Market Announcement

ASX:NTL, NZX:NTL

FOR IMMEDIATE RELEASE



BONANZA RESOURCE UPGRADE DELIVERS BONANZA RESULTS

Commodity Exposure

GOLD and SILVER

Board and Management

Charbel Nader

Chairman/Independent Director

Matthew Hill

Chief Executive/Managing Director

Murray McKee

Independent Director

Murray Stevens

Non executive Director

Tony Haworth

Independent Director

Jane Bell

Company Secretary

Wayne Chowles

Chief Operating Officer

Ash Clarke

Chief Financial Officer

Capital Structure

Ordinary Shares on issue-2,076,995,855

Listed Options – 119,851,516 2 cent – expiring Nov 2017 Market Cap - \$47.7M NZD

Share Chart



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HIGHLIGHTS

- MAIDEN BONANZA RESOURCE OF 73,000 OUNCES Au/Eq
- HIGHEST GRADES RECORDED THUS FAR ON 2012 JORC RESOURCE UPGRADES AT 23.6g/t AuEq
- UNDERGROUND DEVELOPMENTS REACH 400m
- TOTAL JORC 2012 RESOURCES REACH 427,600 OUNCES GOLD EQUIVALENT, AN INCREASE OF 188% ON PREVIOUS ESTIMATES FOR THE SAME AREAS.

New Talisman Gold Mines Ltd (ASX:NTL, NZX:NTL) today announced another milestone with a substantial upgrade to its gold resources after the completion of the third module pertaining to the Talisman Deeps project in the Coromandel region of New Zealand. This module completes the initial resource upgrade of the Maria Vein Deeps zones. Analysis of the Crown and Mystery Modules to comply with JORC 2012 reporting standards has commenced and is anticipated to take 3 months. Resource modelling of the Talisman and Bonanza Zones has resulted in quantifying of an Inferred resource of 73,601 oz gold equivalent (Au Eq) at a grade of 23.64g/t Au Eq. and brings the total JORC 2012 compliant resource estimate for the Maria vein to 427,600 Oz AuEq.

In the Bonanza and Talisman Zones a further area of 154,000m2 on the plane of the orebody has been identified as a Exploration Target. Information available indicates that this area is likely to yield a vein width of between 1.6m and 2.4m with mean AuEq grades ranging between 17.10g/t and 21.6g/t, for between 300,000 and 600,000 contained ounces. This target constitutes a global Exploration Target as defined in the 2012 JORC Code. The potential quantity and grade is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

The Bonanza and Talisman Zones were the most extensively mined of the four known zones in the Maria vein, and were the source of the bulk of the ore mined historically. The Inferred resource referred to in this announcement is contained in the lower reaches of the zone below 14 Level where little or no mining has taken place as such mining coincided with the first world war where many of the miners sadly never returned.

Matthew Hill CEO stated – "The final module for the first series of JORC 2012 forming Talisman deeps has clearly demonstrated the consistency of world class grades at Talisman which are amongst the world's highest. The high level of international and local interest from both an investor level and project level has been tremendous. Whilst we continue to finalise analysis on the remaining resource blocks to upgrade all resources to JORC 2012 our primary focus is completion of prospecting and forging ahead into the extraction phase which is expected to commence in December".



The updated resource table for the Maria Vein is shown below:

Table 1: Maria Vein Resources reported in compliance with the reporting standards set out in the 2012 version of the JORC code.

Mineral Resources	Total 2012 Compliant				
Category	Volume	Tonnes	Aueq g/t	Grams	Ounces
Measured	25,228	63,426	24.1	1,530,440	49,204
Indicated	19,804	49,733	8.0	398,618	12,816
Inferred	225,842	569,763	17.7	10,059,719	365,579
Total Resources	270,874	682,921	17.6	11,988,777	427,600

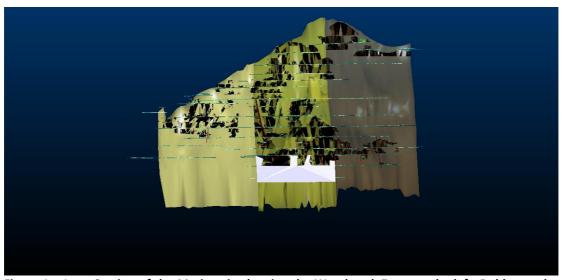


Figure 1 – Long Section of the Maria vein showing the Woodstock Zone on the left, Dubbo on the right and Talisman/Bonanza in the middle. The Bonanza inferred block is highlighted in white

A lower cut-off grade of 3.0g/t Au Eq was applied to reflect the mine cut-off grade estimated for the financial modelling in the 2013 prefeasibility study. It is important to note the previous 2004 resource was quoted with no cutoff, which demonstrates the robustness of the current JORC 2012 resource estimate.

Gold equivalents have been used as the historic data is expressed in bullion values. These have been converted to gold equivalents based on the gold price during the main historic mining period to 1919 where gold price was a constant £4.25 or USD20.67. All more recent exploration data has been converted to gold equivalents at the same metal prices for consistency of resource estimation and reporting.

Additional resources contained in the Mystery and Crown vein systems are tabulated below. These estimates have not yet been upgraded to comply with JORC 2012 reporting standards



and are reported here in compliance with JORC 2004. For ease of comparison these have been converted to reflect gold equivalent values using the same criteria as for the Maria vein resource estimate.

Table 2: Mystery and Crown Vein Resources reported in compliance with the reporting standards set out in the 2004 version of the JORC code

Mineral Resources	2004 Compliant Total				
Category	Volume	Tonnes	Aueq g/t	Grams	Ounces
Measured	15,657	39,300	6.5	257,354	8,274
indicated	19,124	48,000	6.7	320,089	10,291
inferred	44,223	111,000	6.6	735,686	23,653
Total resources	79,004	198,300	6.6	1,313,129	42,218

This brings the Total Mineral Resource estimate for all veins to 469,918 Oz AuEq as set out in Table 3 below

Table 3: Consolidated Mineral Resource Estimate for all veins

Mineral Resources	Total				
			Aueq		
Category	Volume	Tonnes	g/t	Grams	Ounces
Measured	40,885	102,726	17.4	1,787,794	57,478
Indicated	38,928	97,733	7.4	718,707	23,107
Inferred	270,065	680,763	15.9	10,795,406	389,232
Total Resources	349,878	881,221	15.1	13,301,906	469,818

In the Bonanza and Talisman Zones a further area of 154,000m2 on the plane of the orebody has been identified as a Exploration Target. Information available indicates that this area is likely to yield a vein width of between 1.6m and 2.4m with mean AuEq grades ranging between 17.10g/t and 21.6g/t, for between 300,000 and 600,000 contained ounces. This target constitutes a global Exploration Target as defined in the 2012 JORC Code. The potential quantity and grade is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Next Steps

The significant upgrade to the Mineral Resource estimate for the Talisman Mine presents your



company with a wealth of opportunity to expand operations. With the transition to Bulk Sampling expected in December 2017 we wish to accelerate the following:

Installing a concentrator/flotation plant offsite or underground. Test work completed to date indicates that a combination of gravity concentration and flotation will allow a high percentage of the gold to be recovered in approximately 20% of the tonnage. This will have the combined effect of producing a commercially saleable product while reducing surface transport costs. Over the coming months, as part of the larger prospecting effort, we intend gathering samples from underground to test and refine the design of this system.

Expanding the Bulk sampling Programme. The Talisman Deeps Resource Estimate has provided us with a wealth of information on the larger Maria orebody. This information has highlighted areas that could be included into the Bulk Sampling Project or form the basis for additional bulk sampling efforts..

Underground Exploration Drilling. The Company has identified a drill rig, sized appropriately to the dimensions of the mine workings, to conduct exploration drilling into some of the target areas identified above. This will enable us to upgrade the confidence of the resource estimate for inclusion into the updated Talisman Project Pre-Feasibility study. The availability of this drill will also allow on surface exploration of Taukani Hill currently being sampled where previous sampling provided bonanza grade chip samples at surface.

Charbel Nader Chairman "This is further confirmation of the quality of the asset the company is fortunate enough to be the custodian of. In a world where much attention is given to the latest in technology and products, people often forget that it is natural resources that make these possible, everything from the ubiquitous Iphone to the humble pad lock.

This wonderful asset that has given the community and region so much in the past ,is set to contribute to the community's future through new jobs and services. We look forward to advancing this asset to the next level and building on the legacy for the benefit of the community and our shareholders."

For further information please contact: CEO Matthew Hill on +64 217 95559 or matt@newtalisman.co.nz



Resource Estimate Methodology

The process of estimating the resources in the Talisman Deeps project revolved around incorporating NTL's extensive data from the upper levels of the Talisman Mine with the historic database and historic mine plans acquired in 2015.

This involved;

Scanning historic maps and digitising the old levels, stoped, (mined areas), quartz veins and faults to create a 3D model using several software packages but mainly Datamine Studio EM.

A series of cross sections at 10m to 20m intervals along 1300m of the Maria Vein were constructed from the vein positions mapped on the 16 Levels of the old mine. These were used to create a 3D solid model known as a wireframe. Into this model all the geochemical data was imported into its correct position in space with a majority of the gold mineralised portions lying within the wireframe.

These data were then evaluated within the wireframe model using a variety of geostatistical processes to develop a resource model showing the distribution, grade, and tonnages of mineralisation through the deposit.

Initially, there were concerns around the historic data which comprised several thousand channel samples taken in the early 20th century from the deep levels of the mine. The quality control and assurance procedures in place at the time that the samples were taken could not be directly verified, however, as the data sets were evaluated, it was noted that several of the maps from where the original data were derived were signed by the then mine manager. In addition, samples collected donated to the Auckland Museum came to the Company's attention. These were from the 11, 13 and 14 Levels of the Bonanza and Talisman Zones. These samples had gold and silver grades with them and were presented to the Museum by the Talisman Mine Superintendent. The character of the veins is similar to that observed by the Company in the high grade BM37 zone where electrum, (natural gold:silver alloy) is clearly visible and the grades are consistent with the values recorded in the historic channel samples.

The data spacing for this sampling ranges from less than a metre to around 1.5m and if QAQC in today's terms was available would almost certainly qualify as measured resources under the JORC 2012 Code. Moreover, there are historical production figures that are consistent with the grades in the sampling and the stopes from where the production occurred.

Therefore, on the balance of probabilities, the samples are considered valid and it was decided to model the resource here predominantly at inferred status under JORC 2012 until such time that the Company can sample the areas.

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 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 AusIMM. 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 MARKET ANNOUNCEMENT – DATE 2017



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 2300 shareholders who are mainly from Australia and New Zealand. 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. Its gold properties near Paeroa in the Hauraki District of New Zealand are a granted mining permit, including a JORC compliant mineral resource and a JORC compliant reserve statement within the original Talisman underground mine, and a binding Agreement for Newcrest Mining to spend up to \$5M on an adjacent exploration permit along strike from the mine, Rahu. The company is now advancing its plans to develop the mine, and advance the exploration project.



Technical summary

1. Regional Geology

The Talisman mining permit is located within the southern part of the Coromandel Volcanic Zone (CVZ), a north-northwest trending zone of Miocene to early Quaternary sub-aerial calcalkaline volcanics (see figure 1). The permit area covers part of the Karangahake gold-silver deposit, one of the major deposits 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.

The volcanic rocks have been grouped into andesite and dacite, with associated intrusive rocks of the Miocene to Pliocene aged Coromandel Group and rhyolite of the late Miocene to Quaternary aged Whitianga Group. A north-northwest trending, block faulted basement of Mesozoic greywacke underlies the volcanic rocks. This basement only crops out in the northern part of the CVZ although reports from early 20th century deep drilling at Karangahake mention intersecting greywacke beneath the No 16 level of the Talisman Mine.

Ash and pumice that erupted from the Taupo Volcanic Zone and Mayor Island over the last 100,000 years blanket much of the permit area to a depth of up to 8m, which is an impediment to exploration.

2. Project Geology

The area is dominated by andesite and dacite of the Miocene aged Waipupu formation, part of the Coromandel Group, and the lithologies that host most of the known mineralisation. They consist of phyric plagioclase two-pyroxene andesites and dacites that are frequently autobrecciated and in places columnar jointed.

At Mt Karangahake, the Coromandel Group rocks are overlain by a 200m thick rhyolite cap, correlated with the Maratoto Rhyolite and the Rahu Formation to the north. These rocks are younger than the andesitic Waipupu Formation, but are correlated with the Waiwawa Subgroup. The local basement is Mesozoic aged greywacke.

At Rahu, which represents the northern strike extent of the Karangahake mineral deposits, Coromandel Group rocks are exposed in the southern and central parts, but much of the prospect is blanketed by rhyolitic volcanics and lake sediments of the Rahu Formation. The elevation of the contact between Coromandel Group andesites and the rhyolitic rocks at Karangahake and Rahu indicates that Rahu may have been relatively downthrown by about 200m by a fault through the Karangahake Gorge. Unaltered flows of the Whakamoehau Andesite of the Omahine Sub-group are exposed in the northeast, where they overlap some of the rhyolitic Rahu Formation.

The project lies within a major north-northeast trending structural corridor that hosts several



other epithermal gold deposits including Golden Cross, Komata, Owharoa, Wharekiraponga and Onemana.

The main fault trends, as mapped from crush zones, underground mapping and air photos, are northwest, north-south, north northeast and east-west. The north-south and north-northeast faults and associated quartz veins are earlier than the east-west and northwest faults, with the latter usually displacing the major quartz veins by no more than a few metres (but up to 15 m has been observed). It has been postulated that the northwest structures, where the most recent movement is post mineral, may have been active before and during mineralising events, and provided the structural regime for the north to northeast emplacement of the mineralised quartz veins in dilatant zones.

3. Mineralisation

The Karangahake deposit is an epithermal quartz vein system, hosted mainly in andesite, and comprises two major known (Maria and Welcome/Crown) vein zones and a number of other vein zones, including the Mystery Vein and Rahu Ridge, within a 4km x 3km area of hydrothermal alteration.

The quartz vein system comprises a set of steeply to moderately west dipping, north-south to north-east trending, extensional quartz filled fissures. Mining has largely been confined to the Maria and Welcome/Crown veins, the most persistent of the fissure veins.

There is an extensive quartz vein stockwork developed in the silicified and clay altered rhyolitic cap on Mt Karangahake that predates the main gold mineralising event associated with the quartz fissure veins. The silicified and quartz veined rhyolitic tuff of the Rahu Ridge area to the north is interpreted as the strike extension of the mineralised system and has recently been shown to have significant gold/silver mineralisation.

The veins are reportedly deeply oxidised down to about the level of the Waitawheta River (40m RL) and contain bands and impregnations of limonite and manganese oxides.

The primary quartz sulphide mineralisation occurs in the lower levels of the Maria vein (below 0m RL) and the Welcome vein (below -90m RL) as banded quartz-rhodochroisite-calcite-sulphide vein filling. The sulphide bands are composed of sphalerite, galena, pyrite, chalcopyrite and electrum, and display the typical crustiform textures of epithermal ores.

3.1. Maria Vein

The Maria Vein has the largest recorded production. It has a known strike length of 1300 m, averages 2m to 3m wide and has a depth extent exceeding 700m. Its dip varies from 45oW to near vertical (80o 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.

Further north in Taukani Hill, the Maria vein was worked to a limited extent in the Ivanhoe



workings in the near surface oxidised zone. Low grade sections of vein, between and within the ore shoots were not stoped. Some of the ore shoots are bounded by post vein east-west faults.

In the upper levels of the mine (above 120m RL, No10 level), the vein is leached and completely oxidised, consisting of banded quartz with limonite and manganese oxides.

The average Au:Ag ratio of the oxidised ore is 1:4 and the gold and silver occur as electrum associated with goethite. A zone of partly oxidised sulphide ore, with Au:Ag ratios between 1:10 and 1:20, extends over a vertical interval of about 150m from No10 level to No13 level. The ore consists of sphalerite-galena-pyrite-chalcopyrite-electrum, with or without acanthite, as primary sulphides with minor amounts of goethite and manganese oxides. There are patches of very rich secondary ore, especially around No11 level. Silver values are very high in this ore (up to 2.4% Ag). In the primary sulphide ore zone below No13 level (-80m RL), the minerals are sphalerite-galena-pyrite-chalcopyrite-electrum with quartz and rhodochroisite. No acanthite is seen and this is reflected in higher Au:Ag ratios of between 1:3 and 1:1.

Below No14 level, the quartz sulphide mineralisation appears to decrease in electrum content, and a 1973 drill hole intersected the zone at -190m RL, below the Waitawheta River.

4. Sampling Techniques

4.1. Historic sampling

The historic channel sampling that has been captured off stope plans on the Maria Vein from the Talisman Gold Mining Company all have grades expressed as bullion value in pounds shilling and pence and sample intervals in feet and inches.

These are plotted on long section where stopes are dated as at 1919.

It is not possible to know exactly how these 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-2003 sampling

Sampling by NTL predecessor company Heritage Gold was mainly on a reconnaissance basis and included surface and underground channel and continuous chip samples. These have not been used for resource estimation.

Channel sampling by NZ Gold Fields, Cyprus Mines Corp, Freeport, Homestake and Southern Gold have not been used in the resource estimation.

Much of the underground drilling was carried out under the Cyprus/NZ Goldfields joint venture. Cyprus at the time had a well-established sampling protocol with use of standards and duplicates as was used by them at the Golden Cross mine in the nearby



Waitekauri Valley.

4.3. Post-2003 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. 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.

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.

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.

To ensure representivity, care was taken to ensure equal-mass extraction along the entire channel.

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.

4.4. Drilling techniques

An underground Longyear LM55 electric wireline rig used with a LM75 power pack to drill 18 holes.

Diamond coring was all triple tube HQTT with a 1.5m core barrel to target depths. In rare instances where ground conditions dictated the drill diameter was reduced to NQ and core size was NQTT.

All core was oriented using plasticine and holes surveyed with Eastman multi or single shot cameras every 25m and at end of hole.

Some 5 holes were drilled using a small conventional Kempe rig in the Woodstock section. Core size was LTK60 core which is larger than NQTT core and slightly less than HQTT drill core. This core was not oriented and only collar positions were surveyed as holes were generally less than 15m.

4.5. Sample recovery



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.

Use of triple tube coring maximizes core recovery and ensures maximizing core integrity. In the case of the conventional core from the Kempe rig, core was carefully extracted from the core barrel to maximize core integrity.

No known sample bias is likely to have occurred using the sample techniques employed.

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

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.

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.

The geology has formed the basis to create domains to constrain the MRE process.

Vein positions and variability 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.

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 of 1300m.

These were then wireframed to and verified to form enclosed vein models suitable for estimation purposes.

6. Estimation

The wireframe models of the Maria Vein were filled with 10m by 10m by vein width blocks utilizing sub-cell splitting.

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.

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.

An overall wireframe model for the Maria Vein was produced but, based on 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.

The estimation was initially carried out using Ordinary Kriging and then Inverse Distance Squared as a check estimate This was found to be within 2% of each other in terms of total ounces of gold. 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.

7. Classification Criteria

Only current sampling and drill hole data where verifiable QA/QC protocols were in place were used for estimation Measured and Indicated Resources, while the entire database, inclusive of historical data was included for the estimation of Inferred Resources.

The following classification criteria were applied:

Measured Resources – 3 samples within 1 variogram range

Indicated Resources – 3 samples within 2 variogram ranges

Inferred Resources – 3 samples within 3 variogram ranges.

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 3g/t Au for the Dubbo and Talisman Zones and 2.5g/t for the Woodstock Zone.

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

JORC CODE, 2012 EDITION - TABLE 1

Section 1 Sampling Techniques and Data

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

	<u>. </u>	IORC Code explanation	Commentary
3)	ciiteiia .	ione code explanation	Commentary
	Sampling Pechniques	 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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. 	 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. 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. 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. 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. To ensure representivity, care was taken to ensure equal-mass extraction along the entire channel. 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.
1	Orilling eechniques	 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). 	 Underground Longyear LM55 electric wireline rig used with a LM75 power pack. 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.



		OED MINES ENVITED
Criteria	JORC Code explanation	Commentary
		 All core was oriented using plasticine and holes surveyed with Eastman multi or single shot cameras every 25m and at end of hole. Some 5 holes were drilled using a small conventional Kempe rig in the Woodstock section. Core size was LTK60 core which is larger than NQTT core and slightly less than HQTT drill core.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 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. Use of triple tube coring maximizes core recovery and ensures maximizing core integrity. In the case of the conventional core from the Kempe rig, core was carefully extracted from the core barrel to maximize core integrity. No known sample bias is likely to have occurred using the sample techniques employed. 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).
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 A comprehensive system of logging procedures were used to a level of detail to support appropriate Mineral Resource estimation. 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. All data were entered into spreadsheets using laptops producing descriptive and graphic logs. All ~1,100m of core was logged.
Sub-sampling techniques	 If core, whether cut or sawn and whether quarter, half or all core taken. 	 Core was sawn in half, with one half taken for sampling, one half retained for reference logging, petrology, check logging, check



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Criteria	JORC Code explanation	Commentary
and sample preparation	 If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 Results show good correlation between core duplicates/originals and coarse crush duplicates/originals.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	 charge fire assay with AAS finish and a detection limit of 0.01ppm. This is a total assay technique and considered appropriate. The quality control procedures used include the following: Blanks of barren material were introduced every 30 samples, and



Criteria JORC Code explanation	Commentary
	 (e.g. no statistically relevant bias between the two sets of results) 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. Not possible to know what validation process was used on historic data. However, plans are signed by the mine manager of the day. These samples are from the zones modelled and recorded on the mine plans 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.
 Verification of sampling and assaying The verification of significant intersections by either independent of alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 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. 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. These samples are from the zones modelled and recorded on the mine plans. The historic channel samples all have sample widths recorded indicating they were collected as proper channel samples in a systematic manner. 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 modelled from NTL's assessment of the mined stopes.



	Criteria	JORC Code explanation	Commentary
	9		 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.
	Location of data points	 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. Specification of the grid system used. Quality and adequacy of topographic control. 	 A levelling exercise was initially conducted in 8 Level for survey control with a datum established outside No8 Level. All samples were surveyed to ensure proper XYZ control for modelling purposes. All channel samples were surveyed 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. Each drill hole collar was surveyed and downhole surveys recorded at 25m intervals using Eastman single or multi-shot cameras. A full mine survey using a registered mine surveyor was completed and all sample point surveys adjusted accordingly on the basis of this survey. 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. Grid system used historically was Mt Eden Circuit. NTL used NZMG(1949) and converted all earlier data to this grid system. Topographic and survey control is considered adequate for the purpose that the data is being used.
7	Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. 	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.



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Criteria	JORC Code explanation	Commentary
	Whether sample compositing has been applied.	 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. 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. 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. In the Dubbo Zone 767 historic channels range from 0.15m to 3.65m and average 1.03m wide. In the Talisman and Bonanza Zone 1374 historic channels range from 0.15m to 3.65m and average 1.14m wide. 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.
Orientation o data ir relation to geological structure	possible structures and the extent to which this is known, considering	 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. 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. Historic channel sample data had no survey information other than



Criteria	JORC Code explanation	Commentary
		collar coordinates and channel sample length. The Competent Persons take the view that standard mine sampling practice in the early 20 th 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 095° and a dip of -20° reflecting the orientation of the main structures. • Sampling bias based on the knowledge of the structure is considered unlikely.
Sample security	The measures taken to ensure sample security.	 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. 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. 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.
Audits reviews	or • The results of any audits or reviews of sampling techniques and data.	 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.



Section 2 Reporting of Exploration Results

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

Criteria	JC	PRC Code explanation	Commentary
Mineral tenement and land tenure status	•	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. 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.	 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. The Company operates under an access arrangement with the Minister of Conservation with an authority to enter and operate. 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. Tenure is secure at time of reporting.
Exploration done by other parties	•	Acknowledgment and appraisal of exploration by other parties.	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.
Geology	•	Deposit type, geological setting and style of mineralisation.	 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-



JORC Code explanation	Commentary
	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.
 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: easting and northing of the drill hole collar 	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.
 metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth 	There are a total of 2685 drill hole, recent channel and historic channel collar points in the database and 7117 assay data points. These inclu 109 drill hole collars and 4100 drill assays, 505 recent channel samp collars and 931 channel assays.
 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. 	Compiled in the following tables are some of the key drill hole sample information.
	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" Key representative drill hole information is tabulated in the following tables
	 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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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

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 Criteria
 JORC Code explanation
 Commentary

 Hole No BHO?
 East NZMG | North NZMG | RL (masl) | From (m) | To (m) | Length (m) | Gold g/t | Silver g/t | Gold Equiv | Area

 BHO8
 2751319.2
 6414884.0 | 172.97 | 0.00 | 1.55 | 1.55 | 14.33 | 2.82 | 14.42 | Bonanza

 BHO8
 2751378.4 | 6414905.3 | 172.75 | 6.55 | 8.00 | 1.45 | 2.12 | 7.33 | 2.35 | Bonanza

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

Data aggregation methods

- In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.
- Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the
- Channel samples are recorded as drillholes which along with drillhole data were length weighted down hole.
- A lower cutoff of 0.5g/t Au was applied to determine significant intersections. Occasionally short intervals below cutoff are incorporated where it not result in the interval overall falling below cutoff.
- Where high grade samples form part of an overall intersection of lower



Criteria	JC	ORC Code explanation	Commentary
	•	procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	grade material these also reported separately so as not to misrepresent the overall width of intersection of significant grade. • For instance; Hole TM002 assayed 2.22g/t Au_equiv over 4.25m and included 0.75m at 4.75g/t Au_equiv.
			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 because 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.
			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.
			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).
			Gold, with a price per ounce ratio of 65:1 to silver, contributes the most to the metal equivalent calculation and is thus the metal chosen reporting on an equivalent basis
Relationship between mineralisatio n widths and intercept lengths	•	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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').	 Only down hole lengths are reported. While generally holes transect the mineralized zones at right angles the downhole intervals can be slightly oblique. Differences in down hole intervals and true width are factored into the resource estimate based on the estimation methodology.



Criteria	JORC Code explanation	Commentary
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 Exploration Results. 	 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.
Other substantive exploration data	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.	 A comprehensive summary a previous exploration results, consultant reviews, geophysics, surface sampling, geological mapping is presented in the accompanying Report. 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.
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 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.

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	 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. Data validation procedures used. 	 Data was initially captured on paper logs and then entered into excel spreadsheets using standard logging templates to ensure consistency of data capture. Databases have been peer checked on a number of occasions over the duration of the permit. Data validation processes within Excel and in Datamine Studio EM



Criteria	JORC Code explanation	Commentary
		were used during the estimation process.
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	 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. Mr Chowles has been the General Manager of operations since 2012 and is 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	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. 	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.
	The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	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.
		The Competent Person has reviewed alternative geological interpretations and these are not considered to have any adverse impact on the MRE.
		The geology has formed the basis to create domains to constrain the MRE process.
		Vein positions and variability were checked against several of the levels where NTL had its own data to check consistency.
		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.
		These were then wireframed to and verified to form enclosed vein models suitable for estimation purposes.



Criteria	JORC Code explanation	Commentary
		Historic data points had been previously captured by Ian 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.
		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
		The Competent Person has reviewed alternative geological interpretations and these are not considered to have any adverse impact on the MRE
		The geology has formed the basis to create domains to constrain the MRE 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.	 The Maria Vein model is over 1300m long and has been extended to depths ranging from 200 to over 300m below sea level. 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.
Estimation and modelling techniques	 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. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. 	 The wireframe models of the Maria Vein were filled with 10m by 10m by vein width blocks utilizing sub-cell splitting. 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. 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. An overall wireframe model for the Maria Vein was produced but,



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Criteria JORC Code explanation

- The assumptions made regarding recovery of by-products.
- Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).
- In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
- Any assumptions behind modelling of selective mining units.
- Any assumptions about correlation between variables.
- Description of how the geological interpretation was used to control the resource estimates.
- Discussion of basis for using or not using grade cutting or capping.
- The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.

Commentary

based on 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.

 These wireframes were then filled with block model cells orientated orthogonally. And the following estimation parameters applied.

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
Estimation Method	Ordinary kriging and Inverse Distance Squared
Density	2.53 t/m ³
Search radii (measured)	12 to 15m on strike, 36m on dip
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



Criteria	JORC Code explanation	Commentary
		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
Moisture	Whether the tonnages are estimated on a dry basis or with natural	 Variography yielded an anisotropic structure with a longer range down dip than along strike, this is supported by visual inspection of the grade distribution where variability is more apparent along strike. The estimation was initially carried out using Ordinary Kriging and then Inverse Distance Squared as a check estimate This was found to be within 2% of each other in terms of total ounces of gold. 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. Estimates based on dry tonnages.
	moisture, and the method of determination of the moisture content.	·
Cut-off parameters	 The basis of the adopted cut-off grade(s) or quality parameters applied. 	 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 cutoff grade to achieve the required ROM grade. This was determined as a 3g/t Au-eq lower cut. No upper cut has been applied
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	 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

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Criteria	JORC Code explanation	Commentary
	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.	 wireframe was evaluated against the applicable block model to determine volume and metal content. 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. Excavations required to access each zone, appropriate to the intended method, has been designed inclusive of drives, traveling ways and ventilation passes. 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. The Mineral Resource model is described in the first section of this table. Dilution necessary to removal of ore has not been determined for this new resource estimate and will be as part of the feasibility study. The resource modelling process includes some dilution as some blocks include wall rock material. 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.
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 	 Historical metal grades were captured as bullion at source and quoted as financial recoveries in pounds, shillings and pence. it is not possible to accurately split gold and silver grades of historical data. Analysis of modern data indicates a gold: silver ratio of 1:4 on average with estimates of gold grades (quoted without cutoff) being



Criteria	JOF	RC Code explanation	Co	ommentary
		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.	•	6.9g/t to silver grades of 27.1g/t The gold price remained constant during the period that recorded production data is available at £4-6s-0d, (£4.25)/oz or USD20.67/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). Detailed metallurgical studies to date show that expected recoveries for gold are likely to equal or exceed 95%, recovery for silver is expected at approximately 74%. In the company's opinion both gold and silver contained in the Gold Equivalent calculation have reasonable potential to be recovered and sold 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. There is no evidence at this stage of any deleterious minerals that would impact on processing.
Environmen- tal factors or assumptions		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.	•	The deposit lies on DOC land under MP51326 granted to New Talisman Gold Mines Ltd. Consents for bulk sampling up to 20,000m³/annum have been granted for an initial 2 year period once bulk sampling commences. 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. Provided the Company prepares sufficient environmental data to back up any development proposal it will be dealt with by the authorities on its merits.
Bulk density		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.	•	The bulk dry density used in the estimate is 2.53g.cm ⁻³ . 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 ³ .



Criteria	JORC Code explanation	Commentary
	 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. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 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.
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. 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). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 The models were run using the search parameters described in the preceding sections. 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. 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. Indicated resources were determined a 2 times the search ellipsoid and Inferred at 3 times. 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. 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. In the view of the Competent person this fairly represents the data and is considered conservative.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	 The report and data has been peer reviewed by NTL and an independent geological consultancy.
Discussion of relative accuracy/	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	Primary assessment of the accuracy of this estimate has been quantified through applying the results of the estimate to the historically mined areas. The results indicate historic depletions at an



Criteria	JORC Code explanation	Commentary
confidence	 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. 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. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	average grade of reported from the mines production results of 27.1g/t Au This estimate is a global estimate

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