar positions onto the vein wireframe</li> <li>The Competent Person has reviewed alternative geological interpretations and these are not considered to have any adverse impact on the MRE</li> <li>The geology has formed the basis to create domains to constrain the MRE</li> </ul>

Criteria	JORC Code explanation	Commentary
		process
Dimensions	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.	<ul> <li>The Maria Vein model is over 1300m long and has been extended to depth ranging from 200 to over 300m below sea level.</li> <li>This is on the basis of locating and plotting drill hole data from the early 20th century where, although there is no assay data, there is detailed geology showing positions of the Maria Vein at least 100m below 15 Level.</li> </ul>
Estimation and modelling techniques	<ul> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the</li> </ul>	<ul> <li>The wireframe models of the Maria Vein were filled with 10m by 10m by vein width blocks utilizing sub-cell splitting.</li> <li>Variography determined that that an anisotropic semi variogram model with a range of 12m along strike and 36m on the dip of the vein was appropriate.</li> <li>Variography determined that the search ellipsoid was best oriented at -60 degrees +/- 20 degrees. This corresponds to visually determined trends in the orientation of known high grade shoots.</li> <li>An overall wireframe model for the Maria Vein was produced but, based o geology, has been subdivided into 3 separate geological domains that correlate with the Dubbo Zone, the Talisman-Bonanza Zone and the Woodstock Zone. These domains were constructed and estimated separately.</li> <li>These wireframes were then filled with block model cells orientated orthogonally. And the following estimation parameters applied.</li> </ul>
	<ul> <li>resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	Block Model And Estimation Parameters Model And Estimation Parameter Values
		Parent Block Block Cell Size 10m x 10m x vein width
		Sub Cell Splitting  Auto fill to maximum of  5m x 5m x vein width

Criteria	JORC Code explanation	Commentary	
		Estimation Method Ordinary kriging and Inverse Distance Squared	
		Density 2.53 t/m3	
		Search radii (measured)  12 to 15m on strike, 3 on dip	6m
		Search radii (indicated) 2 x measured	
		Search radii (inferred) 3 x measured	
		Search ellipsoid -60+/-20	
		Minimum no of samples (measured) 3	
		Search Volume Range	
		Minimum no of samples (Inferred) 3	
		Maximum no of samples (Indicated and 20 Inferred)	
		Search radii for geological potential Limits of model	
		Top cut None	
		<ul> <li>Variography yielded an anisotropic structure with a longer range down than along strike, this is supported by visual inspection of the grade distribution where variability is more apparent along strike.</li> <li>The estimation was initially carried out using Ordinary Kriging and then Inverse Distance Squared as a check estimate This was found to be with 2% of each other in terms of total ounces of gold.</li> </ul>	

Criteria	JORC Code explanation	Commentary
		<ul> <li>Historic mine plans give a detailed view of areas stoped. Wireframe models of the stopes were produced and the gold content in them interrogated. The estimated gold mined from these stopes was subtracted from the overall resource gold equivalent content.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Estimates based on dry tonnages.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>Cut off grades were based on a preliminary assessment 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.</li> <li>This was determined as a 3g/t Au-eq lower cut.</li> <li>No upper cut has been applied</li> </ul>
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, 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.	<ul> <li>Preliminary stope design was carried out in Mine2-4D in the prefeasibility study in 2013 by constructing wireframe strings around the geological block model encompassing the economic portions of the Resource as known at that time. Waste material necessary to the extraction process was included in the wireframes; the resultant wireframe was evaluated against the applicable block model to determine volume and metal content.</li> <li>An option analysis identified sub-level stoping as the most appropriate mining method which offers the flexibility to adapt to both mechanised and traditional drill and blast techniques.</li> <li>Excavations required to access each zone, appropriate to the intended method, has been designed inclusive of drives, traveling ways and ventilation passes.</li> <li>This deposit is a narrow vein gold deposit. Maximum stope span has been limited to 35m. Strike and dip pillars have been designed to a hydraulic radius of 1.4 which is well above the existing HR of 0.9 observed in stable pillars immediately adjacent to the planned stopes.</li> <li>The Mineral Resource model is described in the first section of this table.</li> <li>Dilution necessary to removal of ore has not been determined for this new resource estimate and will be as part of the feasibility study.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>The resource modelling process includes some dilution as some blocks include wall rock material.</li> <li>No minimum mining widths have been applied as all veins modelled are equal to, or exceed 1.0m in width which is acceptable for removal by the envisaged mining method.</li> <li>Visual inspection of existing stopes indicates that stope widths of &lt;0.6m are attainable within this environment.</li> </ul>
Metallurgical factors or assumptions	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.	<ul> <li>Detailed 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>
Environmen- tal factors or assumptions	<ul> <li>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.</li> </ul>	<ul> <li>The deposit lies on DOC land under MP51326 granted to New Talisman Gold Mines Ltd.</li> <li>Consents for bulk sampling up to 20,000m3/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>
Bulk density	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation</li> </ul>	<ul> <li>The bulk dry density used in the estimate is 2.53g.cm-3.</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.cm3.</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
	process of the different materials.	
Classification	<ul> <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 (ie 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> <li>The models were run using the search parameters described in the preceding sections.</li> <li>Measured Resources were applied to the first pass search parameters, although it was decided to only apply the Measured and Indicated categories to areas where NTL's data only was used.</li> <li>While the data density for the historic data is sufficiently closely spaced to be considered measured, due to the uncertainty around QAQC it was decided to class this as Inferred.</li> <li>Indicated resources were determined a 2 times the search ellipsoid and Inferred at 3 times.</li> <li>The model was rerun using the extents of the wireframe to determine mineral inventory or geological potential beyond the measured, indicated and inferred resource extents ie areas within the geological model that with further exploration could be upgraded to fall within an appropriate resource category.</li> <li>This geological potential constitutes an Exploration Target as defined in the JORC code 2012 and any resource potential may not be realized in part or in whole.</li> <li>In the view of the Competent person this fairly represents the data and is considered conservative.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>The report and data has been peer reviewed by NTL and an independent geological consultancy.</li> </ul>
Discussion of relative accuracy/confidence	<ul> <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> <li>The statement should specify whether it relates to global or local estimates,</li> </ul>	through applying the results of the estimate to the historically mined areas. The results indicate historic depletions at an average grade of 28.31 g/t $\Delta$

Criteria	JORC Code explanation	Commentary
	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.	
	<ul> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	