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ASX Announcement

Big Hill June 2016 Mineral Resource Update

Emerging Australian tungsten developer, Tungsten Mining NL (ASX: TGN) ("Tungsten Mining" or "the Company") is pleased to report the updated Mineral Resource for the Big Hill deposit, located in the Pilbara Region of Western Australia.

In December 2015, Tungsten Mining acquired the Mt Mulgine and Big Hill Projects from ATC Alloys Ltd (formerly named Hazelwood Resources Ltd and herein referered to as "Hazelwood"). Mt Mulgine, located in the Murchison region of Western Australia, contains two known resources – Mulgine Trench and Mulgine Hill.

Mulgine Trench has been estimated to JORC-2012 standards, however at acquisition, Mulgine Hill and Big Hill were classified in accordance with JORC-2004 guidelines. The purpose of this announcement is to advise that the Mineral Resource estimate for Big Hill has now been updated in accordance with JORC-2012. The updated Mineral Resource for Big Hill as at 14 June 2016 is as follows:

Table 1: June 2016 Mineral Resource estimates for Big Hill

Big Hill Deposit – June 2016 Reported above a 0.10% WO_3 cut-off		
Classification	**Tonnes**	**WO_3%**
Indicated	6,200,000	0.16
Inferred	5,300,000	0.13
Total	**11,500,000**	**0.15**

Compared to reporting from the 2010 Mineral Resource estimate at a 0.10% WO_3 cut-off grade, there is a slight decrease in grade and a material reduction in tonnes. The resource category has also been downgraded from predominately a Measured and Indicated classification in 2010 to 54% Indicated in the revised Mineral Resource estimate. This is largely due to a change in estimation methodology and a more conservative approach with regards to extrapolating the resource.

The authors of the Mineral Resource estimate for Big Hill, Optiro Pty Limited (Optiro), have highlighted further work to increase the confidence in the Resource, including mapping and UV lamping of trenches to determine continuity of mineralised veins, closer spaced drilling as well as improved QA/QC measures.

A comparison between the previous and current Resource estimates for the Big Hill deposit is shown in Table 2.

Table 2: Big Hill Resource difference

Class	Cut-off Grade	Tonnes	WO_3%
Big Hill (JORC-2012)			
Measured	0.10	0	-
Indicated	0.10	6,200,000	0.16
Inferred	0.10	5,300,000	0.13
Total	**0.10**	**11,500,000**	**0.15**
Big Hill (JORC-2004) [1]			
Measured	0.10	9,500,000	0.16
Indicated	0.10	4,500,000	0.16
Inferred	0.10	2,200,000	0.14
Total	**0.10**	**16,200,000**	**0.16**

References

1. *Refer ASX (HAZ) Announcement 5 November 2014, "Hazelwood continues to increase tungsten resource"*

Introduction

The previous Big Hill Mineral Resource estimate was commissioned by Hazelwood and completed by Micromine Consulting Services in 2010 using the guidelines provided by the 2004 edition of the JORC Code. The purpose of this update is to provide a Mineral Resource reported in accordance with the guidelines provided by the 2012 JORC Code. No additional drilling has been undertaken since the previous resource estimate.

Big Hill

The Big Hill Project area is located approximately 30 km northeast of the Nullagine township in the Eastern Pilbara of Western Australia. The project contains numerous tungsten occurrences including the Big Hill deposit.

Geology

Tungsten mineralisation at Big Hill is associated with vein-hosted scheelite within a tremolite-rich unit on the western margins of the Cookes Creek granite (Figure 1). Scheelite occurs in aplite, pegmatite and quartz dykes and veins varying in thickness from several millimetres to a maximum of 2 metres. Scheelite grains ranging from 0.05 to 20 millimetres in size with an average grainsize of 0.5 millimetres.

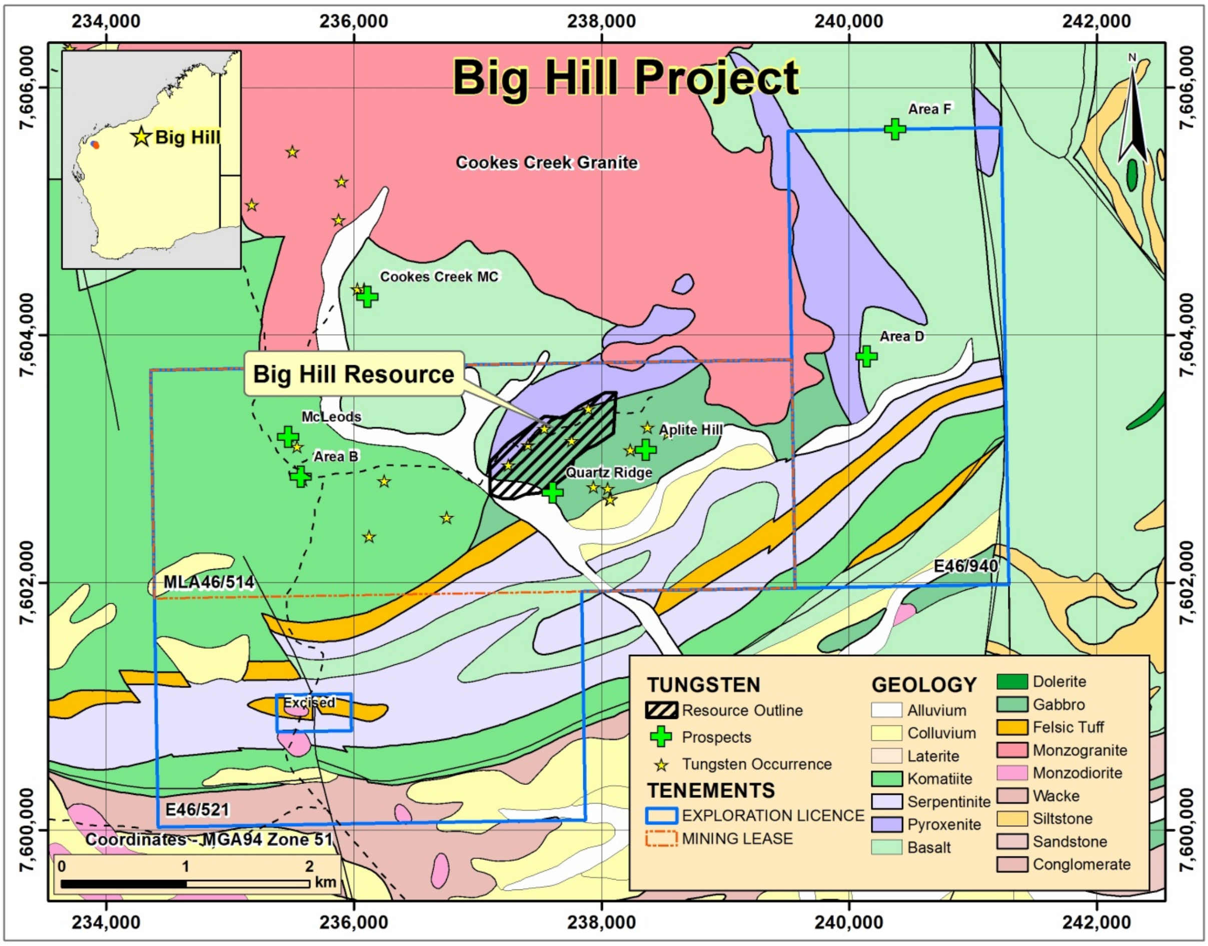

Figure 1. Location of Big Hill Mineral Resource on geology.

The geometry of the Big Hill deposit is controlled by the overall shape of the tremolite-rich unit and the density of veins that host scheelite mineralisation. The dominant vein sets dip steeply towards the north. Drilling has been designed to intersect these veins and is drilled toward the south which is down-dip relative to stratigraphy and the mineralised zones (Figure 2).

Drilling

The deposit was sampled using trenches, reverse circulation (RC) and diamond drilling (DD) over several campaigns (Figure 3). Recent drilling campaigns were completed by Hazelwood from 2007 to 2010. Earlier campaigns were conducted by Kalgoorlie Southern Gold Mines NL (KSGM) and Australian and New Zealand Exploration Company (ANZECO).

A total of 108 RC drillholes (7,004m) and eighty seven HQ diamond holes (13588m) were drilled and the majority of the holes were drilled at approximately 60^0 towards the southeast. KSGM and ANZECO completed 41 NQ diamond holes (1,909.3m) and 26 trenches from 1976 to 1984.

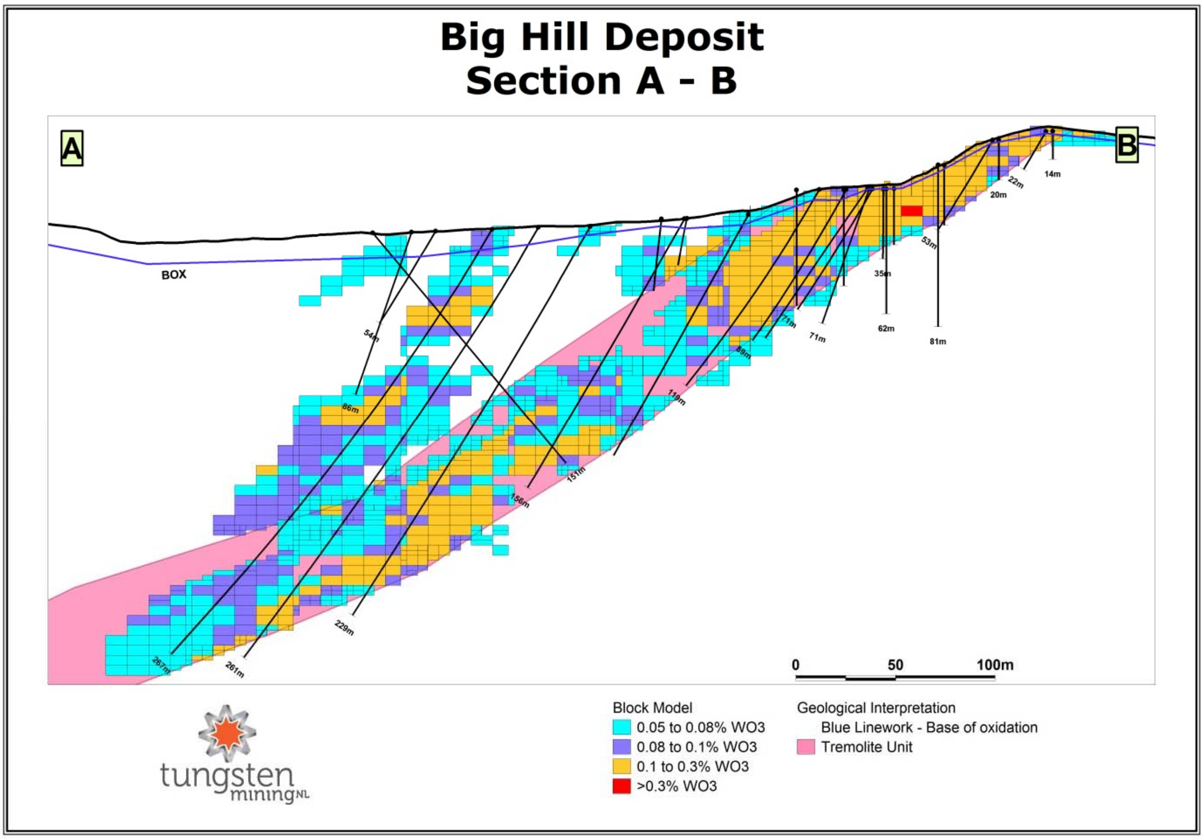

Figure 2. Cross section showing Big Hill Mineral Resource (location displayed on Figure 3 below).

Sampling

For RC drilling from 2007 to 2010, 1 metre intervals were collected from the cyclone and then either riffle or cone split to produce a representative 2 – 3 kilogram sample. Duplicates made by re-splitting the remaining sample were submitted one in every 20 samples.

HQ diamond holes were sampled at 1m intervals by splitting the core using a diamond saw to produce a half core sample. One half of the cut core is left in core boxes and retained in Tungsten Mining's core yard.

Samples collected in 2007 were submitted to Genalysis Laboratories of Perth for a tungsten suite by XRF analysis. Samples from holes drilled in 2008 through to June 2010 were submitted to ALS Chemex of Malaga for a tungsten suite by XRF analysis.

For holes drilled between 2007 to 2010, field QAQC procedures included the insertion of Certified Reference Material (Standards) into the sample stream for diamond holes at a rate of one per 20 samples. Standards and duplicates were inserted into RC samples every 20th sample to test laboratory analysis and field procedures. The XRF method selected for analysis of Big Hill samples are typically used for whole-rock analysis and were not optimised for tungsten. QAQC sampling and recent Tungsten Mining repeat assays on pulps identified a relatively high degree of scatter, however recent work indicates this scatter does not appear to result in an overall material grade bias.

KSGM samples were submitted to Pilbara Laboratories for W, Mg, Be and Li analysis by the induced coupled plasma spectroscopy (ICP) method.

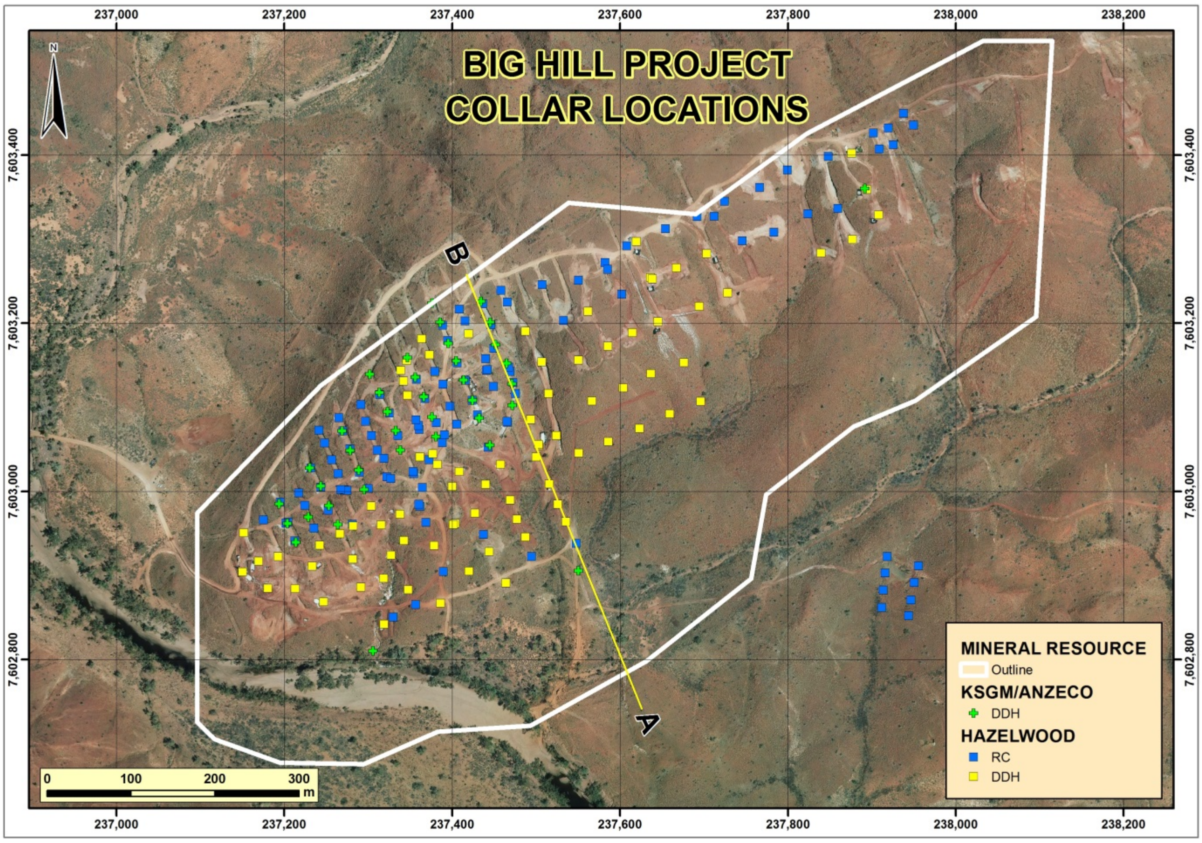

Figure 3. Plan showing RC and diamond drilling at Big Hill. Sections A-B is displayed in Figure 2.

Database

The drill database was provided by Hazelwood in December 2015 and validated by Tungsten Mining in Micromine software. These were checked against original hard copy drill logs, sections and plans. Global consistency was also checked by plotting sections using the database and reconciling assays. This validated data was then exported to excel spreadsheets and supplied to Optiro for use in the Mineral Resource estimate.

Geological Interpretation

The existing lithological contacts used in the 2010 Mineral Resource estimate were reviewed and modified by Tungsten Mining based on interpretation of multi-element assay data and geological logging. Wireframes were created for the Hangingwall Zone (gabbro and dolerite), the Footwall Zone (pyroxenite), and the Main Zone (Tremolite Unit). The Main Zone was sub-divided further into an Upper Zone and a Lower Zone. The resulting lithological interpretation in most drillholes was not significantly changed when compared to that applied during 2010. However, several drill holes showed notable differences in the interpreted contact positions.

Estimation and modelling techniques

Tungsten (WO_3) grade estimation used Ordinary Kriging (OK) of two metre composited samples constrained by lithology domains in Datamine Studio 3 software. These domains were treated as hard boundaries in the estimation process.

The block volume model used to spatially represent the lithological boundaries uses an estimation block size of 20 mE by 10 mN by 5 mRL with sub-blocks allowed to reduce to 5 mE by 2.5 mN by 2.5 mRL to resolve domains boundaries and topography.

A multiple search pass approach was applied that escalated the search distance if the number of informing samples did not satisfy required minimums for a block grade estimate. Grade estimation used a three pass search. The primary search radii were set to 100 m(strike) by 30 m (dip) by 10 m (across plane) for all domains (based on variogram models). The primary search radii were doubled for the secondary search and tripled for the tertiary search. Any blocks that did not receive a grade estimate during this process were not assigned a default grade value and thus remain 'un-estimated'.

A total of 3,216 density measurements are present within the drillhole database. These were averaged within the lithological and oxidation domains and applied to the block model for tonnage estimation.

Mineralisation at Big Hill has been classified as Indicated or Inferred in the Main Ore Zone based on drill grid spacing, combined with the grade continuity modelling, geological confidence, and the quality control standards achieved. Hangingwall and Footwall domains are classified as Inferred only due to the combination of sparser data, the degree of grade extrapolation and the poorer definition of grade continuity.

Mineral Resource Estimate

The Big Hill Mineral Resource has been reported out using a range of lower cut-offs to report tonnes and grades, as shown in Table 3 below.

Table 3: June 2016 Mineral Resource estimates for Big Hill at 0.05, 0.10 and 0.15% WO_3 cut-off.

Big Hill Deposit – June 2016			
Cut-off Grade	Classification	Tonnes	WO_3%
0.05	**Indicated**	15,800,000	0.11
	Inferred	22,700,000	0.08
	Total	**38,500,000**	**0.09**
0.10	**Indicated**	6,200,000	0.16
	Inferred	5,300,000	0.13
	Total	**11,500,000**	**0.15**
0.15	**Indicated**	2,600,000	0.21
	Inferred	1,300,000	0.18
	Total	**3,900,000**	**0.20**

-ENDS-
22 June 2016

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Competent Person's Statement

The information in this report that relates to Mineral Resources is based on, and fairly represents, information and supporting documentation prepared by Paul Blackney, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Blackney is not a full-time employee of the company. Mr Blackney is employed by the resource industry consultancy Optiro Pty Ltd. Mr Blackney has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Blackney consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results and Data Quality is based on, and fairly represents, information and supporting documentation prepared by Peter Bleakley, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Bleakley is not a full-time employee of the company. Mr Bleakley is a consultant to the mining industry. Mr Bleakley has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Bleakley consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

About Tungsten Mining

Emerging Australian tungsten developer, Tungsten Mining NL is an Australian based resources company listed on the Australian Securities Exchange. The Company's prime focus is the exploration and development of tungsten projects in Australia.

Tungsten (chemical symbol W), occurs naturally on Earth, not in its pure form but as a constituent of other minerals, only two of which support commercial extraction and processing - wolframite ($(Fe, Mn)WO_4$) and scheelite ($CaWO_4$).

Tungsten has the highest melting point of all elements except carbon – around 3400°C, giving it excellent high temperature mechanical properties and the lowest expansion coefficient of all metals. Tungsten is a metal of considerable strategic importance, essential to modern industrial development (across aerospace and defence, electronics, automotive, extractive and construction sectors) with uses in cemented carbides, high-speed steels and super alloys, tungsten mill products and chemicals.

Tungsten Mining has three advanced tungsten projects in Australia: the Mt Mulgine Project in the Murchison region, the Big Hill Project in the Pilbara region and the Kilba Project in the Ashburton region of Western Australia. The Mt Mulgine, Big Hill and Kilba Projects, together represent a tungsten resource inventory of 88.6 Million tonnes at 0.18% WO_3, representing more than 15.5 million MTU (metric tonne units) of WO_3 at a 0.10% cut-off grade.

Tungsten Mining is currently identifying opportunities for near term tungsten production, particularly from the Mulgine Hill and Mulgine Trench deposits within the Mt Mulgine Project.

APPENDIX 1 – JORC 2012 TABLE 1

SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The deposit was sampled using trenches, reverse circulation (RC) and diamond drilling (DD) over several campaigns. Recent drilling campaigns were completed by Hazelwood Resources Ltd (Hazelwood) from 2007 to 2010. Earlier campaigns were conducted by Kalgoorlie Southern Gold Mines NL (KSGM) and Australian and New Zealand Exploration Company (ANZECO). A total of 108 RC drillholes (7,004m) were drilled and the majority of the holes were drilled at approximately 60^{o} towards the southeast. Eighty seven HQ diamond holes (13588m) were drilled and a further 29 PQ diamond drillholes (1867.3m) were completed to collect metallurgical samples. KSGM and ANZECO completed 41 NQ diamond holes (1,909.3m) and 26 trenches from 1976 to 1984. KSGM drilled 35 holes and ANZECO 6 holes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Hazelwood inserted Certified standards into the sample sequences at a rate of one in 20 samples. Duplicate samples were collected for RC drilling to check repeatability of sampling and variability or nugget effect for tungsten mineralisation. Reinterpretation of the results from historical QAQC sampling and repeat sampling on pulps by Tungsten Mining NL (Tungsten Mining) identified grade bias. This issue only applies to certain periods of time and the process of identifying the affected assay data is ongoing. The issues produced a high degree of scatter in Tungsten Mining repeat assays, but no overall significant grade bias was observed.
	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 (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information	The RC drilling collected at 1 metre intervals from the cyclone and then either riffle or cone split the sample to produce a representative 2 – 3 kilogram samples. Duplicates were made by re-splitting the remaining sample and were submitted one in every 20 samples. HQ diamond holes were sampled at 1m intervals by splitting the core using a diamond saw to produce a half core sample. One half of the cut core is left in core boxes and retained in core storage. NQ core was sampled at intervals ranging from 0.1 – 1.5m or at set 2m intervals. Samples collected in 2007 were submitted to Genalysis Laboratories of Perth for a tungsten suite by XRF analysis. Samples from holes drilled in 2008 through to June 2010 were submitted to ALS Chemex of Malaga. KSGM cut the NQ core using a diamond saw and submitted 2m samples weighing approximately 5kg to Pilbara Laboratories of Perth. No records were found of how ANZECO conducted their sampling.

Criteria	JORC Code explanation	Commentary
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Hazelwood completed 108 RC drillholes between May 2007 and February 2010. RC holes depths ranged from 5 to 141 m, averaging 64m. RC drilling used a face-sampling hammer that produced a nominal 140m diameter hole. Hazelwood drilled 87 HQ and 29 PQ diamond drillholes. Diamond holes were drilled from 10 to 280m, averaging 108m. Core was orientated using either a spear and REFLEX orientation device. Downhole surveying of diamond drill and RC holes was conducted using either a single shot camera or Ranger multifunction survey system.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	No records of diamond core recovery were found in the database or on paper copies. A review of core photography shows there to be no significant core loss. No records found for RC recovery in the database or on paper copies. Intervals with wet or poor recovery were recorded on sample sheets.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond core was reconstructed into continuous runs for orientation marking, depths being checked against the depth marked on the core blocks and core recovery. RC samples were visually checked for recovery, moisture and contamination. A cyclone and splitter were used to provide a uniform sample and these were routinely cleaned.
	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.	Sample Recovery for diamond holes is generally very high (over 99%) within the mineralised zones. Ground conditions for RC drilling were good and drilling returned consistent size samples. No significant bias is expected, and any potential bias is not considered material at this stage.
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.*	During logging part of the RC sample is washed, logged and placed into chip trays. The chip trays are stored at the Malaga storage unit/core yard. Diamond core was geologically logged and RQDs recorded. Information on structure, lithology and alteration zones was recorded. Diamond core trays are stored at the Malaga core yard for future reference. All drill data is digitally captured and stored in a central database.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Diamond core and RC chips logging included records of lithology, mineralogy, textures, oxidation state and colour. Core was photographed in daylight and selected holes in UV light to estimate scheelite content.
	The total length and percentage of the relevant intersections logged	All drill holes were logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All HQ diamond drill core was cut in half by an Almonte diamond saw. The PQ diamond holes were used in metallurgical testwork and not sampled at set intervals. KSGM cut the NQ core using a diamond saw and submitted 2m samples weighing approximately 5kg to Pilbara Laboratories of Perth. No records were found of how ANZECO conducted their sampling.

Criteria	JORC Code explanation	Commentary
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	A cyclone and splitter (riffle or cone) were used to provide a uniform sample and these were routinely cleaned. During normal drilling operations each metre-sample was allowed to clear through the sampling system before the next metre was drilled. The penetration rate for RC drilling was slow. Cross-sample contamination ("smearing") is therefore unlikely to be a problem. Wet samples and intervals where any sample loss occurred were recorded on sample sheets. Less than 1% of RC samples are recorded as wet and samples from these intervals were collected with a spear. Minor sample losses are noted in the upper two metres of some RC drillholes due to broken ground around the collars and loss of circulation.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	For samples submitted to Genalysis (2007 drilling programs), the samples were dried and crushed to -2mm then subject to pulverisation in LM5 mill with chrome steel bowl to 85% passing 75 microns. For samples submitted to ALS Chemex (2008 onwards), then samples were crushed to -2mm and then milled to 90% passing 75 microns in a LM5 mill with a chrome free bowl. KSGM samples submitted to Pilbara Laboratories were the crushed in a jaw crusher to -1.65mm and then a 250gm riffle split portion pulverised to 90% passing 75 microns. All three methods are considered appropriate. No records of sample preparation exist for the 5 ANZECO holes.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	For Hazelwood holes field QAQC procedures included the insertion of Certified Reference Material (Standards) into the sample stream for diamond holes at a rate of one per 20 samples. Standards and duplicates were inserted into RC samples every 20th samples to test laboratory analysis and field procedures/sampling. There is no mention of standards and duplicate samples in KSGM and ANZECO reports.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	A total of 420 duplicate RC samples were submitted for analysis. Results from duplicate samples correlated well with original samples with an R^2 of 0.97. Eight diamond and two RC holes were drilled to twin existing RC, Hazelwood diamond or KSGM diamond holes. These holes intersected similar widths of mineralisation at target depths, but showed the variable and particulate/nuggetty nature of tungsten mineralisation present.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Duplicate sampling of RC drilling indicates samples size is sufficient with good repeatability of duplicate samples (R^2 of 0.99). There was no duplicate sampling conducted on diamond core.

Criteria	JORC Code explanation	Commentary
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.*	XRF has proven to be a very accurate analytical technique for a wide range of base metals, trace elements and major constituents found in rocks and mineral materials. Glass fusion XRF is utilised for assaying, since it provides good accuracy and precision; it is suitable for analysis from very low levels up to very high levels. As stated earlier the XRF protocols selected for analysis of Big Hill samples in 2008 to 2010 were not optimised for tungsten. They were suited for whole-rock analysis and QAQC sampling has identified a high degree of scatter in recent Tungsten Mining repeat assays. Work to date indicates this scatter does not show an overall significant grade bias. KSGM samples submitted to Pilbara Laboratories were mixed with Na_2O_2 and dissolved in HCL and analysed for W, Mg, Be and Li by the induced coupled plasma spectroscopy (ICP) method. Samples <50 ppm W were reassayed by being melted with K2S2O7 and analysed for tungsten by ICP.
	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.	No downhole geophysical surveys conducted.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Field QAQC procedures included the insertion of field duplicates and commercial standards. Reinterpretation of the results from original QAQC sampling and repeat sampling on pulps by Tungsten Mining identified grade bias relate to a particular laboratory and the utilisation of XRF protocols not optimised for tungsten analysis. This issue only applies to certain periods of time and the process of identifying the affected assay data is ongoing. The issues produced a high degree of scatter in repeat assays, but no overall significant grade bias was observed in 179 repeat assays. There is no reference to standards, duplicates or blanks in reports on KSGM or ANZECO drilling.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	No independent personnel have verified intersections in RC or DD drilling. Tungsten Mining personnel have conducted a review of all assaying by comparing original laboratory reports with the drill database.
	The use of twinned holes.	Eight diamond and two RC holes were drilled to twin existing RC, KSGM and Hazelwood diamond drill holes. These holes intersected similar zones of mineralisation at target depths, but showed the variable and particulate/nuggetty nature of tungsten mineralisation present.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	For RC drilling geological logging took place at the drilling site into excel spreadsheets. Sampling information was recorded on hardcopy sample sheets in the field and a scanned copy stored in the database. Diamond core was oriented and photographed on site and then sent to the Hazelwood core yard at Malaga, Perth. Geological logging and sampling took place in Malaga. Data capture was the same as for RC drilling. Validated data is then loaded into an access database for storage. Tungsten Mining have conducted a thorough validation of this data against original paper copies/files.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	No adjustments were made, other than for values below the assay detection limit which have been entered as half of the detection limit
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drillhole collar locations were picked-up by a licensed surveyor using an RTK GPS. Pickup accuracy was 30mm horizontal and 50mm vertical. Downhole surveying was measured by the drill contractors using Single-shot camera or by AusMine surveyors utilising a Ranger multifunction survey system (multishot tool).
	Specification of the grid system used.	The grid system is MGA GDA94 Zone 50.
	Quality and adequacy of topographic control.	High resolution aerial photography and digital elevation survey was flown by AAM Hatch during September 2008 with pixel size of 15cm and expected height accuracy of +/- 0.2 metres. Ground control points were established by MHR Surveyors.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drill holes were drilled using 25 x 25 m grid for the centre of the deposit and 40 x 50 m grid elsewhere
	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.	The current drill spacing, combined with grade continuity modelling, geological confidence, and the quality control standards achieved are sufficient to classify the Resource as either Indicated or Inferred categories.
	Whether sample compositing has been applied.	No compositing of samples was conducted.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The orientation of drilling was designed to provide intersections approximately orthogonal to the dominant measured vein geometry within the mineralised sequence, maximising the number of vein sets intersected by each hole, but still allowing penetration through the entire mineralised sequence.
	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.	Structural mapping of trenches and logging of diamond core has confirmed that drill orientation did not introduce any bias regarding the orientation of mineralised veining.
Sample security	*The measures taken to ensure sample security.*	RC samples were collected directly from the cyclone and riffle-split into calico bags. From there sample submissions forms were sent with samples by freighted to the laboratory in Perth. Diamond core was oriented and photographed on site and then sent to the Hazelwood core yard at Malaga, Perth. Geological logging and sampling took place at the Malaga with samples sent directly to the laboratory in Perth.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	In March 2010 Micromine Consultants were commissioned to conduct a review of the QAQC analysis of drilling at Big Hill. This audit found procedures to be acceptable, however results from some of the Certified Reference Material or standards were found to be "less than ideal". In 2016, Tungsten Mining conducted a thorough interrogation of the drill database reviewing consistency of data, geological logging, field procedures and sampling/assaying. Any data that failed validation was checked against original paper copies/files, edited and the validated drill database loaded into Micromine. Global consistency was then checked by plotting sections using the drill database and reconciling assays against geological logging. A review of standards and duplicate samples on 179 pulps in 2016 confirmed indicated issues with assaying. These repeat assays produced a high degree of scatter, however no significant grade bias was observed.

SECTION 2: REPORTING OF EXPLORATION RESULTS

Criteria	JORC 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 Big Hill prospect is located on Exploration License E46/521-I covering an area of approximately 15.8 km2. The current registered holder of the tenement is Pilbara Tungsten Pty Ltd, a 100% owned subsidiary of Tungsten Mining. Tungsten Mining has 100% interest in all tenements. The project has a current expenditure commitment of $50,000 per reporting year. The normal Western Australian state royalties apply.
	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 tenements are in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Hazelwood completed 108 RC drillholes between May 2007 and February 2010. Hazelwood also completed 87 HQ and 29 PQ diamond drillholes. 41 historic diamond drillholes and 26 trenches were completed at Big Hill in the 1970s and 1980s by the previous operator (ANZECO and KSGM). ANZECO sampled half core to geological boundaries and KSGM sampled half core at two metre intervals. Both ANZECO and KSGM produced graphical geological logs of a high standard and describe lithology, textures, structures and sampling. This data has been used for geological interpretation and grade interpolation. Tungsten Mining have conducted a thorough review of all drilling and sampling procedures that are discussed in Table 1 – Section 1 and 2.
Geology	Deposit type, geological setting and style of mineralisation.	Tungsten mineralisation at Big Hill is associated with aplite, pegmatite and quartz dykes and veins hosted by a south-dipping layered mafic/ultramafic intrusion. Strongest mineralisation is hosted by a distinctive tremolite-rich unit. Tungsten mineralisation is hosted by mafics in the hangingwall to the tremolite-unit and sporadic mineralisation is present in footwall. The dominant vein sets dip steeply (average 65°) towards the north and drilling has been design to intersect these veins and is drilled toward the south which is down-dip relative to stratigraphy and mineralised zones. The geometry of the deposit is controlled by the overall shape of the tremolite-rich unit and the density of veins that host scheelite mineralisation.

Criteria	JORC Code explanation	Commentary
Drill hole Information	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.	In the company's opinion this material has been adequately reported in previous announcements for drilling. .
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No exploration results reported by Tungsten Mining.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No exploration results reported by Tungsten Mining.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not Applicable.
Relationship between mineralisation 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 (e.g. 'down hole length, true width not known').	No exploration results reported by Tungsten Mining.
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.	Refer to diagrams in body of text.
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.	No exploration results reported by Tungsten Mining.
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.	The Big Hill Tungsten Project occurs at surface, is shallow dipping and is metallurgically simple. The particle size at which the scheelite will be liberated appears to be coarse and test work confirmed that relatively high recoveries at concentrate grades suitable for APT conversion could be achieved using simple, well recognised gravity concentration methods.
Further work	The nature and scale of planned further work (e.g. 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	Future work programmes to be assessed in light of the commodity price cycle.

SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES

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.	The Big Hill Project was recently acquired by Tungsten Mining from Hazelwood. The bulk of the drilling was completed by Hazelwood between 2007 and 2010. For RC and diamond holes geological logging was conducted directly into excel spreadsheets. Sampling information was recorded on hardcopy sample sheets in the field and a scanned copy stored in the database. The drillhole name, coordinates, hole depth, sample number, and sampled interval are recorded on the sampling sheets. Wet samples and intervals where any sample loss occurred was also recorded on sample sheets. Diamond core was oriented and photographed on site with a copy of all photographs stored on Tungsten Mining's server. Digital copies of all laboratory reports are also stored on the server. Validated data is loaded into an access database for storage. Both ANZECO and KSGM produced graphical geological logs of a high standard that describe lithology, textures, structures and sampling. This data has been used for geological interpretation and grade interpolation. Data from these logs have been checked and data entered by Tungsten Mining.
	Data validation procedures used.	Tungsten Mining, where possible, reviewed the original source data (i.e. lab assay reports, downhole survey records, and original drill logs) in order to validate the historical database. Optiro conducted additional data validation checks as part of the drillhole desurveying process such as •missing assays and collars •below detection limit values •overlapping and duplicated sample intervals •comparison of assay and geology depths against collar end of hole depths •assay column swaps All issues found were resolved prior to commencing statistical analysis. Whilst the identified database related issues have been resolved, there remains the possibility that when drillhole data is transferred to a formal drillhole data management system, further issues will be identified. In Optiro's opinion, Tungsten Mining's database related efforts have reached a point of diminishing returns and any issues identified in the future will be of a relatively minor nature
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	No site visit has been undertaken by Optiro.
	If no site visits have been undertaken indicate why this is the case.	Tungsten Mining plan to visit site in June 2016 to review previous exploration, tungsten mineralisation present and exploration targets.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	There is a good level of confidence in the geological interpretation due to the consistency of drilling results.

Criteria	JORC Code explanation	Commentary
	Nature of the data used and of any assumptions made.	Lithological contacts were generated using a combination of logging data and multi-element assay data characteristics (Mg%, Ca% and Al%) which highlight the lithological conditions defining the gabbro, pyroxenite and tremolite lithological units.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Even though there is structural data that suggests the stockwork veins hosting the tungsten mineralisation individually favour a moderately steep but variable orientation, the irregular short range spatial characteristics of the elevated tungsten grades precluded practical subdivision of the data into coherent mineralised subdomains within the lithological units. As such, no constraining mineralised envelope was applied during grade estimation. Additional data may aid in an improved understanding of mineralisation continuity and allow development of mineralisation envelopes.
	The use of geology in guiding and controlling Mineral Resource estimation.	Tungsten grade estimates were constrained by the lithology interpretation. The resource estimate emphasises the stockwork continuity which is considered to be largely constrained within the stratigraphically central tremolite lithology. The orientation of the lithology defines the overall strike and dip of the mineralisation.
	The factors affecting continuity both of grade and geology.	Lithological continuity is well defined by the drillhole data. Mineralisation hosting vein continuity is not well defined and measured grade continuity emphasises the overall stockwork package. Unsampled intervals were assumed to be barren and were assigned background values based on Limit of Reporting (LOR) values from within the database. The vast majority of unsampled intervals were within the Basement, Hangingwall and Footwall Domains.
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 tremolite lithological unit (the primary host for stockwork veins and disseminated tungsten mineralisation) extends 900 m along strike, and down dip for up to 400 m. Individual stockwork veins vary in thickness from several mm to 2 m.
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.*	Tungsten grade estimation used Ordinary Kriging (OK) in Datamine Studio 3 software. Drill grid spacing ranges from a nominal 25 m by 25 m grid, which increases to a nominal 40 to 50 m by 40 to 50 m grid outside of the main mineralisation area. Drillhole sample data was coded for lithology and oxidation. Sample data was composited to a two metre downhole length using a best fit-method. Variography analysis on the composite W ppm grade data for the combined tremolite domains highlighted the stratigraphic orientation of the overall stockwork package. A primary axis direction of 240^{o} (strike) and a secondary axis direction of -30^{o} (dip) were modelled. No plunge component was identified. The continuity models obtained from the tremolite zone were assigned to the Hangingwall and Footwall Domains which lack the necessary data to support spatial analysis. Other estimation parameters, such as block size, minimum and maximum sample numbers were derived from KNA.

Criteria	JORC Code explanation	Commentary
	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 2016 Mineral Resource Estimate is an update to the 2010 Mineral Resource Estimate. There has been a significant down-grading of the confidence assigned to the updated Mineral Resource due to concerns regarding data quality and grade continuity. There has also been a reduction in the reported tonnes and grade at potentially economic cut-off grades. The reduction in predicted tonnage is due to the adoption of a less selective modelling approach which is not as reliant on unsupported assumptions regarding vein continuity, a reduction in unconstrained grade 'blow-outs' and tighter constraints on down dip extrapolation of grade. No previous mining activity has taken place in this deposit.
	The assumptions made regarding recovery of by-products.	No by-products have been estimated at Big Hill.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Based on prior metallurgical test work, there are no deleterious elements that will have an impact on metallurgical processing at Big Hill.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The block model was created with parent block dimensions of 20 mE by 10 mN by 5 mRL. Block sub-celling was allowed down to a minimum block size of 5 mE by 2.5 mN by 2.5 mRL to represent boundary conditions. The block model was constructed from the supplied lithology and oxidation interpretation. Tungsten grades were estimated at Big Hill using ordinary kriging of two metre composites constrained within the lithological domains. All grade estimation was undertaken on a parent cell size scale. Grade estimation used a three pass search. The primary search radii were set to 100 m (strike) by 30 m (dip) by 10 m (across plane) for all domains. The minimum and maximum number of informing samples were derived from the KNA results and remained constant between the primary, secondary and tertiary searches. The primary search radii were doubled for the secondary search and tripled for the tertiary search. The maximum number of samples that could be utilised from a single drillhole was not limited.
	Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in this estimate.
	Any assumptions about correlation between variables.	Tungsten was the only variable estimated.
	Description of how the geological interpretation was used to control the resource estimates.	Drillhole sample data was assigned to lithological domains which were treated as hard boundaries in the estimation process.
	Discussion of basis for using or not using grade cutting or capping.	Top-cut analysis of tungsten was undertaken by viewing log probability plots and by identifying values at which the population distributions started to become discontinuous. Based on this analysis, tungsten top-cuts were assigned to all domains at Big Hill.

Criteria	JORC Code explanation	Commentary
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Comparative checks were carried out between interpretion wireframe and subsequent block model volumes. No discrepancies were found. Estimated block grades were compared to the input drill data on a domain basis using visual appraisal, domain average grade comparisons and grade swath plots in the three grid axis directions. Reasonable outcomes were obtained, particularly in the context of the high nugget, short grade continuity environment. Visual validation of grade trends and distributions was carried out. No mining has taken place; therefore no reconciliation data is available.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages are estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied*	A cut-off grade of 0.05% WO_3 for the stated Mineral Resource Estimate is determined from current and anticipated economic parameters.
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.*	Possible mining of the Big Hill deposit will be by surface mining methods involving standard truck and haul mining techniques. The geometry of the deposit makes it amenable to mining methods currently employed in many surface operations in similar deposits around the world. The current block grade estimates include internal and edge dilution and assume bulk mining on five metre high benches.
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.*	No assumptions have been made regarding metallurgical factors. Test work undertaken in 2010 during a pre-feasibility study (prior to the 2012 edition of the JORC Code) found that minerals usually associated with scheelite such as cassiterite (SnO_2), molybdenite (MoS_2), base metals, tantalite (Fe,Mn)Ta_2O_6), bismuthite, arsenic and spodumene that can contaminate the scheelite concentrate are not present or occur at trace levels in the Big Hill mineralisation. The particle size at which the scheelite can be liberated appears to be coarse and test work confirmed that relatively high recoveries at concentrate grades suitable for APT conversion could be achieved using simple, well recognised gravity concentration methods.
Environmental 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*	No assumptions have been made. These will form part of future works.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td rowspan="3">Bulk density</td><td><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></td><td>A total of 3,216 density measurements are present within the drillhole database. These were averaged within the lithological and oxidation domains and applied to the block model for tonnage estimation as follows.

Density measurements are dry density.

<table>
<tr><th>Domain</th><th>Density</th></tr>
<tr><td>All oxide zones</td><td>2.0</td></tr>
<tr><td>Main Zone (Lower)- Fresh</td><td>2.92</td></tr>
<tr><td>Main Zone (Upper) - Fresh</td><td>2.91</td></tr>
<tr><td>Hangingwall -Fresh</td><td>2.82</td></tr>
<tr><td>Footwall - Fresh</td><td>2.73</td></tr>
</table></td></tr>
<tr><td><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit,</i></td><td>Density measurement includes water displacement and full core tray-weights methods. The majority of density measurements were collected via the “full core tray-weight” method.</td></tr>
<tr><td><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></td><td>The Big Hill deposit is hosted by competent rock-types which favour the tray weight method. Some issues exist near surface were core recovery was poorer but this impacts only a small portion of the deposit</td></tr>
<tr><td rowspan="3">Classification</td><td><i>The basis for the classification of the Mineral Resources into varying confidence categories</i></td><td>Mineralisation at Big Hill has been classified as Indicated or Inferred in the Main Ore Zone based on drill grid spacing, combined with the grade continuity modelling, geological confidence, and quality control standards achieved. Hangingwall and Footwall domains are classified as Inferred only due to the combination of sparser data (or greater substitution of unsampled intervals with nominally low grade), the degree of grade extrapolation and the poorer definition of grade continuity.

The Indicated region within the Main Ore Zone is generally based on the closer spaced drilling data. In some down dip parts of this zone, the drillhole spacing has wider gaps on a number of section lines. However, adjacent section lines generally provide along strike drillhole coverage and given the greater continuity measured along strike, this pattern was judged to be adequate to retain an Indicated status for the blocks occupying the affected areas. Inferred classification is limited to blocks estimated within Search Pass 1 or Search Pass 2 and within an Inferred boundary string, which is based on drill coverage and is designed to restrict grade extrapolation in a number of areas that are tested by relatively isolated drillholes.

No Measured Mineral Resources have been defined.</td></tr>
<tr><td><i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></td><td>The resource classification process addresses all known contributing issues</td></tr>
<tr><td><i>Whether the result appropriately reflects the Competent Person’s view of the deposit.</i></td><td>The Mineral Resource estimate appropriately reflects the view of the Competent Persons</td></tr>
<tr><td>Audits or reviews</td><td><i>The results of any audits or reviews of Mineral Resource estimates.</i></td><td>This is an update to the 2010 Big Hill Mineral Resource estimate.

No audits have been undertaken on the 2016 Mineral Resource Estimate at this stage.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	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	The main issue impacting relative accuracy and confidence at Big Hill is the nuggety, short range grade continuity conditions measure for the tungsten mineralisation. Due to these factors and the stockwork characteristics of the deposit, the model is less likely to be accurate at a local scale. No attempts have been made to quantify these issues at this stage of analysis.
	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	The statement relates to global estimates of tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	No production data is available.