29 January 2021

ASX ANNOUNCEMENT

Maiden Ore Reserve Estimate – Mt Mulgine Project

Highlights

- **Maiden Ore Reserve Estimate of 140 million tonnes** @ 0.10% tungsten (WO_3), 288ppm molybdenum, 0.12g/t gold, 5.9g/t silver and 0.03% copper.
- Ore Reserve contains approximately **145,000 tonnes of tungsten (WO_3), 40,000 tonnes of molybdenum, 542,000 ounces of gold, 27 million ounces of silver and 48,000 tonnes of copper.**
- Confirms Mt Mulgine as one of the largest undeveloped tungsten deposits in the world.
- High conversion of fresh Indicated Mineral Resource tonnes to Ore Reserves.

Commentary

Australian tungsten developer, Tungsten Mining NL (ASX: TGN) ("TGN" or "the Company") is pleased to announce a Maiden Ore Reserve for its world class Mt Mulgine Tungsten Project, located in the Murchison Region of Western Australia, approximately 350km north northeast of Perth.

The maiden Mt Mulgine Ore Reserve, as summarised in Table 1 below, is based on the Mulgine Trench Mineral Resource Estimate (published in May 2020) and the Mulgine Hill Mineral Resource Estimate (published in April 2019). Only fresh indicated tonnes are included in the Ore Reserve based on metallurgical test results.

Craig Ferrier, Tungsten Mining CEO, said*: "The delivery of the Maiden Ore Reserve and the completion of the Pre-Feasibility Study are major milestones for Tungsten Mining, underpinning the case for establishing large scale, long life and low-cost mining and processing operations at the Mt Mulgine Tungsten Project. There was an excellent 91% Indicated Resource to Reserve conversion rate of fresh material, highlighting the robust and bulk nature of the ore body."*

The Ore Reserve has been calculated in conjunction with a Pre-Feasibility Study (PFS) for the Project and is underpinned by that study. The PFS was completed by the Company in November 2020 and published in January 2021 for a conventional load and haul mining operation with a 6Mtpa throughput. Contributions to the PFS were made by a number of suitably qualified independent consultants, experts, vendors and contractors.

The JORC 2012 checklist of assessment of reporting criteria (Table 1) can be found in Appendix A.

Table 1: Mt Mulgine Ore Reserve Estimate

Deposit	Reserve Category	Tonnes (Mt)	Grade WO_3 (%)	Grade Mo (ppm)	Grade Au (g/t)	Grade Ag (g/t)	Grade Cu (%)
Mulgine Trench							
	Proved	-	-	-	-	-	-
	Probable	135	0.10	293	0.12	6.1	0.04
	Total	**135**	**0.10**	**293**	**0.12**	**6.1**	**0.04**
Mulgine Hill							
	Proved	-	-	-	-	-	-
	Probable	5	0.21	134	-	-	-
	Total	**5**	**0.21**	**134**	**-**	**-**	**-**
Mt Mulgine Project							
	Proved	-	-	-	-	-	-
	Probable	140	0.10	288	0.12	5.9	0.03
	Total	**140**	**0.10**	**288**	**0.12**	**5.9**	**0.03**

Estimate for Mt Mulgine Project using:

- *A 0.074% WO_3 equivalent cut-off grade (See Appendix C)*
- *Mining factors of 5% dilution at zero grade and 5% ore loss applied*
- *All tonnes quoted are dry tonnes*
- *Data is reported using significant figures to reflect appropriate precision and may not sum precisely due to rounding*

The Mineral Resource is reported inclusive of the Ore Reserve estimate.

The Probable Ore Reserve estimate is based on Mineral Resource's classified as Indicated Resource after consideration of all mining, metallurgical, infrastructure, social, environmental, governmental and financial aspects of the operation.

The grades and metal stated in the Ore Reserves estimate includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by this study at a PFS level as appropriate that include application of modifying factors.

The Ore Reserve estimate is determined from a mine design, plan and production schedule that is technically achievable and economically viable under reasonable financial assumptions.

The PFS on which the Ore Reserve estimate is based demonstrates, that at the time of reporting, extraction could be reasonably justified.

Traditional bulk load and haul mining techniques have been chosen under the PFS, which is considered appropriate for the size and shape of the ore body. A mining recovery factor of 95% and a mining dilution factor of 5% was applied due to the size, thickness and non-selective nature of the deposit. The geotechnical analysis of the pit slope design was completed by Dempers and Seymour Pty Ltd with the remainder of the mine engineering being completed by MineGeoTech Pty Ltd.

The Mt Mulgine Tungsten Project has an overall strip ratio of 1.1:1. The Mulgine Trench deposit provides 96% of the Ore Reserve, the Mulgine Trench pit is 1.6km long, 830m wide and has a maximum depth of 220m. The Mulgine Hill deposit provides 4% of the Ore Reserve, the Hill pit is 700m long, 440m wide and has a maximum depth of 105m. The pit designs are shown in Figure 1. Long and cross sections of both Mulgine Trench and Mulgine Hill are shown in Figures 3 to 7.

Under the PFS flowsheet, the Mt Mulgine ore will be processed through a 6Mtpa plant consisting of crushing of the ROM ore, x-ray ore sorting, grinding, bulk sulphide flotation (BSF), regrind and concentrate dewatering to first produce a bulk sulphide concentrate. BSF concentrate is upgraded to a molybdenum and copper concentrate via flotation. Molybdenum and copper concentrate are dewatered and bagged prior to transport. Tungsten concentrate is produced from the BSF tails via the tungsten gravity and flotation circuit consisting of magnetic separators, hydrosizers, shaking tables and spiral concentrators. Tungsten concentrate is dewatered, dried and bagged prior to being trucked to port, shipped and sold to an APT Plant. Tailings and slimes from the tungsten gravity circuit are thickened prior to being pumped to the tailings storage facility. The proposed site layout is shown in Figure 2.

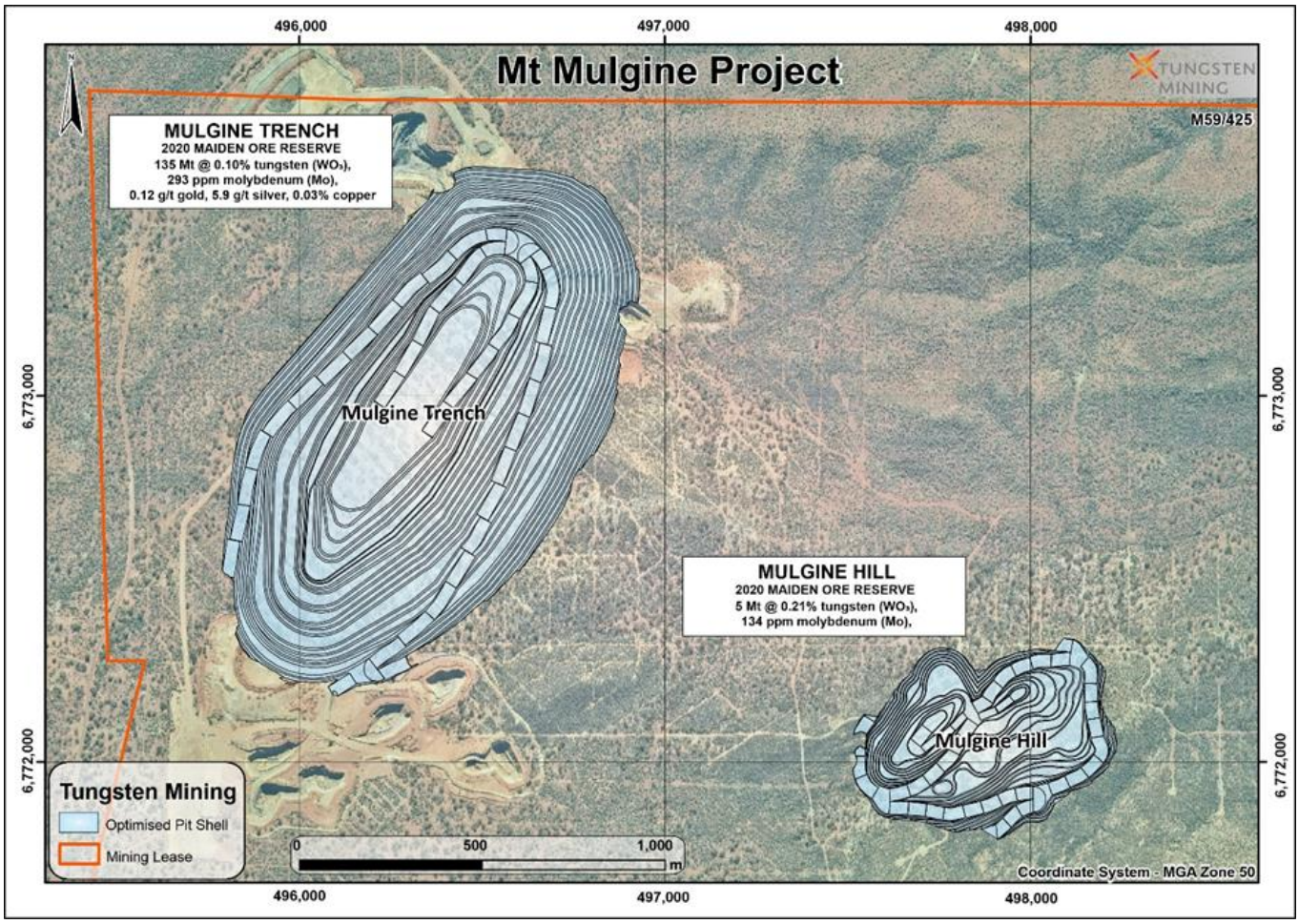

Figure 1: Trench and Hill Pit Designs

The PFS financial modelling shows that the Mt Mulgine Tungsten Project will deliver a $NPV_{(5\%)}$ of A$422M. Revenue was based on an AUD:USD exchange rate of 0.70. Commodity pricing assumptions adopted in the PFS financial model, other than gold, applied a 10 year historical pricing average. These commodity pricing assumptions are provided below.

- Tungsten (APT): US$300/MTU
- Molybdenum: US$11/lb
- Gold: US$1,600/oz
- Silver: US$20/oz
- Copper: US$6,600/tonne

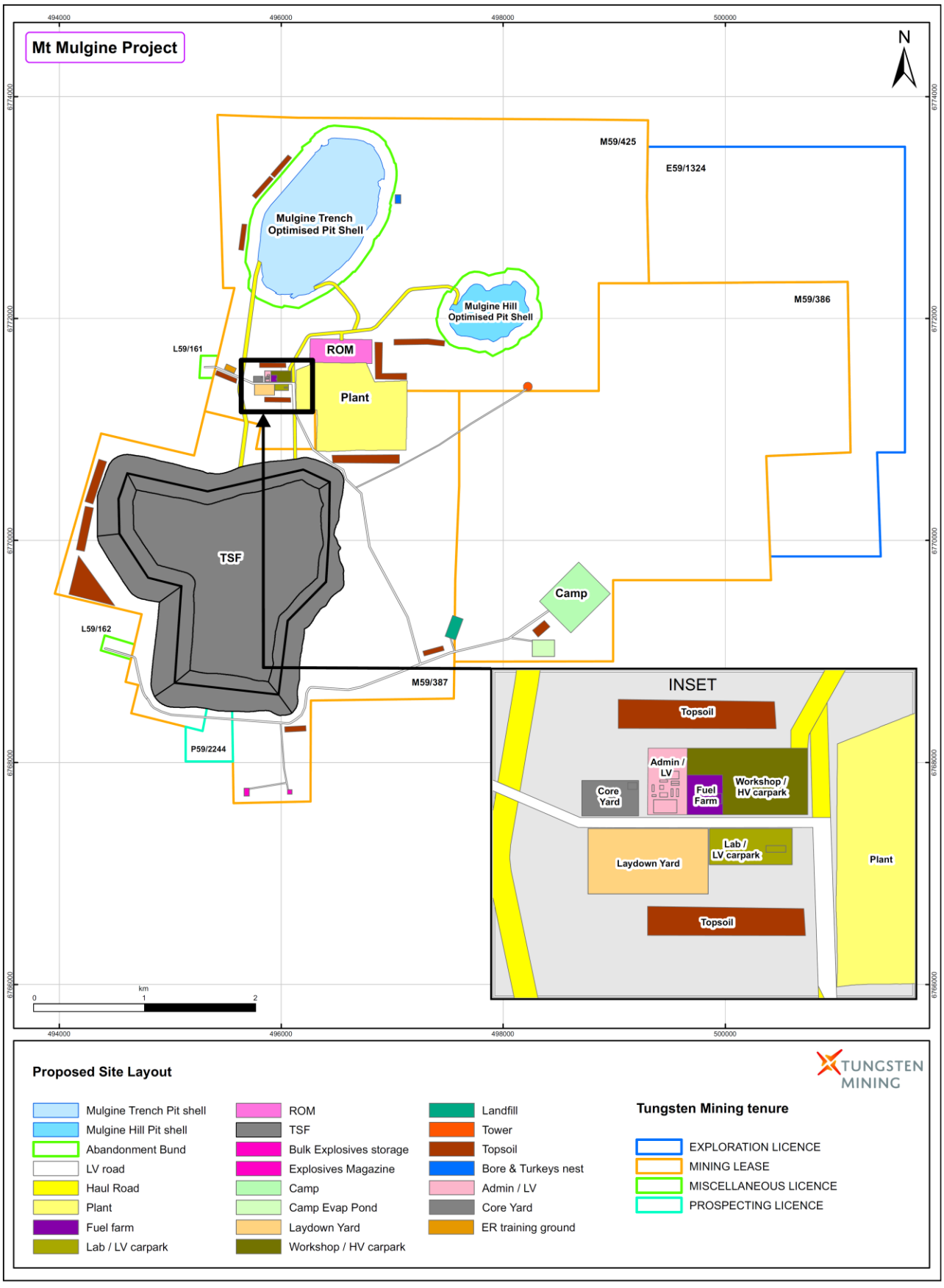

Figure 2: Proposed site layout

Compliance Statements

The information is this report that relates to Ore Reserves is based on information compiled by Ms Nicole Player, who is a Competent Person and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Ms Player is a full time employee of the resource industry consultancy MineGeoTech Pty Ltd and has sufficient experience that is relevant to this style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms Player consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The information in this report that relates to geology and Mineral Resources is based on, and fairly represents, information and supporting documentation compiled by Peter Bleakley, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Bleakley is a full-time employee of the Company. 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.

The information in this announcement that relates to Metallurgy and Engineering Process design was compiled by Mr Mark Merry who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Merry is a full time employee of the Company. Mr Merry has sufficient experience that is relevant to the style of mineralisation and proposed processing and to the activity currently being undertaken to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Merry consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Previously Reported Information

This report includes information that relates to Mineral Resources and Pre-Feasibility Study Results which were prepared and first disclosed under JORC Code 2012. The information was extracted from the Company's previous ASX announcements as follows:

- Pre-Feasibility Study Results – "Mt Mulgine PFS confirms large scale, long life, low cost tungsten concentrate production" 29 January 2021.
- Mulgine Trench Resource Update: "Update of Mineral Resource Estimate for Mulgine Trench Deposit" 4 May 2020
- Mulgine Hill Resource Update: "Update on Activities at Mount Mulgine" 12 April 2019

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of reporting Mineral Resources and Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Persons findings are presented have not been materially modified from the original market announcement.

Copies of the announcements referred to above are available to view on the Company's website at www.tungstenmining.com.

ASX Chapter 5 Compliance and PFS Cautionary Statement

The Company has concluded that it has a reasonable basis for providing the forward looking statements and forecast financial information included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and all material assumptions including the JORC modifying factors, upon which the forecast financial information is based are disclosed in this announcement. This announcement has been prepared in accordance with JORC Code 2012 and the ASX Listing Rules.

The actual results could differ materially from a conclusion, forecast or projection in the forward-looking information. Certain modifying factors were applied in drawing a conclusion or making a forecast or projection as reflected in the forward looking and cautionary statements.

The Mt Mulgine Tungsten Project is in the PFS phase and although reasonable care has been taken to ensure that the facts are accurate and/or that the opinions expressed are fair and reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness. Actual results and development of projects may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. A key conclusion of the PFS, which is based on forward looking statements, is that the Mt Mulgine Tungsten Project is considered to have positive economic potential.

A Probable Ore Reserve classified under JORC 2012 Guidelines was used for the PFS and all relevant details are set out in this announcement.

The Company believes it has a reasonable basis to expect to be able to fund and further develop the Mt Mulgine Tungsten Project. However, there is no certainty that the Company can raise funding when required.

Forward Looking Statement

Any statements, estimates, forecasts or projections with respect to the future performance of the Company and/or its subsidiaries contained in this announcement are based on subjective assumptions made by the Company's management and about circumstances and events that have not yet taken place. Such statements, estimates, forecasts and projections involve significant elements of subjective judgement and analysis which, whilst reasonably formulated, cannot be guaranteed to occur. Accordingly, no representations are made by the Company or its affiliates, subsidiaries, directors, officers, agents, advisers or employees as to the accuracy of such information; such statements, estimates, forecasts and projections should not be relied upon as indicative of future value or as a guaranteed of value or future results; and there can be no assurance that the projected results will be achieved.

Contributors

- Overall
  - Ms Nicole Player – MineGeoTech Pty Ltd
- Mineral Resource Model
  - Mr Paul Blackney – Optiro Pty Ltd
  - Mr Peter Bleakley – Tungsten Mining NL
- Mine Planning
  - Ms Nicole Player – MineGeoTech Pty Ltd
  - Ms Amanda Croser – Tungsten Mining NL
- Geo-technical
  - Clive Seymour – Dempers & Seymour Pty Ltd
- Non-Mining Modifying Factors
  - Mr Leigh Wardell-Johnson for Social and Community – Tungsten Mining NL
  - Mr Mark Merry for Metallurgical Factors – Tungsten Mining NL
  - Mineralurgy Pty Ltd for Metallurgical Factors
  - Ausenco Services Pty Ltd for Infrastructure and Processing
  - Roskill for Market Analysis
  - Craig Ferrier for Economic Assumptions – Tungsten Mining NL
  - Ms Claire McGuire for Environment and Approvals – Tungsten Mining NL
  - Knight Peisold for Tailings Storage Facility

-ENDS-

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This ASX announcement was authorised for release by the Board of Tungsten Mining NL

About Tungsten Mining

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.

Through exploration and acquisition, the Company has established a globally significant tungsten resource inventory in its portfolio of advanced mineral projects across Australia. This provides the platform for the Company to become a major player within the global primary tungsten market through the development of low-cost tungsten concentrate production.

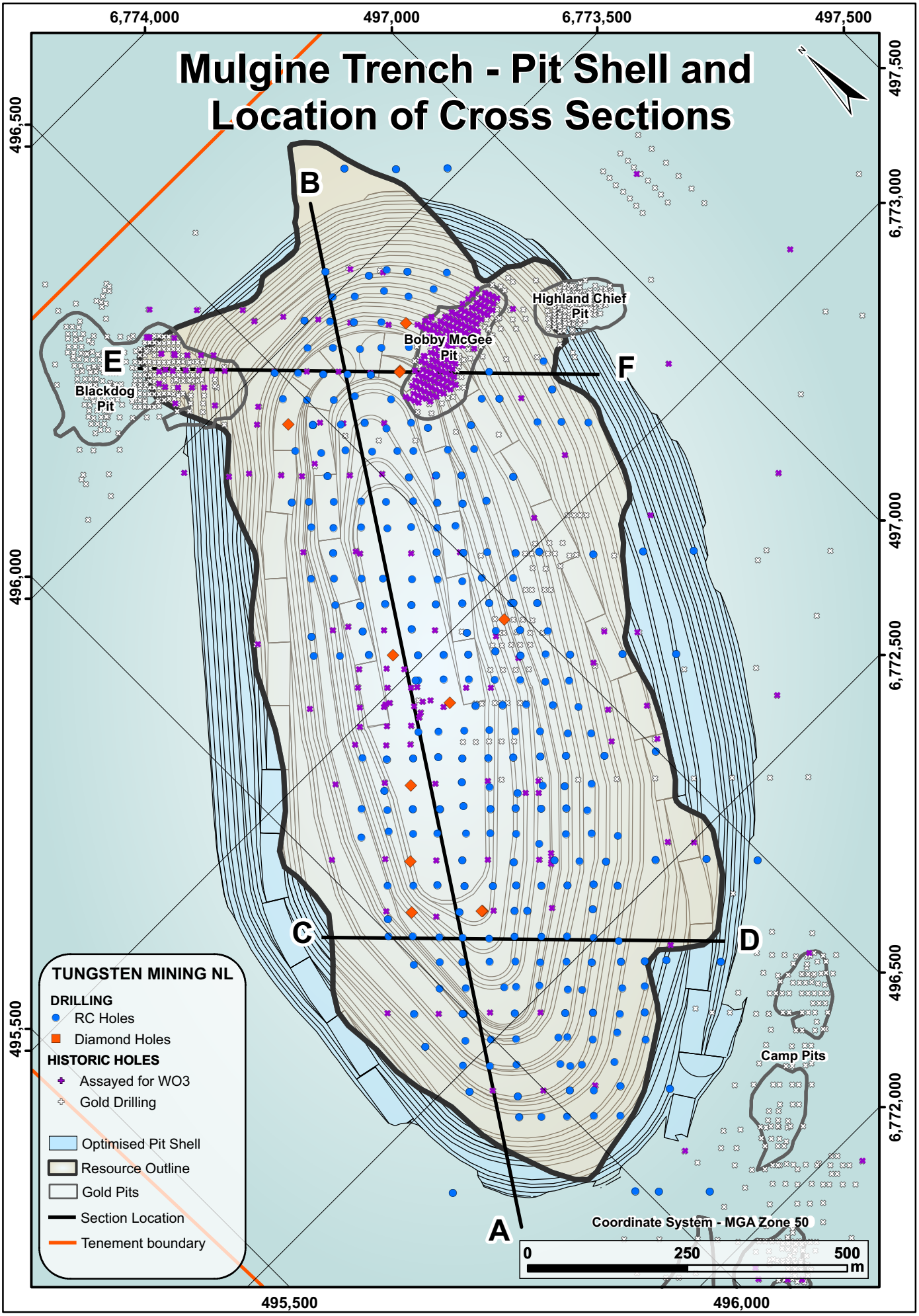
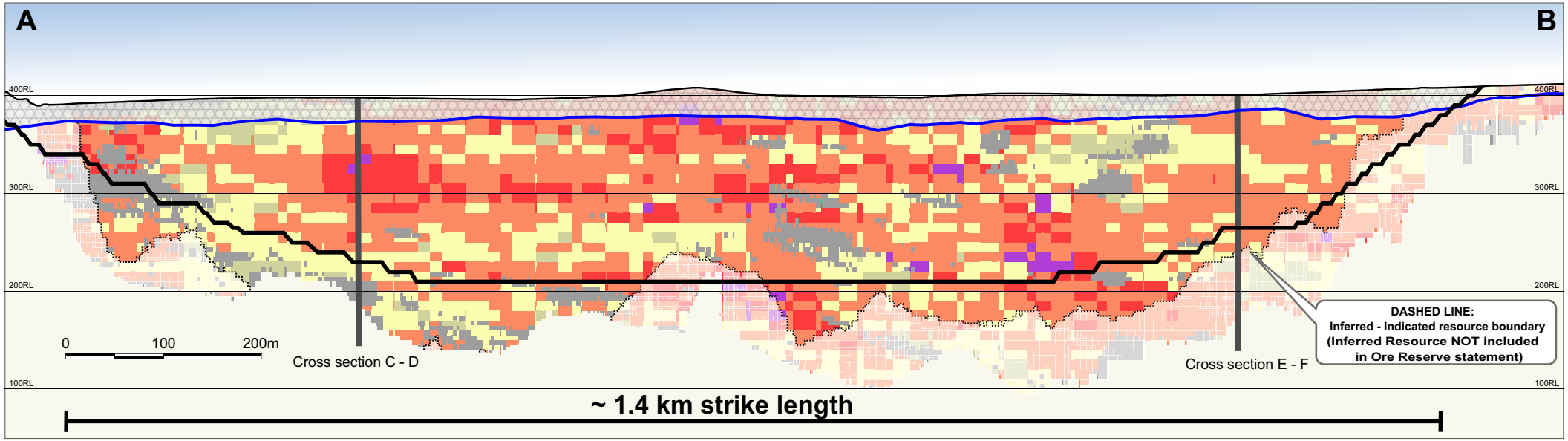
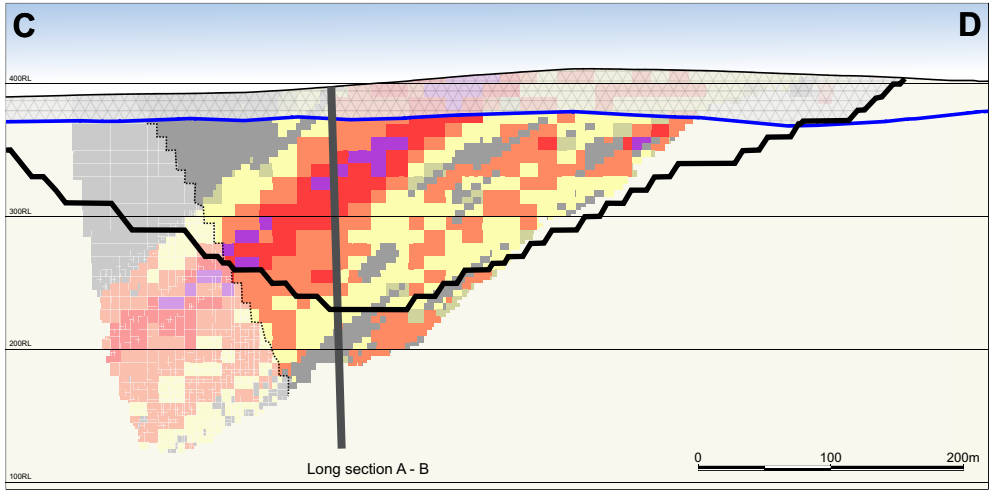


Figure 3. Plan showing location of Mulgine Trench drill holes, resource outline and optimised pit shell for the 2020 Maiden Ore Reserve.

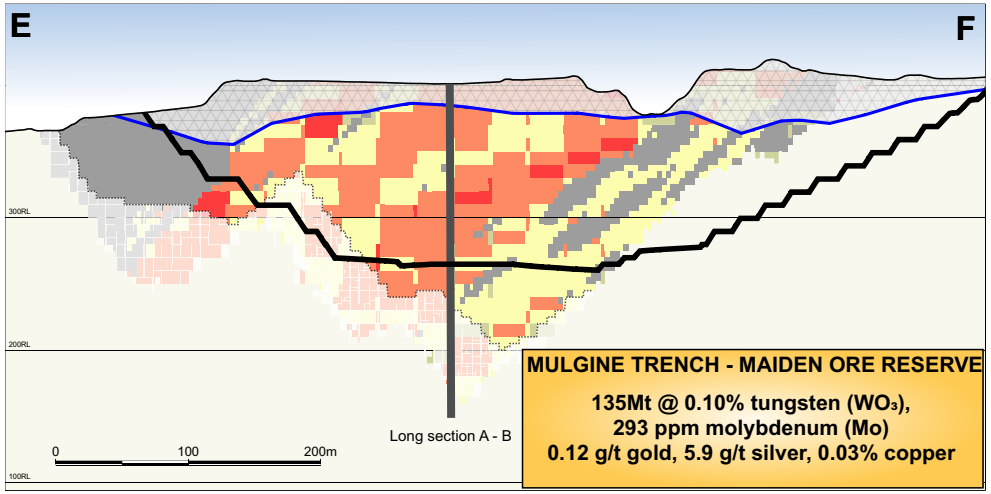
Mulgine Trench Long Section - Tungsten



Cross section C - D



Cross section E - F



MAIDEN ORE RESERVE: Mulgine Hill & Mulgine Trench

140 Mt @ 0.10% tungsten (WO_3),
288 ppm molybdenum (Mo),
0.12 g/t gold, 5.9 g/t silver, 0.03% copper

Optimised Pit Shell

Base of oxidation

Grey hatch = **OXIDE MATERIAL** NOT included in Maiden Ore Reserve

Mulgine Trench 2020 Block Model
Indicated & Inferred Resource
247Mt @ 0.11% WO_3, 280 ppm Mo
(at 0.05% WO_3 cutoff)

WO_3 2020 Block Model (Indicated)

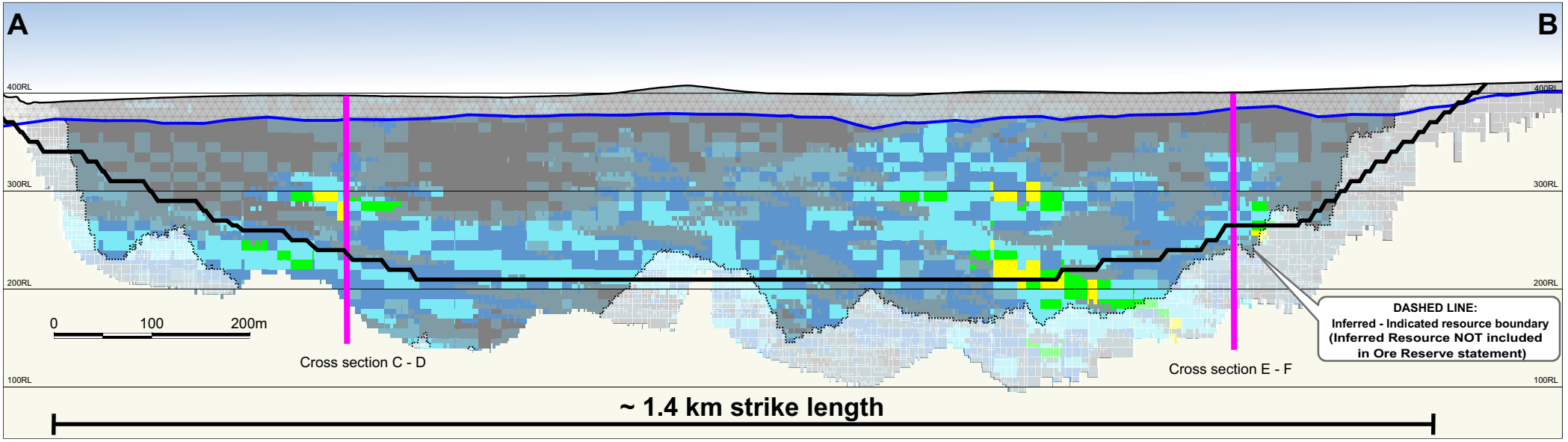
< 0.05% WO_3	0.10 - 0.15% WO_3
0.05 - 0.075% WO_3	0.15 - 0.20% WO_3
0.075 - 0.10% WO_3	>0.20% WO_3

WO_3 2020 Block Model (Inferred)

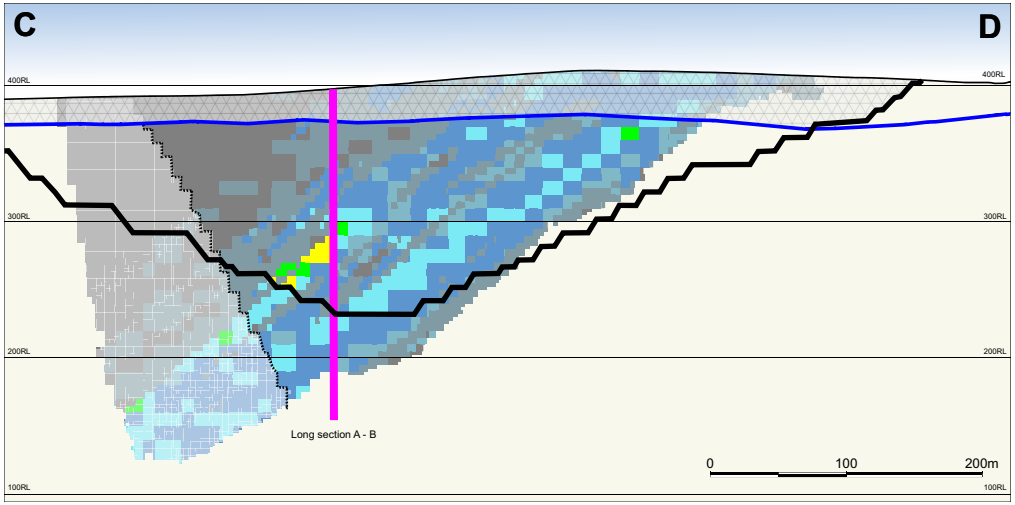
< 0.05%	0.10 - 0.15%
0.05 - 0.075%	0.15 - 0.20%
0.075 - 0.10%	>0.20%

Figure 4. Long section (top) and cross sections (bottom) through Mulgine Trench showing the optimised pit shell for the 2020 Maiden Ore Reserve. Indicated Resources from the oxidised material are not included in the Ore Reserve. Inferred resources (semi-transparent) are also not included and highlight the potential of increasing Ore Reserves. Location of section is shown on Figure 3.

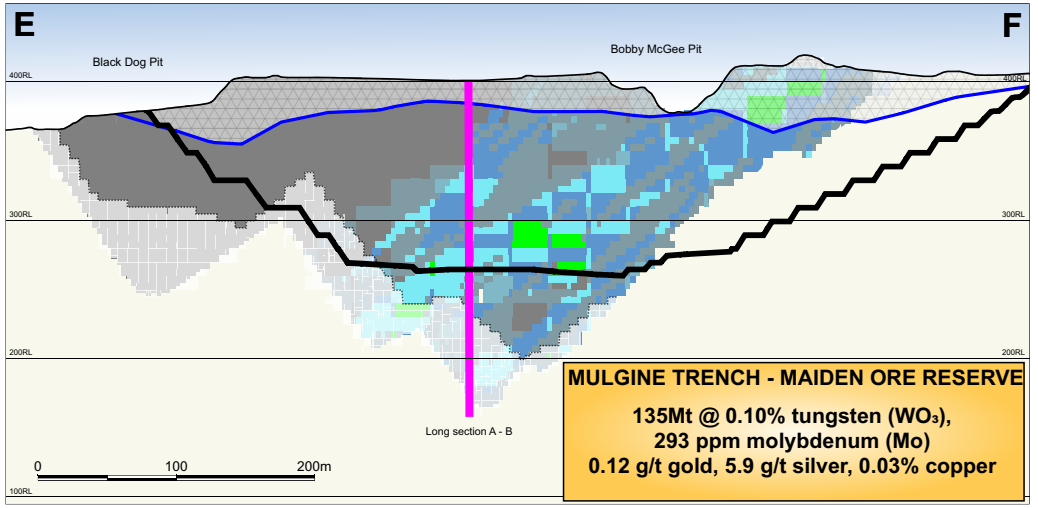
Mulgine Trench Long Section - Molybdenum



Cross section C - D



Cross section E - F



MAIDEN ORE RESERVE: Mulgine Hill & Mulgine Trench

140 Mt @ 0.10% tungsten (WO_3),
288 ppm molybdenum (Mo),
0.12 g/t gold, 5.9 g/t silver, 0.03% copper

Optimised Pit Shell

Base of oxidation (interpreted)

Grey hatch = **OXIDE MATERIAL** NOT included in Maiden Ore Reserve

Mulgine Trench 2020 Block Model

Indicated & Inferred Resource
247Mt @ 0.11% WO_3, 28 0 ppm Mo
(at 0.05% WO_3 cutoff)

Moly 2020 Block Model (Indicated)

- < 100 ppm Mo
- 100 - 200 ppm Mo
- 200 - 350 ppm Mo
- 350 - 500 ppm Mo
- 500 - 800 ppm Mo
- 800 - 1000 ppm Mo
- > 1000 ppm Mo

Moly 2020 Block Model (Inferred)

- < 100 ppm Mo
- 100 - 200 ppm Mo
- 200 - 350 ppm Mo
- 350 - 500 ppm Mo
- 500 - 800 ppm Mo
- 800 - 1000 ppm Mo
- > 1000 ppm Mo

Figure 5. Long section (top) and cross sections (bottom) through Mulgine Trench showing the optimised pit shell for the 2020 Maiden Ore Reserve. Indicated Resources from the oxidised material are not included in the Ore Reserve. Inferred resources (semi-transparent) are also not included and highlight the potential of increasing Ore Reserves. Location of section is shown on Figure 3.

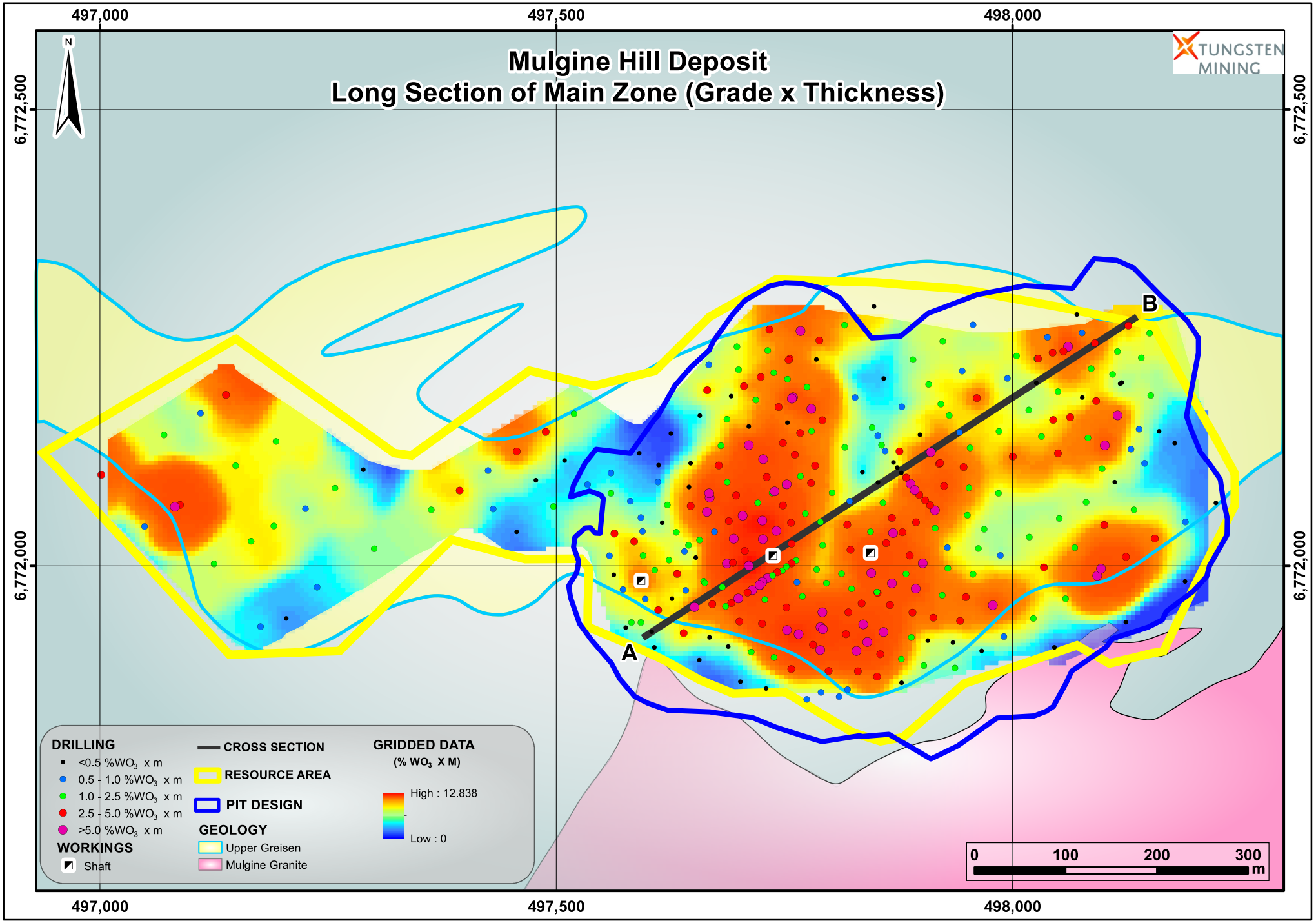


Figure 6. Long section through Mulgine Hill showing the optimised pit design for the 2020 Maiden Ore Reserve.

Mulgine Hill Cross Section

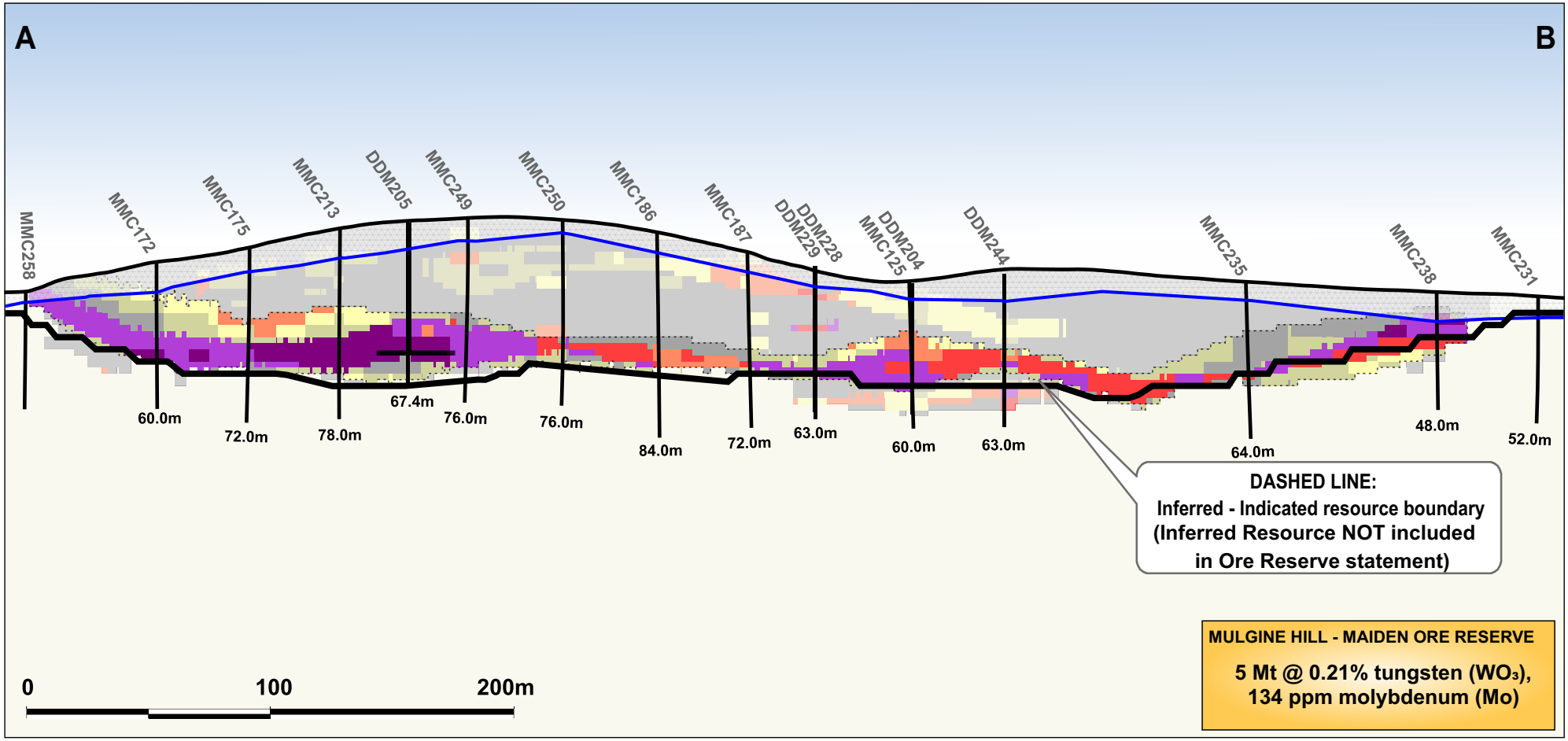


Figure 7. Cross section through Mulgine Hill showing the optimised pit shell for the 2020 Maiden Ore Reserve. Indicated Resources from the oxidised material are not included in the Ore Reserve. Inferred resources (semi-transparent) are also not included and highlight the potential of increasing Ore Reserves. Location of section is shown on Figure 6.

Appendix A: JORC 2012 Checklist of Assessment and Reporting Criteria

Note: Sections 1-3 of the Mulgine Trench Mineral Resource Estimate published 4 May 2020 are reproduced in Appendix A – 1 and Sections 1-3 of the Mulgine Hill Mineral Resource Estimate published on 12 April 2019 are reproduced in Appendix A – 2.

Section 4: Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	*• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* *• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of the Ore Reserves.*	The Ore Reserve estimate is based on the Mineral Resource estimate for the: • Mulgine Trench deposit: Refer ASX Announcement "Update of Mineral Resource Estimate for Mulgine Trench Deposit", 4 May 2020, and • Mulgine Hill deposit: Refer ASX Announcement "Update on Activities at Mount Mulgine",12 April 2019. The Mineral Resource estimates form the basis for the Ore Reserve estimate and were prepared by Optiro Pty Ltd. The Mineral Resource estimate was reported using a 0.05% WO_3 cut-off as: • Mulgine Trench - 247Mt @ WO_3 0.11%, Mo 280ppm, Au 0.13g/t, Ag 6g/t, Cu 0.04% ○ Indicated- 175Mt @ WO_3 0.11%, Mo 290ppm, Au 0.14g/t, Ag 6g/t, Cu 0.04% ○ Inferred- 72Mt @ WO_3 0.11%, Mo 250ppm, Au 0.10g/t, Ag 5g/t, Cu 0.03% • Mulgine Hill – 12.3Mt @ WO3 0.16%, Mo 125ppm ○ Indicated- 8.3Mt @ WO3 0.18%, Mo 128ppm ○ Inferred- 4.0Mt @ WO3 0.12%, Mo 118ppm • Mt Mulgine- 259Mt @ WO_3 0.11%, Mo 270ppm, Au 0.12g/t, Ag 5g/t, Cu 0.03% ○ Indicated- 183Mt @ WO3 0.11%, Mo 290ppm, Au 0.13g/t, Ag 5g/t, Cu 0.04% ○ Inferred- 76Mt @ WO3 0.11%, Mo 240ppm, Au 0.09g/t, Ag 5g/t, Cu 0.03% The Mineral Resource is reported inclusive of the Ore Reserve estimate.
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.*	As part of the Scoping Study, Pre-Feasibility Study (PFS) and the Ore Reserve estimation processes, the Competent Person visited site on: • 7th & 8th March 2017, and • 25th & 26th August 2020. The Competent Person is confident that the requirements of a site visit have been sufficiently fulfilled. There has been no mining or construction activity on the site since these site visits. The visits included, but is not limited to inspecting: • existing pits (Bobby McGee Pit and Camp) • historic shafts (Shaft 1, 2, 3, 4 and 5) • planned pits (Mulgine Trench and Hill), • existing and future site infrastructure locations, • proposed plant and tailings storage facility (TSF) site location, • major hydrological features, • significant fauna and flora sites, • significant heritage sites • significant archaeological and ethnographic sites, and diamond drill core.

Criteria	JORC Code explanation	Commentary
Study status	*• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *• The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	A PFS for the Mount Mulgine Project was completed by Tungsten Mining in November 2020. The work undertaken in this PFS has addressed all the material modifying factors required for the conversion of the Mineral Resources to Ore Reserves and has shown that the mine plan is technically achievable and economically viable. This Ore Reserve Estimate applies all material modifying factors such as mining dilution, mining recovery, infrastructure, costs, legal, environmental, social and regulatory requirements, in line with the PFS. Input parameters for the PFS were based on external industry consultants as tabulated below.
Cut-off parameters	*• The basis of the cut-off grade(s) or quality parameters applied.*	The Mount Mulgine Project is a multi-element deposit, with the economic minerals, WO_3, Mo, Cu, Ag, Au. A variable economic cut-off grade has been used for this Ore Reserve estimation. The cut-off grade is based on a block by block analysis where the revenue obtained exceeds the combined costs for a block (which is classified as a Measured or Indicated Mineral Resource), then that block becomes part of the Ore Reserve. Cut-off grade has been calculated based on forecast revenue, costs and operational factors as mill recovery and mine dilution and recovery for full LOM. The cut-off derivation includes all operating costs associated with the extraction, processing and marketing of ore material.

Purpose	Source
Geology	Tungsten Mining / Optiro
Geotechnical Study	Dempers & Seymour Pty Ltd
Mining Study	MineGeoTech Pty Ltd
Metallurgical Study	Tungsten Mining/ Ausenco / GR Engineering Services
Tailings Storage Facility Report	Knight Piésold
Materials Characterisation	Graeme Campbell & Associates Pty Ltd / Stantec
Hydrogeology Desk Top Study	Groundwater Development Services
Flora and Vegetation Assessment	Spectrum Ecology
Terrestrial Fauna Assessment	Spectrum Ecology
Non-Processing Infrastructure cost estimate	Ausenco / GR Engineering Services
Processing Plant and non-processing Infrastructure cost estimate	Tungsten Mining/ Ausenco / GR Engineering Services
Surface Water Assessment	Advisian
Heritage Place Identification	Terra Rosa Consulting
Archaeological and Ethnographic Site Identification Survey	Terra Rosa Consulting
Market Report	Roskill

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	*• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* *• The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* *• The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* *• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* *• The mining dilution factors used.* *• The mining recovery factors used.* *• Any minimum mining widths used.* *• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* *• The infrastructure requirements of the selected mining methods.*	The Mount Mulgine project will be mined by conventional open pit mining drill and blast and load and haul methods using conventional mining equipment. Pit optimisations utilising the Whittle™ implementation of the Lerchs-Grossmann algorithm were undertaken. The 100% revenue resultant pit shells were used to develop detailed pit designs with due consideration of geotechnical, geometric, and access constraints in accordance with the recommendations made in these studies. Mulgine Trench will be a 4 staged pit. The pit stages will mine concentrically out from the first stage. Mulgine Hill will be a 2 staged pit. The pit stages will mine from west to east. A minimum mining width of 35m was utilised in pit designs. A minimum cutback distance on each stage was 35m. Pit slope parameters were made in accordance with guidelines provided by Dempers & Seymour Pty Ltd. The overall inter-ramp angle ranges between 40-61 degrees depending on the rockmass properties. Blasthole sampling will be undertaken for grade control (GC). GC will delineate the ore and waste boundary and characterise impurities in preparation for blending through the processing plant. Mining dilution and ore loss factors were applied globally. A mining dilution of 5% at zero grade and ore loss of 5% were assumed. These values are considered suitable for the deposit geometry, mining method and the size of the proposed mining equipment. The pit designs were used as the basis for production scheduling and economic evaluation. The geological models used for the Ore Reserve are consistent with that produced for the Mineral Resource declared for the Mount Mulgine deposits. Fresh Measured and Indicated Mineral Resources only were considered as potential ore, with all oxide material treated as waste. Inferred Mineral Resources were not included in the pit optimisations and any Inferred Mineral Resources within the final pit design were considered to be waste. Inclusion or exclusion of Inferred Mineral Resources was shown to have minimal effect on the outcome of pit optimisations. The majority of waste rock mined will be used in the construction of the TSF, Waste not used in the construction of the TSF will be placed in the Mulgine Hill pit as backfill or stored in a separate waste storage facility. Mining infrastructure includes run of mine pad (ROM), processing plant, TSF, haul roads, workshops, offices and camp facilities, communications tower and explosives magazine. The establishment of infrastructure is included in the capital cost estimate for the project.

Metallurgical factors or assumptions	*• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* *• Whether the metallurgical process is well-tested technology or novel in nature.* *• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* *• Any assumptions or allowances made for deleterious elements.* *• The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* *• For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	The Mt Mulgine process plant is designed to treat 6 Mtpa of ore and produce tungsten concentrate, molybdenum concentrate, copper concentrate containing gold and silver. The process flowsheet has been undertaken by Tungsten Mining in conjunction with Mineralurgy Pty Ltd and Ausenco Services Pty Ltd The process plant design has been undertaken by Ausenco Services Pty Ltd. The base case process encompasses crushing of the ROM ore, ore sorting, grinding, bulk sulphide flotation (BSF), regrind and concentrate dewatering to first produce a bulk sulphide concentrate. BSF concentrate proceeds to be upgraded to a molybdenum and copper concentrate via flotation. Molybdenum and copper concentrate are dewatered and bagged prior to being trucked to port, shipped and sold to a smelter. Tungsten concentrate is produced from the BSF tails via the tungsten gravity and flotation circuit consisting of magnetic separators, hydrosizers, spirals & table concentrators, regrind and flotation. Tungsten concentrate is dewatered, dried and bagged prior to being trucked to port, shipped and sold to an APT plant. A process flowsheet and design criteria (including grinding, BSF, regrind and concentrate dewatering and flotation) was developed using well-established technology, based on metallurgical test work, industry standards and benchmarked data from similar operations. X-ray ore sorting is a technology which is becoming more frequently deployed within the mining industry. The process plant was designed to treat ore from the Mulgine Trench deposit dominant metallurgical domain, (basalt) which accounts for approximately 60% of the Ore Reserve. Differences in performance between lithologies were identified in the initial testwork and further testwork is planned to define the differences. Whilst differences in metallurgical performance between lithologies were identified in the testwork, there was sufficient similarity in the results to conclude that the recoveries and grades adopted were suitable for application to the entire deposit at a PFS level. Previous metallurgical testwork from Mulgine Hill mineralisation, indicates that it behaves in a similar metallurgical manner to the Mulgine Trench basalt lithology. As such, the same metallurgical recoveries were used for Trench and Hill. Metallurgical testwork was completed on the major lithologies, however reproducibility of results was not able to be fully demonstrated due to limited sample mass. Completed testwork includes: • Minerology • Comminution • Ore Sorting • Bulk Flotation • Gravity Table separation • Tungsten sulphide and Mozley separation • Copper and Molybdenum separation Insufficient concentrate sample sizes generated from the fine test work flowsheet were available for gold and silver assays, therefore the recovery of these elements was estimated based on the coarse flowsheet assays. Additional work is required to determine deportment of gold and silver across the circuit. In the opinion of the CP, this is likely to improve and therefore the current assumptions are valid. Initial overall recovery factors applied during mine planning optimisation, design and scheduling were: • Tungsten (WO_3) – 74.3% • Molybdenum (Mo) - 62.6% • Gold (Au) – 22.8% • Silver (Ag) – 15.9% • Copper (Cu) -61.9% Further metallurgical testwork completed during the PFS and incorporated into the financial modelling, indicated updates to the overall recovery factors as applied below: • Tungsten (WO_3) – 74.3% • Molybdenum (Mo) - 62.6%

Criteria	JORC Code explanation	Commentary
		• Gold (Au) – 40.8% • Silver (Ag) – 46.5% • Copper (Cu) -62.0% Completed metallurgical testwork has indicated that there are no deleterious contaminants in concentrates that are expected to affect the overall viability of the project. Metallurgical testwork to date has shown that sulphur and silica are present in the tungsten concentrate but the inclusion of regrind and sulphur flotation in the gravity circuit is expected to decrease this so the tungsten concentrate meets required product specifications. No bulk sample or pilot scale testwork had been carried at the time of the completion of the PFS study. However proven performance at similar operating plants has been taken into consideration. Testwork to date has shown that the Cu concentrate grade falls below marketable levels but it is considered that a final grade copper concentrate of 22.6% can be produced.
Environmental	*• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	Preliminary environmental studies have been undertaken by Spectrum Ecology to assess potential impacts of the operation on flora, vegetation and terrestrial fauna. Within the Project are: • no Threatened flora were recorded • two Priority 1 flora are identified to have high local and regional significance • no Threatened Ecological Communities (TECs) or Priority Ecological Community (PECs) occurring within or are likely to occur within the Project • The Department of Biodiversity, Conservation and Attractions (DBCA) Threatened fauna database search identified seven conservation significant fauna species that may be found within 40 km of the Project • six conservation significant fauna species were recorded Tungsten Mining has identified a proposed exclusion zone in order to protect heritage and biological factors. An area to the southeast of project has been identified as a proposed exclusion zone. TGN are currently engaged in consultation with appropriate government regulators regarding clearance of flora species identified as endemic to Mt Mulgine. Initial waste rock characterisation work on samples recovered from the Hill deposit was carried out by Graeme Campbell and Associates (GCA), indicating that a high percentage, approximately 80%, of fresh waste material is potentially acid forming (PAF). A preliminary PAF management plan prepared by GCA indicates that encapsulation of the PAF material within the TSF walls and WRL can be completed prior to any detrimental effect on the environment Further waste characterisation work on the ore rejects from samples recovered from the Trench deposit was co-ordinated by Stantec and indicates that encapsulation of the PAF ore rejects can be achieved through storage within the TSF. Waste rock and tailings storage facility (TSF) locations have been selected based on suitable geographic characteristics and proximity to the pit and plant. A conceptual TSF design has been completed by Knight Piesold Pty Ltd. utilising waste rock from the open pits as the primary construction material. Should the open pit material be unsuitable, alternative waste sources have been identified for TSF construction. Tungsten Mining currently have an approved Mining Proposal for the development and mining at the Mulgine Hill deposit. Further approvals are required prior to commencing mining and processing activities at Mt Mulgine, however there is no apparent impediments to obtaining all required approvals.

Criteria	JORC Code explanation	Commentary
Infrastructure	*• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	There is currently no substantial on-site infrastructure. A site lay-out has been developed within the following constraints: • Minimisation of disturbance to environmentally sensitive locations • Minimisation of development footprint and • Maintaining mining tenement boundaries. The Mt Mulgine Project consists of two main areas, the Mulgine Hill and the Mulgine Trench Deposits. Both are within tenement M59/425. Additional site infrastructure including the Processing Plant and ROM Pad, Waste Rock Landforms, Stockpiles and Camp Facilities will be located within the M59/387 and M59/386 tenements. The Tailings Storage Facilities (TSF) will be located within the M59/387 and P59/2244 tenements. An application for a mining lease over P59/2244 is expected to be granted on submission of compliant application. The required project infrastructure includes: • 6Mtpa process plant • LNG power plant located adjacent to the process plant • camp facility located south east of the mine and process plant site with capacity to accommodate the fly in – fly out (FIFO) workforce. • 'paddock' style tailings storage facility consisting of a single cell • mine facilities in a centralised location primarily to the west of the process plant including an administration building, warehouse, workshops, reagent storage, laboratory, bulk fuel facility and other ancillary facilities • site roads connecting the mine facilities, process plant, camp, airstrip and other minor remote infrastructure, and bulk earthworks and drainage for the process plant and camp sites • water pipeline supplying make-up water from regional sources. • site data and communications provided via a wide area network utilising microwave communication towers connecting the site communications infrastructure to the national communications grid in Geraldton • explosives magazine • mine fleet heavy vehicle workshop/stores, tyre change, heavy vehicle wash, go line, dispatch • run of mine (ROM) pad Product concentrates will be transported in sea containers by roadtrains via Greater Northern Highway. This will require an upgrade of approximately 14km of public road.

Criteria	JORC Code explanation	Commentary
Costs	*• The derivation of, or assumptions made, regarding projected capital costs in the study.* *• The methodology used to estimate operating costs.* *• Allowances made for the content of deleterious elements.* *• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* *• The source of exchange rates used in the study.* *• Derivation of transportation charges.* *• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* *• The allowances made for royalties payable, both Government and private.*	Comprehensive cost estimates for the development of all necessary infrastructure items have been incorporated to the PFS. The cost estimate is considered to have an accuracy of ±25%. • Capital cost estimates are based on data from equipment suppliers, engineering experience and typical industry estimating factors. • Operating cost estimates were derived from quotations, tenders and typical industry estimating factors • Transport costs were derived from industry benchmarked averages Initial commodity price assumptions for tungsten and molybdenum (applied during mine planning optimisation, design and scheduling) were based on a Market Report undertaken by Roskill in 2020. Historical prices were applied for gold, silver and copper from Fastmarkets MB database (Metal Bulletin) Commodity prices were updated for the financial modelling to account for the anticipated mine start and mine life. Commodity process are based on 10 year historical average prices (Fastmarkets MB) other than for gold which is based on 85% of 3 month COMEX average spot price. Treatment and refining charges are derived from Market Report undertaken by Roskill in 2020. Penalties for failure to meet specification have not been applied as it is anticipated that through a short-term blending strategy the required concentrate specifications can be achieved. Impurity levels for arsenic and molybdenum are also expected to be within specification. The exchange rate applied in the PFS was based on the 2 year historical average outlined by the Reserve Bank of Australia. A Western Australian state government royalty of 5 % is applied to all revenues

Revenue factors

• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.

• The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.

The grade of process feed and metal content is supported by the information in the Mineral Resource estimate and driven by the mining and production schedule

Processing recoveries are based on the metallurgical test work, mass balance software and professional experience and are applied within the financial model as tabulated below.

A Market Report was undertaken by Roskill in 2020 on tungsten, molybdenum and copper to ascertain:

- Market outlook for supply and demand
- Historical market trends and
- Market pricing and revenue forecasts.

This information has been supplemented by historical commodity price analysis derived from Fastmarkets MB database and the COMEX average spot price.

The metal prices adopted for the financial model are approximately:

- Fastmarkets MB 10 year historical average price for APT, 88.5% WO3
    - Tungsten concentrate prices between 77-80% of APT prices
    - 10 year historical average price for Molybdenum oxide, Pittsburgh warehouse, 58.5% Mo
    - Molybdenum concentrate treatment charges and penalties in the range of 15%.
    - 10 year historical average for silver
    - 10 year historical average for copper
- COMEX
    - 85% of 3 month average spot price for gold.

The AUD to USD exchange rate is in line with the historical average outlined by the Reserve Bank of Australia of 0.6923 for the 24 months to 31 October 2020.

The financial parameters are tabulated below

Financials	Units	Financial Model Inputs (November 2020)	Mine Planning Inputs (February 2020)
Selling Price - ATP	USD/MTU	300	250
Selling Price - Mo	USD/lb	11	12
Selling Price – gold	USD/oz	1,600	1,500
Selling Price – silver	USD/oz	20	18
Selling Price - copper	USD/t	6,600	5,600
Payability WO3	%	80	80
Payability MO	%	85	85
Payability Au*	%	97	90
Payability Ag*	%	90	90
Payability Cu*	%	95.7	90
Metallurgical Recovery WO3	%	74.3%	74.3%
Metallurgical Recovery MO	%	62.6%	62.6%
Metallurgical Recovery Au	%	40.8%	22.8%
Metallurgical Recovery Ag	%	46.5%	15.9%
Metallurgical Recovery Cu	%	62.0%	61.9%
Exchange Rate	USD: AUD	0.70	0.70
Government Royalties	%	5.0	5.0

*Payability factor before adjustment for treatment and refining charges applicable to the copper concentrate

Additional treatment and refining charges applicable to the copper concentrate are included in the financial model.

Criteria	JORC Code explanation	Commentary
Market assessment	*• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* *• A customer and competitor analysis along with the identification of likely market windows for the product.* *• Price and volume forecasts and the basis for these forecasts.* *• For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	Total tungsten supply – including from primary (existing and new operations) and secondary sources – is expected to grow modestly between 2020 and 2030. Supply from existing tungsten mines is projected to fall by approximately 10% from 2019 to 2030, as a result of closures or falling output due to ore grade depletion. Over the same period, secondary tungsten supply is projected to grow marginally. The use of secondary tungsten is already considered to have peaked in Europe, USA and Japan, while future Chinese consumption is likely to be hampered by existing bans on the import of scrap and domestic challenges regarding scrap collection programmes. Scrap availability is also driven by end-user market activity and the APT price In Roskill's base case, tungsten demand increases to approximately 120kt W 2030, suggesting some 16kt W of concentrates from new mines will be required that year in order to maintain market balance. Roskill's base case outlook for market balance and prices projects a sharp contraction in demand in 2020, as a result of COVID-19. A sharp demand rebound is projected for the 2021-2023 period, putting the market into deficit and then balance. This would likely support a recovery in price levels. Between 2024-2028, several new mine projects are forecast to come online, which may tip the market into surplus once more and lead to a weaker price environment for a period before rebalancing and supporting stronger prices. The COVID-19 pandemic is expected to have a significant negative impact on molybdenum demand in 2020, although demand is expected to recover thereafter. Roskill's base case forecast is for molybdenum demand to decline by 11.5% in 2020. In the following years, demand is expected to recover, with a 9.3% rise in demand forecast in 2021 as the global economy recovers, and with demand reverting to more typical growth rates thereafter. Between 2019 and 2030, Roskill expects primary molybdenum demand to rise by an average of ~ 2%py. Modelled concentrate specifications provided by Tungsten Mining indicate that the WO_3 content of Mt Mulgine tungsten concentrate would sit within the desirable range for the market, at 55-65% WO_3. Impurity levels for arsenic and molybdenum would also be within specification. Tungsten Mining has not entered into any contracts or arrangements that apply to mining, concentration, smelting, refining, transportation, handling, sales, hedging and forward sales that apply specifically to the Project
Economic	*• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* *• NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Discounted cashflow modelling has been carried out based on capital and operating cost estimates driven by the production schedule. Cashflow projections include initial and sustaining capital estimates, mining and processing operating costs, revenue estimates based on concentrate pricing, concentrate logistics costs to the customer and state royalties. A contingency allowance of 10% has been applied to all initial capital estimates. A discount rate of 5% is applied. The Project is financially viable, indicating a positive NPV and Post-Capital Cashflow Surplus after tax. Sensitivity analysis on the financial model indicates that the Project remains NPV positive when independent changes to key project parameters are flexed ±20% of the PFS base values (APT price, by-product prices, capital and operating costs) .

Criteria	JORC Code explanation	Commentary
Social	*• The status of agreements with key stakeholders and matters leading to social licence to operate.*	Archaeological and ethnographic site identification surveys undertaken by Terra Rosa Consulting indicate: • there are no registered Aboriginal site within the expected areas of disturbance. • there are logged Other Heritage Places (OHP) logged with the Department of Planning and Heritage (DPLH) within the expected areas of disturbance The cultural management strategy will include all reasonable efforts to avoid the DPLH OHP and restrict access and works to heritage sites. Archaeological salvage excavation will be undertaken prior to any disturbance of the site. There is no native title, or native title claims, in respect of the project footprint. Tungsten Mining liaises with the Badimia People in relation to heritage matters over the project area. The proponent for the realignment of the public road corridor (Warriedar Copper Mine Road) through area covered by the Widi mob claim is expected to be the local shire or Main Roads Western Australia. In such circumstances, the Company expects that the proponents will consult with the native title claim party consistent with relevant legislation. There are no apparent impediments to obtaining all required approvals within the anticipated timeframes The Project tenements M59/425, M59/386, M59/387 and E59/1324 are partially located within the former Warriedar pastoral lease, which is now managed by the Department of Biodiversity Conservation and Attractions (DBCA) TGN are actively engaged with, and has a constructive ongoing relationship with, all key stakeholders. There are no formal agreements in place with the key stakeholders, however there are no apparent impediments to obtaining all required approvals.
Other	*• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* *• Any identified material naturally occurring risks.* *• The status of material legal agreements and marketing arrangements.* *• The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	No material naturally occurring risks have been identified including earthquakes/cyclones etc There are no approvals in place with government regulators, however there are no apparent impediments to obtaining all required approvals within the anticipated timeframes. There are no formal agreements in place with the key stakeholders, however there are no apparent impediments to obtaining all required approvals within the anticipated timeframes. No marketing agreements in place, however there are no apparent impediments to obtaining all required agreements within the anticipated timeframes. The Mt Mulgine Project (the Project) is situated approximately 330 kilometres (km) North East of Perth and 15 km North East of Rothsay. The Project is located within contiguous Mining Leases M59/386, M59/387, M59/425, and E59/1324 which are held by Minjar Gold Pty Ltd (Minjar). More recent tenements P59/2244, L59/161 and L59/162 were applied for and are held by Tungsten Mining NL. Minor activities (construction and operation of roads) will be undertaken within the Miscellaneous Licences L59/161 and L59/162. An application for a mining lease over P59/2244 will be submitted. It is anticipated that this licence will be granted on submission of a compliant application. The Project is within the Shire of Perenjori and can be accessed from the Warriedar Copper Mine Road and the Minjar Haul Road. The Project tenements are located within the Wanarra Pastoral Lease and the former Warriedar pastoral lease. The latter is now managed by the Department of Biodiversity Conservation and Attractions (DBCA). Tungsten Mining owns 100% of the tungsten and molybdenum rights on tenements M59/386, M59/387, M59/425 and E59/1324. Tungsten Mining also has the rights to all by-products from the mining of tungsten and molybdenum on these tenements.

Criteria	JORC Code explanation	Commentary
Classification	*• The basis for the classification of the Ore Reserves into varying confidence categories.* *• Whether the result appropriately reflects the Competent Person's view of the deposit.* *• The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	The Ore Reserve estimate is a 100% Probable Ore Reserve derived from Indicated Mineral Resources only. The Competent Person has reviewed the work undertaken to date and considers that it is sufficiently relevant and detailed to appropriately reflect the Mount Mulgine Project.
Audits or reviews	*• The results of any audits or reviews of Ore Reserve estimates.*	The PFS has been internally reviewed by Tungsten Mining. No material flaws have been identified and the Ore Reserve basis of estimate is considered appropriate for a PFS level of study. No external audits or reviews have been conducted on the Ore Reserve estimate.
Discussion of relative accuracy/ confidence	*• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which 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.* *• Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* *• It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	This Ore Reserve estimate is supported by the Mount Mulgine PFS which resulted in a technically and economically viable business case. The Ore Reserve estimate has been determined using appropriate industry standard procedures for a PFS. The global accuracy of the Ore Reserve estimate is ±25%. All modifying factors have been taken into account to the pit design and Ore Reserve. To the best of the Competent Persons knowledge, the estimate of the Ore Reserve is not at this stage materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issue. Furthermore the estimate of the Ore Reserve is not materially affected by any known mining, metallurgical, infrastructure or another relevant factor.The cost estimate basis is derived via standard industry practice: • Capital cost estimates are based on data from equipment suppliers, engineering experience and typical industry estimating factors. • Operating cost estimates were derived from quotations, tenders and typical industry estimating factors • Transport costs were derived from industry benchmarked averages The metallurgical method proposed is well known and tested.Key risks identified during the PFS will be addressed in subsequent study phases, in particular; security of water, level of metallurgical and process definition and TSF design. There has been no production at the project to date, so no comprehensive comparison or reconciliation of data has been made.

Appendix A – 1: JORC Code Reporting Criteria – Sections 1-3 of the Mulgine Trench Mineral Resource Estimate published on 4 May 2020

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.*	***Holes drilled by other parties*** The deposit was sampled using diamond drilling over several campaigns from 1970 to 1981 and numerous RC drilling programs targeting gold since 1993. Earlier campaigns were conducted by Minefields Exploration NL (Minefields) and Australian and New Zealand Exploration Company (ANZECO) targeting tungsten-molybdenum mineralisation. The majority of this drilling was vertical with a total of 77 NQ and BQ diamond drillholes (8,703 m DD, 1,870 m pre-collars). In 1993, focus then turned to gold exploration and multiple phases of dominantly RC and minor diamond drilling was completed by numerous companies to present day. A total of 666 RC holes (37,563 m) and 6 diamond holes (1,216 m) have been drilled to evaluate gold at Mulgine Trench. Some of this drilling has been assayed for tungsten, molybdenum and/or silver. Grade control RC drilling was completed at the Highland Chief, Bobby McGee, Black Dog and Camp pits with 1,462 holes for 36,543 metres drilled. Holes at Bobby McGee were assayed for a suite of elements including tungsten, molybdenum, gold and silver. Grade control holes at Highland Chief, Black Dog and the Camp pits were assayed for gold only. ***Holes drilled by Tungsten Mining*** Within the Mulgine Trench Mineral Resource outline, the Companies RC and diamond drilling makes up the bulk of drilling, except where close spaced RC holes targeted shallow gold mineralisation (I.e. Bobby McGee and Camp pits). During August 2016, TGN drilled 9 RC holes for 476 metres and one large diameter (PQ) diamond hole (not sampled) for 31.6 metres at Mulgine Trench to test tungsten mineralisation adjacent to and beneath the Bobby McGee pit. In September 2018, TGN drilled 4 PQ diamond holes (528.2 m) into the Trench deposit to collect metallurgical samples and twin RC and diamond holes. From 12 July 2019 to 27 February 2020, the Company drilled 280 RC holes for 47,983 metres (47,388 metre of RC drilling, 595 metres in seven HQ diamond tails).

Criteria	JORC Code explanation	Commentary
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	***Holes drilled by other parties*** Minefields/ANZECO diamond holes were picked up by a surveyor (method unknown) and an Eastman single shot camera was used to survey holes at 30m intervals. Two twin holes drilled by Tungsten Mining in 2018 closely replicated original intersections for WO_3, Mo, Au and Ag. Between 1993 to 1995, General Gold Resources NL (General Gold) and Goldfields Exploration Pty Ltd (Goldfields) drilled two RC programs (227 holes, 13,998 m) targeting gold. Holes were picked up by DGPS for 31 holes and unknown method for the remainder. There is no known downhole survey data for this drilling. From 2001 to 2004, Gindalbie Gold NL (Gindalbie) completed multiple phases of RC drilling (228 holes, 9,487 m) and diamond drilling (3 holes, 101 m) targeting gold. Gindalbie also drilled 119 grade control RC holes (3,270 m) at the Highland Chief pit. Downhole surveying of deeper holes was conducted, but the method is unknown. A twin hole drilled by Tungsten Mining in 2018 closely replicated original intersections for Mo, Au and Ag (WO_3 not assayed in original hole). Between 2010 and 2015, Minjar Gold Pty (Minjar) drilled 197 RC holes (13,253 m) and these were pick up by DGPS with sub-metre accuracy. Downhole surveying of deeper holes was conducted by single shot camera or by a gyroscopic system. Minjar also drilled 1,343 grade control RC holes (33,273 m) at the Bobby McGee, Black Dog and Camp pits. No data on QAQC is stored in the database or described in reports. Hazelwood resampled a large number of these holes around Bobby McGee for a tungsten suite including molybdenum. Hazelwood submitted standards at a rate of 1 in 20. Seven twin holes drilled by Tungsten Mining closely replicated original intersections for WO_3, Mo and Au. ***Holes drilled by Tungsten Mining*** TGN drillhole collar locations were picked up by a licenced surveyor using a Topcon GNSS with manufacturer's specifications of +/- 10mm N,E and +/15mm Z. Downhole surveying was measured by the drill contractors using a Champ North Seeking solid state gyroscopic system in the drill rods. Accuracy is ±0.75° for azimuth and ±0.15° for inclination. Certified standards were inserted into the sample sequences according to TGN QAQC procedures. Duplicate samples were collected to check repeatability of sampling and variability or nugget effect for mineralisation. Blanks were inserted into the sample stream behind high-grade samples to test for contamination. Results from this QAQC sampling are considered good. Four TGN holes were twinned by later TGN holes (three RC redrills and 1 diamond metallurgical hole) and these holes intersected similar grade intersections for WO_3, Mo, Au, Ag and Cu.

Criteria	JORC Code explanation	Commentary
	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	***Holes drilled by other parties*** Minefields/ANZECO diamond holes were logged and UV lamped to determine mineralised material. These mineralised zones were then sampled at dominantly 5 feet intervals to 1977 and then 1 - 2 m intervals in later campaigns. Samples consisted of half core split by either a chisel or diamond saw. Samples were initially submitted to General Superintendence Co P/L in Perth for XRF analysis. Holes drilled later in the program were submitted to AMDEL in Perth for tungsten (±Mo, Sb) by XRF analysis (Method B1/1 or B2) and Mo (±Au, Ag, Bi, Cu, Sb, Zn) by AAS analysis. Between 1993 and 1995, General Gold and Goldfields drilled two RC programs (227 holes, 9,487 m) targeting gold. General Gold holes were sampled at 1 m intervals, riffle split to produce 2 – 3 kg samples and submitted to Genalysis Laboratory Services Pty Ltd for Au, Ni, Cu, As and Mo (B/AAS). Goldfields holes were sampled at 2m intervals and submitted to Analabs in Perth for Au by 30gm fire assay. From 2001 to 2004, Gindalbie completed multiple phases of RC drilling (350 holes, 12,858 m) targeting gold. For RC drilling, samples were split in a two-tier riffle splitter to produce a 3-4kg 1 m samples. Exploration holes samples were submitted to Ultratrace for 40g fire assay – ICPOES finish for gold. Grade control samples from Highland Chief were recorded as being fire assays. Minjar RC drilling (2010 and 2015) used a face sampling hammer with samples split in a three-tiered riffle splitter. Samples were originally submitted for fire assay with AAS or FA_ICPES finish. Hazelwood resampled selective holes for a standard tungsten suite including molybdenum and submitted standards at a rate of 1 in 20. Samples were submitted to Bureau Veritas and analysed by XRF analyse (method XF300). ***Holes drilled by Tungsten Mining*** Tungsten Mining ran an orientation survey in 2019 to determine the acceptability of 2m sampling intervals and found no evidence that increasing the sample interval materially impacts either accuracy or precision of the assay results. The 2016 programs plus first 36 RC holes drilled in 2019 (MMC265 –291, MMC301 –309) were sampled at 1 m intervals from the cyclone and split using a cone splitter to produce two representative 3 - 5 kg 1m-samples. Subsequent holes were then sampled to produce 2m cone-split samples. The bulk reject material was collected at 1 m intervals from the cyclone and placed on the ground for geological logging. The cone splitter was cleaned to eliminate sample contamination. Two samples were collected; one is used for analysis and the other is retained as a reference or for possible re-analysing / QAQC activities. Samples from the current drilling program were submitted to Bureau Veritas Minerals Pty Ltd of Canning Vale, WA, for a standard XRF Tungsten Suite and fire assay for gold analysis. were analysed by Laser Ablation ICP-MS for a comprehensive multi-element suite (including molybdenum and silver) to assist geometallurgical domaining of the deposit.

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).*	***Holes drilled by other parties*** From 1970 to 1981 Minefields and ANZECO completed 77 NQ and BQ diamond drillholes ranging from 15 to 243 m, averaging 140 m. These holes targeted tungsten mineralisation and were assayed for tungsten and variably for molybdenum gold and silver. Between 1993 to 1995, General Gold and Goldfields drilled two RC programs (227 holes, 13,998 m) targeting gold. Holes ranged from 20 to 120 m, averaging 61 m. From 2001 to 2003, Gindalbie completed multiple phases of exploration of RC drilling (228 holes, 9,487 m) and diamond drilling (3 holes, 101 m) targeting gold. Holes ranged from 10 to 179 m, averaging 41m. Downhole surveying of deeper holes was conducted. In 2003, Gindalbie also drilled close spaced grade control RC drilling (8 by 5 m pattern) over the Highland Chief pit (119 holes, 3,270 m). Gindalbie assayed all the grade control holes for gold only. From 2010 to 2015, Minjar drilled 197 RC holes (13,253 m) targeting gold at Mulgine Trench. Holes ranged from 22 to 114m, averaging 67m. Hazelwood assayed many of the exploration holes for tungsten and molybdenum. In 2014/2015, Minjar also completed a close spaced grade control RC drilling program (10 by 7 m pattern) over the Bobby McGee, Black Dog and Camp pits. Hazelwood assayed all the grade control holes from the Bobby Mcgee pit for a standard tungsten suite. ***Holes drilled by Tungsten Mining*** TGN completed 290 RC drillholes with depths ranging from 6 to 309 m, averaging 167 m. RC drilling used a face-sampling hammer that produced a nominal 140 mm diameter hole. TGN also drilled 5 PQ diamond holes with depths ranging from 31 to 177 m, averaging 132 m. Seven holes were extended by diamond tails (595 m of HQ core). TGN diamond and RC holes were surveyed in-rods at 20 - 30 m intervals using a North Seeking gyroscopic probe.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	***Holes drilled by other parties*** Sample recoveries from Minefields and ANZECO diamond drillholes were recorded as percentage recoveries and as being very good. Most RC drilling has visual estimates for sample recovery and moisture content. Recoveries were recorded as good (listed as mostly 100%) and dry samples (99% listed as dry). ***Holes drilled by Tungsten Mining*** RC and diamond recovery was visually assessed, recorded on drill logs and considered to be acceptable.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	***Holes drilled by other parties*** Sample recoveries from Minefields/ANZECO diamond drillholes were recorded as being generally very good and inspection of core photographs confirms this. Gindalbie and Minjar RC drill samples was collected through a cyclone and recorded as having good recovery and being dry. Details of sampling procedures for other RC drilling targeting gold are unknown at this stage. ***Holes drilled by Tungsten Mining*** RC samples collected by TGN were visually checked for recovery, moisture and contamination. A cyclone and cone splitter was used to provide a uniform sample and these were routinely cleaned. The drill contractor blew out the hole at the beginning of each drill rod to remove excess water and maintain dry samples.

Criteria	JORC Code explanation	Commentary
	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.	***Holes drilled by other parties*** Sample recoveries from Minefields/ANZECO diamond drillholes were good and no significant bias is expected. Any potential bias is not considered material at this stage. Ground conditions for shallow RC drilling would be good with drilling reported to return consistent sized dry samples. Contamination would be minimal and it is expected there would be no significant bias. ***Holes drilled by Tungsten Mining*** Ground conditions for RC drilling were good and drilling returned consistent size samples. All RC samples were dry and contamination would be minimal. 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.*	***Holes drilled by other parties*** 68 of the 77 Minefields/ANZECO diamond drillholes have geological logging, core photography and well preserved drill core. The drill database captures geological logging for 69% of RC and diamond holes targeting gold including some or all of the following: colour, rock type, weathering, veining, sulphides and dominant mineralogy. Hard copies of geological logging for many of the holes not captured by the digital drill database have been located (excluding grade control holes). ***Holes drilled by Tungsten Mining*** TGN uses specially designed drill logs for tungsten mineralisation to capture the geological data including lithology, grainsize, mineralogy, textures, oxidation state and colour. During logging, part of the RC sample is washed, logged and placed into chip trays. During the 2019/2020 drilling program, a second set of partially sieved material is stored in chiptrays for mineral identification by a near-IR spectral scanner (PANalytical TerraSpec Halo). The washed chip trays are stored in sea containers on site and Halo chip trays stored at TGN's Gnangara warehouse. All drill data is digitally captured and stored in a central database. For historical and Tungsten Mining drilling, geologically and geotechnically logging is considered to be at an appropriate level of detail to support Mineral Resource estimation and later studies.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	***Holes drilled by other parties*** Minefields/ANZECO diamond drillholes have geological logging, core photography and well preserved drill core for 90% of holes. The drill database captures geological logging for 69% of RC holes targeting gold and is qualitative in nature. ***Holes drilled by Tungsten Mining*** RC chip logging included records of lithology, mineralogy, textures, oxidation state and colour. Key minerals associated with tungsten mineralisation and veining are recorded. Diamond core was geotechnically logged for recovery and RQD. Information on structure, lithology and alteration zones were recorded. All drill core is photographed in natural and UV light. Diamond core trays are stored at Tungsten Mining warehouse for future reference.
	The total length and percentage of the relevant intersections logged	***Holes drilled by other parties*** Geological logging is captured in the Company's drill database for 90% of Minefields/ANZECO diamond holes and 69% of RC holes. ***Holes drilled by Tungsten Mining*** All TGN drill holes were logged in full.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	***Holes drilled by other parties*** Core from Minefields/ANZECO diamond holes was split by either a chisel or diamond saw and half core samples submitted for analysis. ***Holes drilled by Tungsten Mining*** PQ metallurgical core was cut in half and then quartered by an Almonte core saw and 1 metre samples of quarter core submitted for analysis. For HQ diamond tails, core was cut in half by an Almonte core saw and 1 metre samples of half core submitted for analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	***Holes drilled by other parties*** RC holes targeting gold were split by either riffle or cone splitters depending on the program to typically produce 2 - 3 kg samples ***Holes drilled by Tungsten Mining*** TGN RC samples were collected on the rig by a cyclone. Material was split by a cone splitter immediately beneath the cyclone to produce two 3 - 5 kg samples.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	***Holes drilled by other parties*** Minefields and ANZECO samples were submitted to either General Superintendence Co P/L or AMDEL in Perth. No details were found on sample preparation for samples submitted to General Superintendence Co P/L. Samples submitted to AMDEL were crushed to -1/4 inch, pulverised to -30 mesh in a Braun Pulveriser and a 120 – 150 g riffle split milled to 98% passing 200 mesh. Gindalbie submitted samples to Ultratrace Analytical Laboratories. Sample preparation comprises drying and pulverising total sample to nominal -75 micron grain size. Minjar submitted samples to Ultratrace Analytical Laboratories or ALS Global. Sample preparation comprised drying and pulverising to nominal -75 micron grain size. ***Holes drilled by Tungsten Mining*** In 2016 and 2018, TGN submitted all samples to Nagrom and these were dried and crushed to 6.3 mm using a jaw crusher. Samples in excess of 2 kg are riffle splits and pulverised to 80% passing 75 µm in LM5 pulveriser. Samples from the 2019/2020 drilling program were submitted to Bureau Veritas Minerals Pty Ltd of Canning Vale, WA and dried, split if over 2.5 kg and pulverised in robotic vibrating disc pulveriser.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	***Holes drilled by other parties*** There is no mention of routine standards and duplicate samples in Minefields and ANZECO reports. A small number of duplicate samples were sent to external laboratories and these repeated well. There is no mention of routine standards and duplicate sampling in General Gold, Goldfields, Gindalbie and Minjar annual technical reports. Re-assaying of RC drilling at Bobby McGee by Hazelwood for a tungsten suite in 2014 included insertion of standards at a rate of 1 in 20. Results fell within two standard deviations from the mean, but a high-grade standard (2.19% W) consistently assayed below the certified value. ***Holes drilled by Tungsten Mining*** Tungsten Mining's QAQC procedures included the insertion of field duplicates, blanks and commercial standards. Duplicates, blanks and standards were inserted at intervals of one in 25. Geological logging and UV lamping was used to ensure duplicate and blank samples were from mineralised intervals.

Criteria	JORC Code explanation	Commentary
	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.	***Holes drilled by other parties*** In 2011, Hazelwood submitted 201 duplicate half-core samples from Minefields/ANZECO diamond holes and submitted these to ALS Chemex for tungsten analysis by XRF. Results from these samples correlated well with original assays given the coarse-grained nature of scheelite mineralisation present. Again there is no mention of routine standards and duplicate sampling in General Gold, Goldfields, Gindalbie, and Minjar reports. ***Holes drilled by Tungsten Mining*** TGN inserted 1 in 25 RC field duplicates taken from 1 m or 2 m cone split samples at the rig. Repeatability in RC duplicate samples was found to be acceptable. Four PQ diamond holes and ten RC hole have twined RC and diamond drilling at Mulgine Trench. These holes intersected similar grade and thickness of WO_3, Mo, Au, Ag and Cu mineralisation at target depths. Individual high grade zones did demonstrate the particulate or nuggetty nature of mineralisation present.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	***Holes drilled by other parties*** The 2011 duplicate half-core samples Hazelwood submitted for tungsten analysis correlated well with original assays given the coarse-grained nature of scheelite mineralisation present. The coefficient of determination (R^2) was 0.68 and the mean was 0.238% W and 0.235% W for the original and repeat assays respectively. Two twin holes were drilled by Tungsten mining and these closely replicated original intersections for WO_3, Mo, Au and Ag. Again there is no mention of routine standards and duplicate sampling in General Gold, Goldfields, Gindalbie, and Minjar reports. However, eight holes drilled by Tungsten Mining twinned historic gold holes and these closely replicated original intersections for WO_3, Mo, Au, Ag and Cu. ***Holes drilled by Tungsten Mining*** Assays from duplicate samples showed a low - moderate scatter (R^2 0.81) for tungsten with no systematic bias. This is consistent with the style of mineralisation present, coarse grained scheelite associated with quartz veining. Molybdenum and silver results from duplicate samples showed good correlation with an R^2 of 0.93 and 0.91 respectively. Gold results from duplicate samples showed a higher degree of scatter with an R^2 of 0.63. This is interpreted to be related to the nugget effect or particulate nature of gold mineralisation at Mulgine Trench. The larger sample size of approximately 40 kg per metre collected by RC drilling is considered more appropriate than small diameter diamond holes and therefore sample sizes are considered to be acceptable to accurately represent the tungsten, molybdenum, silver, gold and copper mineralisation present at Mulgine Trench

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.*	***Holes drilled by other parties*** Samples from Minefields/ANZECO diamond holes were submitted to either General Superintendence Co P/L or AMDEL in Perth for tungsten analysis by XRF. Gold was assayed by either Fire assay AAS finish or Fire assay ICPOES finish for historic drilling targeting gold. When assayed, multielement data was analysed by sodium peroxide fusion/ICPMS finish or XRF analysis. Assay techniques used by other parties are considered appropriate. ***Holes drilled by Tungsten Mining*** Tungsten Mining assays samples for a tungsten suite by XRF. 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. Gold was assayed by 40g charge Lead Collection Fire Assay with silver used as secondary collector. Fire assay is regarded as the preferred method for quantitative gold analysis. For Phase 1 drilling, a suite of 40 elements including tungsten and molybdenum were assayed by Fused Bead Laser Ablation ICP-MS. The XRF disk is laser ablated and the gas formed is introduced to the Mass Spectrometer, providing an ideal platform for analysis. The Fused Bead Laser Ablation ICP-MS technique is total digestion of the sample achieved through the fusion process, so quantifiable elemental data is produced at detection limits that are equal if not better than acid digest techniques. Phase 2 holes were assayed for the tungsten suite by XRF, gold by fire assay and a reduced suite of elements including molybdenum and silver by Fused Bead Laser Ablation ICP-MS. Assay techniques used by Tungsten Mining are considered appropriate.
	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.	***Holes drilled by Tungsten Mining*** A handheld magnetic susceptibility meter (KT-10) was used to measure magnetic susceptibility for every sample. Data is stored in the database. A near-IR spectral scanner (PANalytical TerraSpec Halo) was utilised for mineral identification to assist in defining geometallurgical domains in the Phase 1 2019 drilling program. Partially sieved material was collected, stored in chip trays and scanned. Downhole density measurements were undertaken by Wireline Services Group using a Century Geophysical 9238 Logging Tool with a sensitivity range from 1.0 to 5.0 grams/cm^3. The standard density tool combines natural gamma, guard resistivity and high resolution density measurements into a single run.
	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.	***Holes drilled by other parties*** In 2011, Hazelwood submitted 201 duplicate half-core samples from Minefields/ANZECO diamond holes. Results from these samples correlated well given the coarse-grained nature of scheelite mineralisation present. Tungsten Mining drilled three diamond and seven RC holes that twinned earlier RC and diamond drill holes completed by previous companies within the Mulgine Trench deposit. Results from the twin holes returned intersections that closely repeated the original intersections for tungsten, molybdenum, gold, silver and copper. ***Holes drilled by Tungsten Mining*** Field QAQC procedures for TGN sampling included the insertion of blanks, commercial standards and duplicates at the rate of one in 25 samples. Assay results have demonstrated acceptable levels of accuracy and precision. Tungsten Mining drilled one diamond and 3 RC holes that twinned TGN holes. Again, results from the twin holes returned intersections that closely repeated the original intersections.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	TGN personnel have conducted a review of all assaying. During logging by the Company, visually estimates for tungsten were made under UV light and presence of molybdenite was noted. UV and normal photography of Minefields/ANZECO diamond core was also reviewed and compared against assays for tungsten and molybdenum.
	The use of twinned holes.	A total of four diamond and ten RC holes drilled by TGN twin RC and diamond drill holes within the Mulgine Trench deposit. TGN drilled four PQ diamond holes to collect material for metallurgical testwork and these holes twinned a TGN RC hole, two Minefields BQ/NQ diamond holes and one RC hole targeting gold. Seven of the RC holes twinned gold holes and three were redrills/twins of abandoned TGN holes. Results from the twin holes returned intersections that closely repeated the original intersections for tungsten, molybdenum, gold, silver and copper. Individual high-grade assays often varied considerably for all metals which is to be expected for particulate vein hosted mineralisation.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	***Holes drilled by Tungsten Mining*** Logging conducted by TGN takes place on site. Ruggedised computers are used to record the logging for RC samples. Diamond logging is either directly recorded into ruggedised computers or onto paper drill logs and data entered in Perth. A set of standard Excel templates are used to capture the data. Data was validated on-site by the supervising geologist before being sent to Perth office. It was then loaded into Micromine and validated for logging codes, missing intervals, overlapping intervals, hole location and downhole surveying. Validated data is then loaded into a relational database for storage.
	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.*	***Holes drilled by other parties*** Minefields/ANZECO diamond drilling was picked up by a surveyor and were downhole surveyed at approximately 30m intervals by an Eastman single shot camera. Holes drilled by General Gold and Goldfields from 1993 to 1995 were picked up by DGPS for 31 holes and unknown methods for the remainder. There is no downhole survey data for drilling. Holes drilled by Gindalbie from 2001 to 2004 were picked up by a combination of a surveyor (RTK GPS), DGPS and GPS depending on location. Downhole surveying of holes at Bobby McGee and Highland Chief was completed using a gyroscopic system. Regional exploration holes have no downhole survey data. Between 2012 and 2015, Minjar drilled 197 RC holes and these were picked up by DGPS with sub-metre accuracy. Downhole surveying of deeper holes (> 50 m) was completed using a gyroscopic system. ***Holes drilled by Tungsten Mining*** All holes drilled by TGN were picked up by a licenced surveyor using a Topcon GNSS with manufacturer's specifications of +/- 10mm N,E and +/-15mm Z. Downhole surveying of TGN holes was measured by the drill contractors using a North Seeking solid state gyroscopic system in the drill rods. Accuracy is ±0.75° for azimuth and ±0.15° for inclination. Downhole surveying indicated a number of holes deviated significantly and these were checked by Wireline Services confirming original dip and azimuths.
	Specification of the grid system used.	Geocentric Datum of Australia 1994 (GDA94) - Zone 50.
	Quality and adequacy of topographic control.	High resolution aerial photography and digital elevation survey was flown by Geoimage Pty Ltd on 18 February 2018 with expected height accuracy of +/- 0.5 m.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drill spacing is generally 40 metre spaced holes on 40 metre sections.

Criteria	JORC Code explanation	Commentary
	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 drill spacing at Mulgine Trench was sufficient to define an Indicated and Inferred Mineral Resource as outlined in the report.
	Whether sample compositing has been applied.	***Holes drilled by other parties*** In Minefields/ANZECO diamond drilling, mineralised zones were then sampled at dominantly 5 feet intervals to 1977 and then 1 - 2 m intervals in later campaigns. From 1993 to 1995, General Gold submitted 1 m riffle split samples, while Goldfields submitted 2 m composite samples. From 2001 to 2004, Gindalbie submitted composite samples for exploration holes. The original 1 m riffle splits samples were selectively submitted for analysis where composite intervals assay >0.2g/t Au. Grade control samples were collected at 1 m intervals. Minjar drilling between 2010 and 2015 was sampled at 1 m intervals. Four metre composite sampling was used on 15 exploration holes. ***Holes drilled by Tungsten Mining*** For non-mineralised intervals 1 m samples collected from the cyclone were composited into 5 m and later 6 m composite samples for RC drilling. Where composite samples have anomalous tungsten and/or molybdenum, the 1 m or 2 m cone split samples have been submitted for analysis.
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.*	For historic and current drilling, the orientation of drilling is designed to intersect mineralisation perpendicular to the dominant vein geometry and mineralised stratigraphy. Holes drilled at -60 degree towards the southeast intersect dominant vein sets and stratigraphy at 90 degrees. Note that one historic RC drilling program at Bobby McGee with 102 holes was drilled down dip (-60^0 towards the north).
	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.	Six strategraphic sections through the deposit had structural data collected by an optical/acoustic televiewer probe. The televiewer data plus surface mapping and structural data collected from diamond core confirmed that drill orientation did not introduce any bias regarding the orientation of mineralised veining.
Sample security	*The measures taken to ensure sample security.*	***Holes drilled by other parties*** Details of sample security for historic drilling is unknown. ***Holes drilled by Tungsten Mining*** Samples collected by TGN were securely sealed and stored on site and delivered by courier to the laboratory in Perth. Sample submissions forms used to track samples were emailed directly to the laboratory.

Criteria	JORC Code explanation	Commentary
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Quality control analysis of pre-2014 data has been audited by SJS Resource Management (SJS). It is concluded in SJS that "there is no reason or evidence to believe [there is] systematic assay errors in the legacy data or recent RC data. Any Mineral Resource estimation for The Trench deposit should not exceed the Inferred Category given the large proportion of legacy drilling used in the estimation." Obviously, ongoing drilling by TGN is designed to mitigate the classification issue. It is concluded in SJS that "there is no reason or evidence to believe systematic assay errors [exist] in the database." In March 2020, RSC Mining and Mineral Exploration completed a QAQC audit of the Mulgine Trench Resource drilling program. RSC concludes that, even though several issues were noted and improvements can made, the quality of the data is fit for the purpose of mineral resource estimation. Internal Company audits for both historical and current Company drilling are carried out to ensure drilling and sampling techniques are consistent with industry standards, consistency of data is validated by Tungsten Mining while loading into the database. Any data which fails the database constraints and cannot be loaded is returned for validation. Global consistency is audited by plotting sections using the database and reconciling assays. During drilling the Company inserts standards, duplicates and blanks into the sample stream. These QAQC samples are periodically reviewed and any issues addressed. Tungsten Mining also conducted a thorough review of historical data that included checking of assay results, twinning of holes and checking drilling against historical reports. Any errors identified were corrected in the database.

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 Mulgine Trench prospect is located on Mining Lease M59/425-I covering an area of approximately 9.4 km^2. TGN has 100% of the mineral rights for tungsten and molybdenum and to all by-products from the mining of tungsten and molybdenum. The current registered holder of the tenement is Minjar Gold Pty Ltd. The normal Western Australian state royalties apply. The Federal Court has determined that Native Title does not exist over the area of M59/425-I in relation to Badamia claim (Federal Court # WAD6123/1998). M59/425-I is located on former pastoral lease 'Warriedar Station' which has been purchased by the State Government and now forms part of the Karara Rangeland Park. Other operating mines are also located within the Park boundary.
	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 at the time of reporting. Mid-West Tungsten Pty Ltd, a wholly owned subsidiary of Tungsten Mining NL, holds a consent caveat over tenement M59/425-I.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Within the Mulgine Trench Mineral Resource outline, the Companies RC and diamond drilling makes up the bulk of drilling, except where close spaced RC holes targeted shallow gold mineralisation (i.e. Bobby McGee and Camp pits). **Tungsten Drilling** Drilling initially focused on tungsten mineralisation with Minefields and ANZECO drilling 77 NQ/BQ diamond drillholes (8,703 m DD, 1,871 m pre-collars) in the 1970s and 1980s. In 2014, Minjar Ltd drilled 27 RC exploration hole (1,680 m) northwest of the Bobby McGee and 160 RC holes (5,712 m) for grade control in the Bobby McGee pit. Hazelwood Resources Ltd assayed these holes for their standard XRF tungsten suite. TGN have conducted a thorough review of all drilling and sampling procedures. **Gold Drilling** In 1993, focus then turned onto gold exploration and multiple phases of dominantly RC drilling and minor diamond drilling was completed by numerous companies to present day. A total of 666 RC holes (37,563 m) and 6 diamond holes (1,216 m) have been drilled to evaluate gold at Mulgine Trench. During mining, an additional 1,462 RC grade control holes (36,543 m) were drilled at Bobby McGee, Highland Chief, Black Dog and the Camp pits. Exploration drilling consisting of 422 RAB (11,374 m) holes was drilled across the Trench Deposit and strike extensions.
Geology	Deposit type, geological setting and style of mineralisation.	**Mulgine Trench** Stratigraphy for the Mulgine Trench deposit consists of hangingwall amphibolites, the main mineralised horizon and footwall greisen of the Mulgine Granite. The mineralised horizon is a 160 to 260 metre thick zone that is delineated over 1.4 kilometres of strike and dips shallowly (25 – 40 degrees) towards the northwest. Tungsten and molybdenum mineralisation dominantly occurs as scheelite and molybdenite in foliation parallel veins or adjacent to vein margins or as coatings on fractures or disseminated in greisen units/veins.

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.	Not applicable, not reporting exploration results.
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.	Not applicable, not reporting exploration results.
	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.	Not applicable, not reporting exploration results.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable, no metal equivalents were quoted.
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').	Not applicable, not reporting exploration results.
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 the 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.	Not applicable, not reporting exploration results.
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.	An extensive geo-metallurgical program to identify the range of ore types in the Trench deposit and their volumes continues. This will provide the basis to recover representative bulk samples to build on the metallurgical testwork results achieved at benchscale on larger sample sizes.
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	TGN are currently undertaking a Pre-Feasibility Study on the greater Mt Mulgine Project incorporating the Mulgine Trench and Mulgine Hill deposits. Planned activities include: • Mine design and optimisation of the mining schedule, geotechnical studies and definition of maiden ore reserves; • Metallurgical test work on the material from Trench; • Process design and engineering for the tungsten processing plant and associated non-process infrastructure; • Assessment of existing and exploration for additional ground water resources; and • Completion of native flora, fauna, aboriginal heritage surveys and regulatory approval processes.

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.	***Tungsten/Molybdenum Drilling by other parties*** The bulk of the historic drilling targeting tungsten and molybdenum mineralisation was completed by Minefields and ANZECO between 1970 and 1980. Both produced graphical geological logs of a high standard that describe lithology, textures, structures and sampling. Data from these logs have been cross checked with digital records and data entered by TGN where necessary. ***Gold Drilling by other parties*** A drilling database was supplied to Tungsten Mining by Minjar for all gold holes. This data was loaded into Micromine and validated for logging codes, missing intervals, overlapping intervals, hole location and downhole surveying. Global consistency was also checked later by plotting sections using the database and reconciling assays. ***Holes drilled by Tungsten Mining*** Data associated with TGN RC drilling was recorded on ruggedised computers. Diamond logging was either directly recorded into ruggedised computers or onto paper drill logs and data later entered in Perth. A set of standard Excel templates are used to capture the data. Data was validated on-site by the supervising geologist before being sent to Perth office. It was then loaded into Micromine and validated for logging codes, missing intervals, overlapping intervals, hole location and downhole surveying. Validated data is then loaded into a relational database for storage.
	Data validation procedures used.	TGN, where possible, reviewed the original source data (i.e. original drill logs, laboratory assay reports, cross sections and plans) to validate the historical database. Data collected by TGN was validated as described above. Optiro conducted additional data validation checks as part of the drillhole desurveying process including: • 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. Only minor issues were found and these were resolved prior to commencing statistical analysis.
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.*	No site visit has been carried out by Optiro. TGN Exploration Manager is acting as Competent Person for data used in this Mineral Resource estimate.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The confidence in the geological interpretation has been significantly improved due to the infill drilling to 40 m by 40 m which has been completed since the preceding phase of resource estimation. This data continues to support the lithological patterns applied during the last generation of geological interpretation, which was influenced by aeromagnetic survey data, and has improved the resolution of the interpretation process. General confidence in the geological interpretation is good.

Criteria	JORC Code explanation	Commentary
	Nature of the data used and of any assumptions made.	The geological interpretation is based on a combination of drilling data, including close spaced grade control drilling from several small oxide gold pits, and aeromagnetic data. The drilling includes lithological logging and a subset of the sampling included bulk rock geochemistry. The geochemical database has been significantly bolstered by the addition of new data from the infill drilling. Several drillholes throughout the deposit have been logged downhole using an optical/acoustic televiewer probe which now adds information on structural features. The geochemistry data was subjected to domain analysis using neural network methods, which was correlated to the logging information. Collectively, this data was used to interpret units corresponding to ultramafics, mafics, felsics or basal granitoid.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Several lithology and structural interpretations have been considered, however, the guidance provided by the bulk rock geochemistry, the aeromagnetic data and structural data has dominated interpretations of orientation and structural domains.
	The use of geology in guiding and controlling Mineral Resource estimation.	The geological interpretation, specifically lithological and structural elements have been utilised to guide the principal axes directions employed during grade estimation. Lithology and oxidation domains were used to control the assignment of zone density values to the resource estimate.
	The factors affecting continuity both of grade and geology.	The main factors that impact continuity are: • Structure ±lithology • Oxidation (for gold, silver and copper) • The structural data at the northeast end of the deposit suggests greater mineralisation complexity than the rest of the deposit. In the northeast, the data suggests some departure from the typical subparallel relationships between lithology and mineralisation hosting veining observed throughout most of the deposit • An east-west striking, steeply dipping unmineralised late stage dyke cuts across the mineralisation at southwest end of the deposit
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 Mulgine Trench Mineral Resources extends approximately 1,700 m in a northeast-southwest strike direction and has a horizontal width in the dip direction of around 400 m in the main parts of the deposit. Mineralisation dips at approximately 40^0 toward the northwest with thicknesses up to 220 m extending to a maximum depth of 350 m below surface.

Criteria	JORC Code explanation	Commentary
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.*	Resource estimation was conducted using Datamine Studio RM software with some input from Imdex's IoGAS statistical analysis software, Snowden Supervisor and LeapFrog Geo 3D. Categorical Indicator Kriging methods applying dynamic anisotropy based on structural data were employed to define mineralised volumes for each element based on grade thresholds determined via statistical analysis of the drillhole samples. The estimated probability of being above each element grade threshold was used to define mineralised volumes which were manually constrained at the footwall of the deposit based on the extent of tungsten assaying data in drillholes. Grades were estimated within the mineralised (and background) zones using ordinary kriging of two metre downhole composites which had been top-cut as required. Dynamic anisotropy was applied based on structural data. Grade population coefficients of variation (CV) were low to very low for all elements except for gold, which exhibited moderate CVs). This demonstrates that grade estimation via ordinary kriging is applicable to the Trench deposit. For tungsten and molybdenum grade estimation, oxidation, lithology and orientation domains were all treated as soft boundaries. Gold, silver and copper grade estimation applied oxidation as a hard grade boundary. A three-pass search strategy was employed for grade estimation. The first pass was broadly based on the maximum range of continuity modelled during variography analysis. The second pass doubled these ranges while the final pass multiplied the primary ranges by a factor of five. This was done largely to facilitate grade estimation in the unmineralised background domains. Less than 1% of the tungsten mineralised blocks were estimated by the final search pass depending on the structural domain. Between 12 and 32 composites could inform a block grade in the first search. The minimum required samples were reduced to eight for the final search. No more than 10 composites could be selected from a single drillhole. Typical mineralised grade continuity was in the order of 50 m to 300 m in the mineralisation plane. Across plane continuity was less and variable by element. Gold exhibited the shortest continuity ranges.
	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 previous Mineral Resource estimates were completed by CSA in October 2014 and Optiro in November 2019. No production data is available for the project.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding by-product recovery. Tungsten, molybdenum, gold, silver and copper exhibit poor statistical correlations although it is apparent that varying degrees of spatial correlation exist between the elements. Mineralisation envelopes were developed separately for each element to constrain the grade estimation processes.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No deleterious elements are known to exist at Mulgine Trench that may impact metallurgical processing. Sulphur was used to guide the interpretation of the base of oxidation and it is known that sulphur grades are elevated in the tungsten hosting lithologies.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Parent block size was set at 20 mE by 20 mN by 10 mRL. Drillhole spacing is typically 40 m by 40 m throughout the deposit. The primary search was set to 100 m by 100 m by 20 m except for gold which used 50 m by 50 m by 10 m.

Criteria	JORC Code explanation	Commentary
	Any assumptions behind modelling of selective mining units.	The current estimate assumes mining selectively commensurate with open pit extraction on a 10 m high bench, however, no specific modelling of selective mining units has been incorporated into this generation of estimation.
	Any assumptions about correlation between variables.	No assumptions have been made regarding inter-element correlations. Statistical analysis indicates that the elements of interest are poorly correlated.
	Description of how the geological interpretation was used to control the resource estimates.	The geological interpretation was used to control density value assignment and to guide the preferred directions of grade continuity.
	Discussion of basis for using or not using grade cutting or capping.	Grade capping was used to reduce the impact of grade outliers. Correlation coefficients were low for tungsten, molybdenum and silver and there was little requirement to cap outlier grades. Top-cutting of gold grade occurred more frequently due to the more frequent occurrence of outlier grades.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Model validation was based on a combination of visual comparison with the drillhole data, whole-of-domain statistical analysis and grade profile plots. These validation processes showed satisfactory comparative outcomes. While there are some historical small oxide gold open pits within the limits of the deposits, no mining of tungsten or molybdenum has occurred, and no reconciliation information 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 was determined from current and anticipated economic parameters for the reporting of the Mineral Resource estimate.
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.*	Potential mining of the Mulgine Trench deposit will be by surface mining methods involving standard truck and haul mining techniques. The geometry of the deposit will make it amenable to mining methods currently employed in many surface operations in similar deposits around the world. The current block grade estimate includes internal and some edge dilution and assumes bulk mining on 10 m 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.*	Metallurgical test work using samples representative of the major ore types recovered from the Mulgine Trench PQ core was completed and showed high tungsten and molybdenum grades and recoveries could be achieved, subject to the flowsheet design. The test work also showed there was moderate to high copper, silver and gold recovery to the copper concentrate as by-products. Initial test work on oxide samples from Mulgine Trench shows that tungsten and molybdenum concentration can be achieved via leaching and/or gravity methods. Further work is planned with the aim of developing an extraction method that may be incorporated into the process flowsheet. Evidence gathered to date shows that no major metallurgical problems, including the presence of deleterious contaminants in concentrates, are expected to affect the overall viability of the project.

Criteria	JORC Code explanation	Commentary
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*	Preliminary environmental surveys have been completed and early site planning includes allowances for known areas of potential environmental impact on flora and fauna.
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.*	A total of 4,939 density measurements are present within the database. These were averaged within the lithological and oxidation domains and applied to the block model for tonnage estimation. The assigned density averages varied between 2.18 (oxide) and 2.93 t/m^3. Dry density was measured.
	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,	A total of 1,330 measurements were taken using the "Archimedes Principle" water displacement technique on diamond drill core from the Mulgine Trench Project. Measurements were taken from both BQ, NQ core and PQ, and from both whole core, half and quarter cut core. A total of 3,609 composite downhole density measurements were taken by a Century Geophysical 9238 Logging Tool with a sensitivity range from 1.0 to 5.0 grams/cm^3.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Average density values were assigned relative to lithological and oxidation conditions.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories*	The Mineral Resource Estimate has been assigned to Indicated and Inferred categories. A reasonable prospects of eventual economic extraction limit (RPEEE) was applied to limit the footwall extent of the Mineral Resource by producing an optimised pit shell based on an ammonium paratungstate (APT) price of USD350 per metric tonne unit (metric tonne unit or mtu is equivalent to 10 kg of tungsten) and reasonable pit slope, dilution, ore loss and recovery assumptions. The parameters employed assume larger scale mining and milling methods. The reported Mineral Resource was constrained further by restricting the down dip extensions of the deposit to a nominal 80 m projection distance beyond the drillholes that test the down dip limits of the deposit
	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).	This resource classification is considered to have appropriately accounted for all known factors.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource estimate appropriately reflects the view of the Competent Persons.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	No audits have been undertaken on the 2020 Mineral Resource estimate apart from internal peer review by Optiro.

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 relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code (2012 Edition). No attempt has been made to quantify relative accuracy and confidence 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.

Appendix A – 2: JORC Code Reporting Criteria – Sections 1-3 of the Mulgine Hill Mineral Resource Estimate published on 12 April 2019

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 diamond drilling (DD) over several campaigns from 1970 to 1980, 2011, 2017 and 2018 and reverse circulation drilling (RC) in several campaigns from 2016 to 2018. Earlier campaigns were conducted by Minefields Exploration NL (Minefields) and Australian and New Zealand Exploration Company (ANZECO). Hazelwood Resources Ltd (Hazelwood) drilled NQ diamond holes in 2011. Tungsten Mining NL (TGN) completed drilling campaign utilising RC and diamond drilling from 2016. A total of 213 NQ/BQ diamond drillholes (10,631 m DD, 2,355 m pre-collars) were drilled by Minefields and ANZECO. The majority of the drillholes were vertical. Hazelwood drilled five NQ diamond holes (437.3 m) in 2011; four of these holes twined historical Minefields/ANZECO drilling. In 2016/2017, TGN collected and assayed 1966 half-core samples from Minefields and ANZECO holes. These intervals had not previously been assayed and often had visible scheelite in UV photography. Between August 2016 and October 2018, TGN drilled an additional 152 RC drillholes (7,852 m) and the majority of the holes were vertical. TGN also drilled five PQ diamond hole (202 m) were drilled to collect metallurgical samples and four HQ diamond hole (321 m) to collect geotechnical data. In October 2018, TGN drilled four PQ diamond hole (528.2 m) to collect metallurgical samples. Results from this drilling are reporting in the accompanying announcement.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	ANZECO submitted a small number of duplicate samples to external laboratories and these repeated well. There is no reference to standards, duplicates or blanks in reports on Minefields and ANZECO drilling. In 2011, Hazelwood submitted 414 duplicate half-core samples from the Minefields and ANZECO holes to ALS Chemex for tungsten analysis by XRF. Results from these samples correlated well given the coarse-grained nature of scheelite mineralisation present. The coefficient of determination (R^2) was 0.68 and the mean was 0.238% W and 0.235% W for the original and repeat assays respectively. Hazelwood inserted one standard in 20 samples; however, 50% of these weren't assayed for tungsten as there was insufficient sample. TGN drillhole collar locations were picked up by a licenced surveyor using an RTK GPS accurate to +/- 10mm North +/- 10mm East and +/- 15mm RL. . Downhole surveying was measured by the drill contractors using a Champ North Seeking solid state gyroscopic system in the drill rods. Accuracy is ±0.75° for azimuth and ±0.15° for inclination. Certified standards were inserted into the sample sequences in according to TGN QAQC procedures. Duplicate samples were collected to check repeatability of sampling and variability or nugget effect for tungsten mineralisation. Results from this QAQC sampling were considered excellent.

Criteria	JORC Code explanation	Commentary
	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	NQ or BQ diamond holes were logged and UV lamped to determine mineralised material. These mineralised zones were then sampled at dominantly 5 feet intervals to 1977 or 1 to 2 m intervals in later campaigns. Samples were half core split by either a chisel or diamond saw. One half of the cut core is left in core boxes and retained in core storage at the Minjar core yard unless used for metallurgy or QAQC samples. Mineralised intervals in pre-collars were sampled at 1 m intervals. There is no documentation on how pre-collar samples were collected. Samples were initially submitted to General Superintendence Co P/L in Perth for XRF analysis. Holes drilled later in the programme were submitted to AMDEL in Perth for tungsten (±Mo, Sb, Mo) by XRF analysis (Method B1/1 or B2) and Mo (±Au, Ag, Bi, Cu, Sb, Zn) by AAS analysis. Diamond core drilled in 2011 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. Core was cut in half by an Almonte diamond saw and 1 m samples submitted to ALS Chemex of Malaga for tungsten (plus As, Ba, Ca, Cu, Mo, Pb, S, Sn, Ta, Zn) analysis by XRF. In 2016/2017, TGN collected generally 1 m half core (NQ or BQ) samples cut by previous operators by either chisel or diamond saw. Samples were then submitted to Nagrom Laboratory of Kelmscott for analysis by XRF Tungsten Suite. For TGN RC drilling, the drilling crew collected 1 m intervals from the cyclone and the sample was split using a cone splitter to produce two representative 2 - 4 kg samples in calico bags. The cone splitter was cleaned by hosing with pressurised air to eliminate sample contamination. One of the calico samples is for analysis and the second duplicate sample is retained as a reference sample or for possible re-analysing / QAQC activities. All TGN core was oriented, logged and photographed on site. PQ metallurgical core from August 2016 wasn't sampled at set intervals and have no assay data that can be used in the Mineral Resource estimate. For geotechnical HQ diamond holes, core was cut in half by an Almonte diamond saw and 1 m samples submitted analysis. For metallurgical PQ diamond holes drilled at Mulgine Trench in September 2018, core was cut in half and then quartered by an Almonte diamond saw and quarter core 1 m samples submitted for analysis. All TGN samples were submitted to Nagrom Laboratory of Kelmscott for analysis by XRF Tungsten Suite.
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).*	Minefields and ANZECO drilled 213 NQ/BQ diamond drillholes (10,631 m DD, 2,355 m pre-collars) over multiple campaigns from 1970 to 1980. Holes depths ranged from 11 to 154 m, averaging 61 m. Most holes drilled by Minefields and ANZECO were vertical: holes that were inclined had core orientated using a spear to mark the bottom of the core for logging structures. Hazelwood completed 5 inclined NQ diamond holes for 437 m in 2011 to twin historic drilling. Core was orientated using a REFLEX orientation device. Downhole surveying was conducted using a Reflex multi-shot survey system. TGN completed 152 RC drillholes in four drilling programmes. RC holes depths ranged from 18 to 102 m, averaging 52 m. RC drilling used a face-sampling hammer that produced a nominal 140 mm diameter hole. TGN drilled 9 PQ3 and 4 HQ3 diamond drillholes. Diamond holes were drilled from 30 to 96 m, averaging 58 m. Drill core was orientated for inclined holes, but not for vertical holes. The orientated holes were mark on the bottom of the core for structural logging. TGN diamond and RC holes were surveyed by in-rods at 20 - 30 m intervals using a North Seeking gyroscopic probe.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Minefields and ANZECO reports referred to core recovery as being excellent. No records of diamond core recovery were found in the database or on drill logs. A review of core photography shows there to be no significant core loss. TGN RC recovery was visually assessed, recorded on drill logs and considered to be acceptable. TGN diamond core recovery is logged and recorded in the database. No significant core loss issue exists. Sample recoveries were recorded and stored in the database for intervals from Minefields and ANZECO core sampled by TGN in 2016/2017. Most of these samples were from intervals that were close to 100% core recovery.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	During validation of the drill database in 2011, all available core was reconstructed into continuous runs for marking depths and core recovery. This process confirmed there was excellent core recovery. RC samples collected by TGN were visually checked for recovery, moisture and contamination. A cyclone and cone splitter was used to provide a uniform sample and these were routinely cleaned. The drill contractor blew out the hole at the beginning of each drill rod to remove excess water and maintain dry samples. Diamond core was reconstructed into continuous runs for orientation marking, depths being checked against the depth marked on the core blocks.
	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 within the mineralised zones. No significant bias is expected, and any potential bias is not considered material at this stage. BQ sample size is small given the coarse grained or nuggety nature of the scheelite mineralisation. Ground conditions for RC drilling were good and drilling returned consistent size samples. All RC samples were dry and contamination would be minimal. 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.*	Diamond core was geologically logged with information on structure, lithology and alteration zones recorded. Diamond core trays containing half or quarter core are stored for most holes at the Minjar core yard for future reference. TGN uses specially designed drill logs for tungsten mineralisation to capture the geological data. During logging part of the RC sample is washed, logged and placed into chip trays. The chip trays are stored at TGN's core yard. TGN diamond core was geotechnically logged for recovery and RQD. Information on structure, lithology and alteration zones are recorded. Diamond core trays are photographed in plane and UV light. 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 logging included records of lithology, mineralogy, textures, oxidation state and colour. Core was photographed in daylight and UV light to estimate scheelite content. TGN diamond core and RC chip logging included records of lithology, mineralogy, textures, oxidation state and colour. Key minerals associated with tungsten mineralisation and veining are recorded.
	The total length and percentage of the relevant intersections logged	There is either historical logging or recent re-logging for three quarters of the drillholes. All TGN drill holes were logged in full.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	For Minefields and ANZECO holes, NQ and BQ core was cut by either a chisel or a diamond saw and 5 feet or 1 - 2 m half core samples were submitted to General Superintendence Co P/L or AMDEL in Perth. For Hazelwood holes, NQ diamond drill core was cut in half by an Almonte diamond saw and submitted to ALS Chemex of Malaga. In 2016/2017, TGN collected generally 1 m half core (NQ or BQ) samples cut by previous operators by either chisel or diamond saw. TGN HQ geotechnical diamond core was cut in half by an Almonte diamond saw. PQ metallurgical core was cut in half and then quartered. 1 metre samples of half core for HQ holes and quarter core for PQ holes were submitted to Nagrom for XRF analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	There are no records of how Minefields and ANZECO sampled pre-collars. TGN RC samples were collected on the rig by a cyclone. Material was split by a cone splitter immediately beneath the cyclone to produce two 2 - 4 kg samples.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Minefields and ANZECO samples were submitted to either General Superintendence Co P/L or AMDEL in Perth. No details were found on sample preparation for samples submitted to General Superintendence Co P/L. Samples submitted to AMDEL were crushed to -1/4 inch, pulverised to -30 mesh in a Braun Pulveriser and a 120 – 150 g riffle split milled to 98% passing 200 mesh. Hazelwood samples were submitted to ALS Chemex and were crushed to -2 mm and then milled to 90% passing 75 µm in a LM5 mill with a chrome free bowl. TGN submitted all samples to Nagrom and these were dried and crushed to 6.3 mm using a jaw crusher. Samples in excess of 2 kg are riffle splits and pulverised to 80% passing 75 µm in LM5 pulveriser.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	There is no mention of routine standards and duplicate samples in Minefields and ANZECO reports. A small number of duplicate samples were sent to external laboratories and these repeated well. TGN's QAQC procedures included the insertion of field duplicates and commercial standards. Duplicates and standards were inserted at intervals of 30. Geological logging and UV lamping was used to ensure duplicate samples were from mineralised intervals.
	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.	In 2011, Hazelwood submitted 414 duplicate half-core samples to ALS Chemex for tungsten analysis by XRF. Results from these samples correlated well given the coarse-grained nature of scheelite mineralisation present. The coefficient of determination (R^2) was 0.68 and the mean was 0.238% W and 0.235% W for the original and repeat assays respectively. TGN inserted 1 in 30 RC field duplicates taken from 1 m cone split samples at the rig. Repeatability in RC duplicate samples was found to be excellent. Eight RC holes were drilled to twin historic diamond drilling at Mulgine Hill. These holes intersected similar grade and thickness of mineralization at target depths. Individual very-high grade zones did demonstrate the particulate or nuggety nature of tungsten mineralisation present.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Duplicate sampling of the smaller diameter BQ core indicates the nuggetty nature of tungsten mineralisation present and small sample size resulted in a relatively high degree of scatter. As noted above duplicates samples correlated well, therefore sample sizes are considered to be acceptable to accurately represent the tungsten mineralisation at Mulgine Hill given the thickness and consistency of the intersections. The larger sample size of approximately 40 kg per metre collected by RC drilling is considered more appropriate. The coefficient of determination (R^2) for RC duplicates was 0.88 and the mean was 0.149% W and 0.152% W for the original and repeat assays respectively.

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.
	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.	A handheld magnetic susceptibility meter (KT-10) was used to measure magnetic susceptibility for every sample. Data is stored in the database.
	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.	ANZECO submitted a small number of duplicate samples to external laboratories and these repeated well. There is no reference to standards, duplicates or blanks in reports on Minefields and ANZECO drilling. In 2011, Hazelwood submitted 414 duplicate half-core samples from the Minefields and ANZECO holes to ALS Chemex for tungsten analysis by XRF. Results from these samples correlated well given the coarse-grained nature of scheelite mineralisation present. The coefficient of determination (R^2) was 0.68 and the mean was 0.238% W and 0.235% W for the original and repeat assays respectively. Field QAQC procedures for TGN sampling included the insertion of commercial standards and duplicates at the rate of one in 30 samples. Assay results have demonstrated acceptable levels of accuracy and precision.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	No independent personnel have verified intersections in DD drilling. TGN personnel have conducted a review of all assaying by visual inspection of UV core photography and comparing original drill logs against the drill database.
	The use of twinned holes.	Hazelwood drilled four NQ diamond holes in 2011 to twin historical Minefields/ANZECO drilling. Twin holes intersected mineralisation at target depths; however, grades and widths show the nuggety or variable nature of the scheelite mineralisation present. TGN drilled eight RC holes to twin historic diamond holes and intersected similar widths and grades for mineralisation. Very high grade zones were however found to be variable or nuggety.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Minefields and ANZECO drilling were carefully measured, geologically logged and UV lamped prior to sampling. Data was recorded onto paper drill logs and was later transferred into an electronic database. TGN have conducted a thorough validation of this data against original paper copies/files. Diamond core drilled in 2011 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 straight into Excel files. Logging conducted by TGN takes place at the drilling site. Ruggedised computers are used to record the logging for RC samples. Diamond logging is onto paper drill logs and data entered in Perth. A set of standard Excel templates are used to capture the data. Data was validated on-site by the supervising geologist before being sent to Perth office. It was then loaded into Micromine and validated for logging codes, missing intervals, overlapping intervals, hole location and downhole surveying. Validated data is then loaded into a relational database for storage.
	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.

Criteria	JORC Code explanation	Commentary
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.*	Minefields and ANZECO collar locations were picked-up by a licensed surveyor on the national grid (AMG). This has been transformed to GDA94 Zone 50 in 2011 and old drill pad positions were located, and original collars pegged where possible. These holes were picked-up by a licenced surveyor using a DGPS and this confirmed the grid transformation was accurate. Holes drilled by TGN were picked-up by a licenced surveyor using an RTK GPS accurate to +/- 10 mm North +/- 10 mm East and +/- 15 mm RL. Downhole surveying of TGN holes was measured by the drill contractors using a North Seeking solid state gyroscopic system in the drill rods. Accuracy is ±0.75° for azimuth and ±0.15° for inclination.
	Specification of the grid system used.	Geocentric Datum of Australia 1994 (GDA94) - Zone 50.
	Quality and adequacy of topographic control.	High resolution aerial photography and digital elevation survey was flown by Fugro Spatial Solutions Pty Ltd in October 2013 with expected height accuracy of +/- 0.9 m.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drillholes were drilled using 20 by 40 m grid for most of the deposit and 80 by 80 m grid elsewhere. Two close spaced (5 to 10 m spacing) sections were drilled to determine grade continuity. Metallurgical diamond holes drilled at Trench are within the historic drill pattern completed by Minefields and ANZECO in the 1980s. This drill spacing is generally 80 metre spaced holes on 120 – 180 metre sections. Selected areas have been infilled to closer spacings.
	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.	For Mulgine Hill, the current drill spacing, combined with kriging efficiency, geological confidence and the quality control standards achieved have been used to divide the deposit into Indicated and Inferred Mineral Resource within the Main Mineralisation Zone. Hangingwall and Footwall mineralisation zones have poorer geological and grade continuity and blocks within this domain have been classified as Inferred. The drill spacing is sufficient to define an Inferred Mineral Resource reported in November 2014.
	Whether sample compositing has been applied.	For non-mineralised intervals 1 m samples were composited into 5 m composite samples for RC drilling. Where composite samples have anomalous tungsten, the 1 m cone split samples have been submitted for analysis.
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 intersect mineralisation perpendicular to the dominant vein geometry and mineralised stratigraphy.
	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 logging of diamond core has confirmed that drill orientation did not introduce any bias regarding the orientation of mineralised veining.

Criteria	JORC Code explanation	Commentary
Sample security	*The measures taken to ensure sample security.*	Samples numbers were recorded on drill logs for Minefields and ANZECO holes. No records of measures taken to ensure sample security were documented in historical reports for these holes. Diamond core for Hazelwood holes 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 core yard with samples sent directly to the laboratory in Perth. Samples collected by TGN were securely sealed and stored on site and delivered by courier to the laboratory in Perth. Sample submissions forms used to track samples were sent with samples as well as emailed directly to the laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	In January 2010, SJS Management conducted a review of the QAQC for drilling at Mulgine Hill. This audit found procedures for drilling, logging and sampling acceptable. However, they did find issues with assaying and the small sample size (NQ and BQ) given the coarse-grained nature of tungsten mineralisation present. In 2016, TGN conducted a thorough interrogation of the drill database reviewing consistency of data, geological logging, field procedures and sampling/assaying. UV photographs of core were checked against assay results. 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.

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 Mulgine Hill prospect is located on Mining Lease M59/425-I covering an area of approximately 9.4 km^2. TGN has 100% of the mineral rights for tungsten and molybdenum. The current registered holder of the tenement is Minjar Gold Pty Ltd. 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.	Minefields and ANZECO drilled 213 NQ/BQ diamond drillholes (10,631 m DD, 2,355 m pre-collars) in the 1970s and 1980s. Hazelwood completed 5 NQ diamond drillholes in February 2011. TGN have conducted a thorough review of all drilling and sampling procedures that are discussed in Table 1 – Sections 1 and 2.
Geology	Deposit type, geological setting and style of mineralisation.	**Mulgine Hill** The Mulgine Hill mineralisation occurs in a well-defined reaction zone along the northern margin of the Mulgine Granite preserved in an arcuate dominantly north-northeast trending trough. Within the mineralised zone there is both quartz-muscovite greisen and complexly veined mafic (phlogopite pyrite) schist. The main mineralised zone is along the upper contact of the mafic schist where scheelite has been deposited either as coarse disseminations within the quartz-muscovite (fluorite-apatite) greisen or within numerous quartz and greisen veins in both the mafic schist and the quartz-muscovite greisen. Overlying the Main Zone of mineralisation there are multiple less continuous zones hosted by the greisenised granite. Beneath the Main Zone, poorly defined zones of scheelite-molybdenite mineralisation have been identified by recent drilling. **Mulgine Trench** Stratigraphy for the Mulgine Trench deposit consists of a hangingwall amphibolites, the main mineralised horizon and footwall felsic volcanics and quartzite. The mineralised horizon is a 100 to 250 metre thick zone, is delineated over 1.5 kilometres of strike and dips shallowly (25 – 40 degrees) towards the northwest. Tungsten mineralisation dominantly occurs as scheelite in foliation parallel veins or adjacent to vein margins or as coatings on fractures or disseminated in greisen units/veins.
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.	Collar data for drilling is included in Appendix A.

Criteria	JORC Code explanation	Commentary
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.	Intersections were reported using a lower cut-off grade of 0.05% WO_3. WO_3 and Mo grades are reported separately for intersections. No top cut and up to 2m of internal waste were used.
	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.	All assays >0.05% WO_3 are reported beneath the relevant intersection. Interval zones of waste up to 2m wide are included in intersections provided the adjacent zone and waste are >0.05% WO_3.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable, no metal equivalents were quoted.
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').	Two diamond holes were vertical and two inclined intersecting mineralisation at between 60° - 90°. True thickness will be between 70 – 100% of the intersection thickness.
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 the 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.	All Intersections greater than 2m at 0.05 WO_3 at Mt Mulgine are reported and holes with no significant mineralisation are documented in Appendix 1.
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.	Historic mineralogical and metallurgical studies on the Mulgine Hill deposit greisen and schist ore zones showed scheelite was well liberated below 0.3 mm and gave good recoveries in a simple gravity circuit using spirals and tables. Evidence gathered to date show that no major metallurgical problems are expected to affect the overall viability of the project. Metallurgical test work has shown that the ore as represented by the samples tested, is readily concentrated to exceed the target of +50% WO_3 concentrate. Levels of potential deleterious contaminants reporting to the final concentrate were below the minimum threshold for specific APT conversion processes. Ore sorting test work to remove gangue material prior to milling and gravity treatment showed that X-Ray Transmission (XRT) sorting has removed up to 50% of the feed mass as waste whilst maintaining +95% tungsten yield. The removal of waste material will significantly reduce the processing plant footprint, capital and operating costs. Preliminary leaching studies demonstrated that high extraction rates of tungsten and molybdenum from secondary minerals in the weathered profile at Mulgine Hill are achievable. Subsequent testwork phases will focus on the recovery of tungsten in solution into a saleable solid form.
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	TGN are looking at completing a Pre-Feasibility Study on the greater Mt Mulgine Project incorporating the Mulgine Trench and Mulgine Hill deposits.

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 bulk of the drilling was completed by Minefields and ANZECO between 1970 and 1980. Both Minefields and ANZECO produced graphical geological logs of a high standard that describe lithology, textures, structures and sampling. This data has been used by TGN for geological interpretation and grade interpolation. Data from these logs have been cross checked with digital records and data entered by TGN where necessary. Diamond core drilled in 2011 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 with data capture straight into Excel files. Data associated with TGN RC drilling was recorded onto ruggedised computers. Diamond logging is onto paper drill logs and data entered in Perth. A set of standard Excel templates are used to capture the data. Data was validated on-site by the supervising geologist before being sent to Perth office. It was then loaded into Micromine and validated for logging codes, missing intervals, overlapping intervals, hole location and downhole surveying. Validated data is then loaded into a relational database for storage.
	Data validation procedures used.	TGN, where possible, reviewed the original source data (i.e. original drill logs, laboratory assay reports, cross sections and plans) to validate the historical database. Data collected by TGN is validated as described above. Optiro conducted additional data validation checks as part of the drillhole desurveying process including: •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, TGN'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.* *If no site visits have been undertaken indicate why this is the case.*	No site visit has been carried out by Optiro. TGN's Exploration Manager is acting as Competent Person for data and geological interpretation aspect of this Mineral Resource estimate.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	There is a reasonable level of confidence in the geological interpretation which divides the deposit into major lithological domains and oxidation horizons. Mineralised zones are designated by elevated tungsten grades.

Criteria	JORC Code explanation	Commentary
	Nature of the data used and of any assumptions made.	The lithology and oxidation domains are based on geological logging codes and observations from core photographs. Mineralisation domains are based on tungsten assay data with some input from UV light photographs of core. Mineralisation is defined by assay grades exceeding a nominal 0.025% WO_3 cut-off. Three mineralisation domains were interpreted; the Main Zone, which consists of a mineralisation horizon associated with the mafic schist/Upper Greisen contact, the Hangingwall Zone, which consists of a series of mineralisation envelopes confined to the Upper Greisen, and the Footwall Zone which is represented by a set of less continuous mineralisation envelopes within the Lower Greisen. A high-grade subdomain based on a 0.075% WO_3 cut-off was included within the Main Zone. No assumptions were made regarding un-assayed drillhole intervals within the mineralised domains for either tungsten or molybdenum. Unsampled intervals within the background are assumed to have grade lower than the mineralisation threshold.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The Main Zone mineralisation presents as a continuous blanket like horizon and appears robust based on the current drillhole data. Recent drilling of this zone has introduced some modifications to the margins of this domain since 2017. The Hangingwall and Footwall Zones are considerably less continuous, and the geometry of the interpreted zones may change considerably as more data is gathered. Sporadic elevated tungsten grade intersections located outside these three domains have not been estimated due to a lack of discernible continuity.
	The use of geology in guiding and controlling Mineral Resource estimation.	There is a clear relationship between the mafic schist/Upper Greisen contact and the Main Zone mineralisation horizon. This relationship influences the geometry of the Main Zone mineralisation which is primarily based on elevated tungsten grade.
	The factors affecting continuity both of grade and geology.	Lithological boundaries are reasonably defined by the available drillhole data. Grade continuity is visually obvious within the Main Zone but grade continuity modelling suggests that further close spaced data would benefit the definition of grade continuity, both in terms of directional controls and ranges.
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 Mulgine Hill Mineral Resources extends approximately 500 m in a north-south direction and extends for a maximum distance of 1,100 m in an east-west direction. Mineralisation is flat lying with an average thickness of 10 to 20 m and is close to surface (extending to a maximum depth of 80 m below surface).

Criteria	JORC Code explanation	Commentary
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, molybdenum and sulphur grade estimation used ordinary kriging (OK) in Datamine Studio RM software. Drill grid spacing ranges from a nominal 20 m by 20 m staggered grid, which increases to a nominal 75 m by 75 m grid outside of the central area of the deposit. Drillhole sample data was flagged using domain codes generated from three-dimensional mineralisation domains, lithology wireframes and oxidation surfaces. Sample data was composited to a 2 m downhole length using a best fit-method. Variography analysis of the composite data within the mineralisation domains for tungsten, molybdenum and sulphur provided kriging parameters. Top-cuts were applied prior to block grade estimation as required. Mineralisation boundaries were treated as hard boundaries for each element for grade estimation. Other estimation parameters, such as block size, minimum and maximum sample numbers were modified after completing a kriging neighbourhood analysis.
	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 previous Mulgine Hill Mineral Resource estimate was completed in 2017 using a similar geological interpretation and mineralisation boundaries. No previous mining activity has taken place in this area although tungsten grade data from two exploration shafts and associated crosscuts is available.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of by-products. Molybdenum has been estimated as it may be partly recovered as a by-product. The molybdenum grades suggest it is not a viable economic source in its own right. The possibility exists that some precious metals are associated with the tungsten mineralisation, but this has not been addressed by the resource modelling as only very limited data is available.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No deleterious elements that may impact metallurgical processing are known to exist at Mulgine Hill. Sulphur was estimated to assist in the understanding of the acid forming potential of the rock mass.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The Mulgine Hill block model was created with parent block dimensions of 10 mE by 10 mN by 5 mRL. Block sub-celling was allowed down to a minimum block size of 5 mE by 5 mN by 2.5 mRL to represent domain boundaries. Grade estimation used a three-pass search. The primary search radii were based on the tungsten variogram models and were constant for all elements and domains. Minimum and maximum informing sample numbers remained constant between the primary, secondary and tertiary searches. The primary search radii were doubled for the secondary search and multiplied by ten for the tertiary search. The maximum number of samples that could be utilised from a single drillhole was limited to three for all grade estimation.
	Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in this estimate.
	Any assumptions about correlation between variables.	No grade correlation exists between tungsten, molybdenum and sulphur globally, by lithology, or by domain. Any molybdenum produced would likely only be as a by-product of tungsten production. Highest sulphur grades are generally hosted the mafic schist and ultramafic rock units

Criteria	JORC Code explanation	Commentary
	Description of how the geological interpretation was used to control the resource estimates.	Drillhole sample data was flagged using domain codes generated from the mineralisation, lithological and oxidation interpretations. Mineralisation domains were treated as hard boundaries in the estimation of tungsten, molybdenum and sulphur. Lithology and oxidation were used to control density assignment. Oxidation was also used to control sulphur grade estimation due to the visually obvious sulphur depletion within the oxide.
	Discussion of basis for using or not using grade cutting or capping.	Top-cut analysis of tungsten, molybdenum and sulphur was undertaken by viewing log probability plots and by identifying values at which the population distributions started to become discontinuous, i.e. included outlier grades. Top-cuts were applied to all tungsten domains, a small number of molybdenum domains and the background sulphur domains based on this analysis.
	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 interpretation wireframe and subsequent block model volumes. No significant 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 trend plots in the three grid axis directions. Reasonable outcomes were obtained, particularly in the context of the moderate nugget and moderate 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 0.10% 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.*	Potential mining of the Mulgine Hill deposit will be by surface mining methods involving standard truck and haul mining techniques. The geometry of the deposit will make it amenable to mining methods currently employed in many surface operations in similar deposits around the world. The current block grade estimate includes internal and some edge dilution and assumes bulk mining on 5 m high benches.

Criteria	JORC Code explanation	Commentary
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.*	Completion of the preliminary metallurgical test work programme has shown that scheelite was readily concentrated to exceed the target concentrate grade of 50% WO_3. Levels of potential deleterious contaminants reporting to the final concentrate were below the minimum threshold for specific APT conversion processes. Ore sorting test work to remove gangue material prior to milling and gravity treatment showed that X-ray type sorting has removed up to 43% of the feed mass as waste whilst maintaining +95% tungsten yield. The removal of waste material will significantly reduce the processing plant footprint, capital and operating costs. Preliminary leaching studies for the extraction of tungsten from secondary minerals in the weathered profile at Mulgine Hill demonstrated high recoveries are achievable. Subsequent testwork phases will focus on the recovery of tungsten in solution into a saleable solid form.
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*	Waste rock from any mining will be placed into a waste rock landform adjacent to the main pit. Process plant residue will be pumped and stored as a slurry in a tailings storage facility with a central decant station that returns process water back to the process plant. An acid mine drainage management plan has been developed, utilising encapsulation of PAF material with NAF waste from the main pit pre-strip material and existing waste stockpiles in the area.
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.*	A total of 1,602 density measurements are present within the database. These were averaged within the lithological and oxidation domains and applied to the block model for tonnage estimation. The assigned density averages varied between 2.59 and 2.89 t/m^3. Dry density was measured.
	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,	Measurements were taken using the "Archimedes Principle" water displacement technique on diamond drill core from the Mulgine Hill Project. Measurements were taken from both BQ and NQ core, and from both whole core, half and quarter cut core. Measurements were also collected from PQ core drilled in 2016 by TGN. Measurements were taken using the "Archimedes Principle" water displacement technique on whole core.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Average density values were assigned relative to lithological and oxidation conditions.

Criteria	JORC Code explanation	Commentary
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories*	The Mineral Resource classification at Mulgine Hill is based on confidence in the geological and grade continuity, along with the 20 m by 20 m drillhole grid informing the core of the deposit (with two infill section lines on 5-10 m in-section spacing also present). These grid conditions combined with geological confidence and grade continuity achieved from variography modelling has divided the Main Zone mineralisation into Indicated and Inferred regions. Due to the poorer geological and grade continuity within the Hangingwall and Footwall Zone mineralisation all blocks within these zones have been classified as Inferred. Blocks with assigned grades, and blocks with tungsten and molybdenum grades within the background domain have not been classified as Mineral Resources. All blocks outside or below the drilling limits are unclassified. No Measured Mineral Resources have been defined. The total reported Mineral Resource is constrained within an open pit shell based on an ammonium paratungstate (APT) price of USD400 per metric tonne unit (mtu).
	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).	The resource classification process addresses all known contributing issues.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource estimate appropriately reflects the view of the Competent Persons.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	No audits have been undertaken on the 2019 Mineral Resource estimate apart from internal peer review by Optiro.
	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 relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code (2012 Edition). No attempt has been made to quantify relative accuracy and confidence 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.

Appendix B – Mt Mulgine Mineral Resource Estimate

Mulgine Trench Mineral Resource Estimate at 0.05% WO_3 reporting cut-off grade.

Mulgine Trench Mineral Resource Estimate – May 2020							
Classification	**Oxidation**	**Mt**	**WO_3 (%)**	**Mo (ppm)**	**Au (ppm)**	**Ag (ppm)**	**Cu (%)**
Indicated	Oxide	29	0.11	290	0.18	2.8	
	Fresh	146	0.11	290	0.13	6.2	0.04
	Total	**175**	**0.11**	**290**	**0.14**	**5.6**	**0.04**
Inferred	Oxide	3	0.09	260	0.14	2.0	0.03
	Fresh	68	0.12	250	0.10	5.6	0.03
	Total	**72**	**0.11**	**250**	**0.10**	**5.4**	**0.03**
Total	Oxide	32	0.10	285	0.18	2.7	0.05
	Fresh	215	0.11	279	0.12	6.0	0.04
	Total	**247**	**0.11**	**280**	**0.13**	**5.6**	**0.04**

Mulgine Hill Mineral Resource Estimate at 0.05% WO_3 reporting cut-off grade.

Mulgine Hill Mineral Resource Estimate– April 2019							
Classification	**Oxidation**	**Mt**	**WO_3 (%)**	**Mo (ppm)**	**Au (ppm)**	**Ag (ppm)**	**Cu (%)**
Indicated	Oxide	1.1	0.17	134	-	-	-
	Fresh	7.2	0.18	127	-	-	-
	Total	**8.3**	**0.18**	**128**	**-**	**-**	**-**
Inferred	Oxide	0.6	0.14	119	-	-	-
	Fresh	3.3	0.11	118	-	-	-
	Total	**4.0**	**0.12**	**118**	**-**	**-**	**-**
Total	Oxide	1.7	0.16	129	-	-	-
	Fresh	10.5	0.16	124	-	-	-
	Total	**12.3**	**0.16**	**125**	**-**	**-**	**-**

Appendix C

1. Conversion factors used to calculate tungsten equivalent grade

Metal	Selling Price USD/unit	Selling Price AUD/t	Metallurgical Recovery %	Payability %	Royalty %	Conversion
Tungsten	250 / MTU	35,714	74.3	80	5	1.00
Molybdenum	12 / lb	37,793	62.6	85	5	0.95
Gold	1500 / oz	68,894,450	22.8	90	5	665.95
Silver	18 / oz	826,733	15.9	90	5	5.57
Copper	5600 / tonne	8,000	61.9	90	5	0.21

It is in the Company's opinion that that all metals included in the calculation of the tungsten equivalent grade have reasonable potential to be recovered and sold. This is based on the assumed commodity prices for all metals, recovery of metal from metallurgical test work and the payability of metal in concentrate form.

The pit optimisations for the determination of the Ore Reserve were undertaken prior to the completion of the market analysis and determination of the commodity price inputs for the PFS model. Accordingly, the conversion factors may differ to the PFS model inputs disclosed on page 3 of this announcement.

2. Calculation formula used

Tungsten Equivalent Grade = (WO_3 grade * WO_3 conversion) + (Mo grade * Mo conversion) + (Au grade * Au conversion) + (Ag grade * Ag conversion) + (Cu grade * Cu conversion)

WO_3 Equivalent Grade = WO_3 + 0.95Mo + 665.95Au + 5.57Ag + 0.21Cu