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19 December 2019

ASX ANNOUNCEMENT

MAJOR MINERAL RESOURCE ESTIMATE UPDATE FOR MULGINE TRENCH DEPOSIT

Mineral Resource estimate doubles tungsten and triples molybdenum mineralisation with gold and silver accessory minerals modelled for first time.

Key Points are as follows:

- The updated Mineral Resource estimate confirms the significance of mineralisation at Mulgine Trench with a **189% increase in tonnes** and an **increase in contained metal** of **97% in tungsten and 211% for molybdenum**.
- The updated estimate also highlights the significance of accessory minerals with approximately **850,000 ounces of gold** and **35 million ounces of silver** associated with tungsten mineralisation.
- A further resource update is planned for April 2020 to drive engineering studies.

Australian tungsten developer, Tungsten Mining NL (ASX: TGN) ("TGN" or "the Company") is pleased to report a major Mineral Resource Estimate update at the Mt Mulgine Project in the Murchison Region of Western Australia, approximately 350km north northeast of Perth.

The purpose of this announcement is to advise that the Mineral Resource estimate for Mulgine Trench as of 19th December 2019 above a 0.05% WO_3 reporting cut-off grade is as follows:

Table 1: JORC-2012 Mineral Resource estimates for Mulgine Trench at 0.05% WO_3 reporting cut-off grade

Mulgine Trench Inferred Mineral Resource – December 2019									
Oxidation	Mt	WO_3 %	WO_3 (t)	Mo ppm	Mo (t)	Au ppm	Au (Oz)	Ag ppm	Ag (MOz)
Oxide	35	0.11	37,000	280	9.700	0.15	160,000	3	3
Fresh	172	0.11	190,000	271	47,000	0.12	690,000	6	32
Total	**207**	**0.11**	**230,000**	**272**	**56,000**	**0.13**	**850,000**	**5**	**35**

Tungsten Mining's CEO Craig Ferrier commented, "*This is an outstanding first step in the Mt Mulgine PFS and the results to date have exceeded our expectations. The very substantial increase in contained metal highlights the enormous potential of the Mt Mulgine project and we look forward to providing the market with an updated estimate at the conclusion of the resource definition drill program to be completed in the first quarter of 2020".*

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AN AUSTRALIAN BASED RESOURCES COMPANY

The Company owns 100% of the tungsten and molybdenum rights on a group of tenements that have been the subject of significant previous evaluation for tungsten and molybdenum. The Company also has the rights to all by-products from the mining of tungsten and molybdenum. Near surface Mineral Resources have been delineated at the Mulgine Trench and Mulgine Hill deposits, which have been the subject of ongoing evaluation by the Company (Figure 1).

In April 2019, the Company commenced work on a Pre-Feasibility Study (PFS) for large scale mining operations at the Mt Mulgine Project. It is anticipated that one of the outcomes of the PFS will be that a significant portion of the Mulgine Trench Mineral Resource will be classified as Indicated, supporting the declaration of a maiden Ore Reserve for the larger Mt Mulgine Project.

In July 2019, the Company commenced resource definition drilling at Mulgine Trench with results from the first 123 reverse circulation (RC) holes received by 22 November 2019. Resource consultants, Optiro Pty Ltd (Optiro) were engaged to update the Mulgine Trench Mineral Resource and completed this exercise in December 2019.

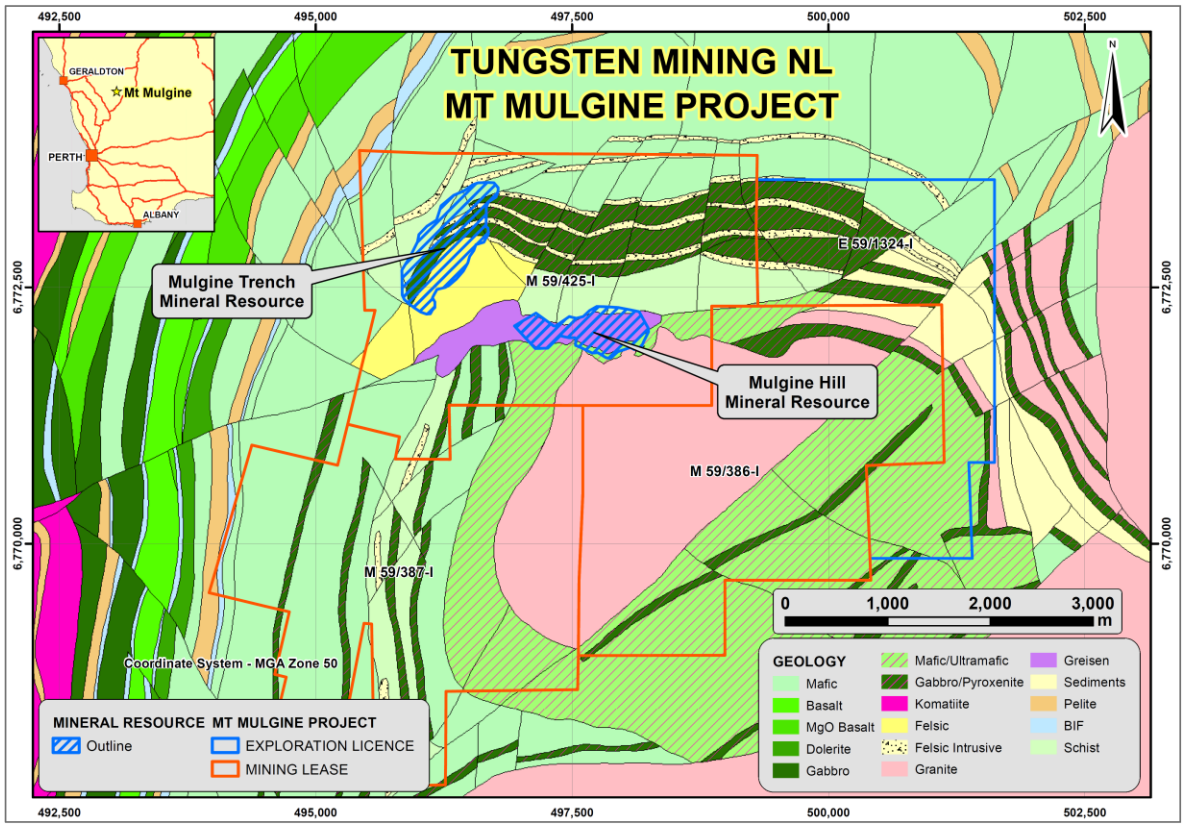

Figure 1. Location of Mulgine Trench and Mulgine Hill Mineral Resources.

Mulgine Trench Mineral Resource

The previous Mulgine Trench Mineral Resource estimate was completed by CSA Global in November 2014 for tungsten and molybdenum within 0.10% WO_3 domains. This estimate was based on drilling on 80 metre to 180 metre spaced sections with 40 metre to 80 metre spaced holes on sections. Since the June 2014 Mineral Resource estimate, the Company has drilled an additional 143 RC holes for 21,157 metres and five PQ diamond holes for 560 metres.

A comparison between the previous and current Resource estimates for the Mulgine Trench deposit is shown in Table 2 below. The reported Mineral Resource is constrained within limits defined by a pit shell with an ammonium paratungstate (APT) price of US$400 per mtu revenue factor. This pit shell was used to demonstrate that there are reasonable prospects for eventual economic extraction in accordance with the 2012 editon of the JORC Code. At a 0.05% WO_3 cut-off grade, this has resulted in a **189% increase in tonnes** and an **increase in contained metal** of **97% in tungsten and 211% for molybdenum**. In addition, gold and silver grades were estimated into the block model and this defined **850,000 ounces of gold and 35 million ounces of silver**.

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Table 2: Mt Mulgine Resource comparison at 0.05% WO_3 reporting cut-off grade

Mineral Resource Report for Mulgine Trench – December 2019						
Classification	**Oxidation**	**Mt**	**WO_3 (%)**	**WO_3 (t)**	**Mo (ppm)**	**Mo (t)**
Dec 2019 Mulgine Trench Resource Estimate						
Grand Total	Oxide	35	0.11	37,000	280	9,700
	Fresh	172	0.11	190,000	271	47,000
	Sub-Total	**207**	**0.11**	**230,000**	**272**	**56,000**
Nov 2014 Mulgine Trench Resource Estimate						
Grand Total	Oxide	3.5	0.15	5,000	280	1,000
	Fresh	68.2	0.16	112,000	250	17,000
	Sub-Total	**71.7**	**0.16**	**117,000**	**250**	**18,000**
Difference						
Grand Total	Oxide	900%	-27%	640%	0%	870%
	Fresh	152%	-31%	70%	8%	176%
	Sub-Total	**189%**	**-31%**	**97%**	**9%**	**211%**

Note: Totals may differ from sum of individual numbers as numbers have been rounded in accordance with the Australian JORC code 2012 guidance on Mineral Resource reporting. The November 2014 Mineral Resource estimate included a minor component of material classified as Indicated and does not include gold or silver grade estimates.

The tungsten and molybdenum reported within the December 2019 Mineral Resource estimate constitute the dominant minerals within the Mulgine Trench deposit pursuant to the terms of the Mt Mulgine mineral rights agreements between the Company and Minjar Gold Pty Ltd, with gold and silver identified as accessory minerals and therefore potential by-products to be recovered from mining tungsten and molybdenum. It should be noted that whilst the accessory minerals may have the potential to contribute value as a by-product, they are not considered economic to mine in their own right. The extent of recovery of these accessory minerals is presently uncertain. Metallurgical test work to confirm recoveries for all minerals is in progress as part of the PFS programme and will be reported as the relevant information becomes available.

Geology

Tungsten-molybdenum mineralisation at Mt Mulgine is associated with the Mulgine Granite - a high-level leucogranite forming a 2km stock that intrudes the Mulgine anticline (Figure 1). The granite intrudes a greenstone sequence composed of micaceous schists, amphibolite and talc-chlorite schist which were formerly metasediments, mafic and ultramafic rocks respectively.

The Mulgine Granite is associated with intense hydrothermal alteration, with greisenisation and quartz veining of the granite and widespread pervasive phlogopite alteration and sulphidation on the north and northwest flanks of the granite.

The mineralised horizon at Mulgine Trench is a 140 to 220 metre thick zone that has been delineated over 1.4 kilometres of strike and dips shallowly (25 – 40 degrees) towards the northwest (Figure 2 and 3). Stratigraphy consists of mafic to ultramafic amphibolites with at least three narrow banded iron formation (BIF) units. Numerous felsic units intrude the sequence, and these are interpreted as being associated with the Mulgine Granite intrusion.

Tungsten mineralisation dominantly occurs as scheelite in veins or adjacent to vein margins or as coatings on fractures or disseminated in greisen units/veins. There are two principal sets of quartz veins, a dominant conformable set that dips shallowly (25 - 40°) towards the northwest and a steeper set (50 - 60°) dipping in the same direction.

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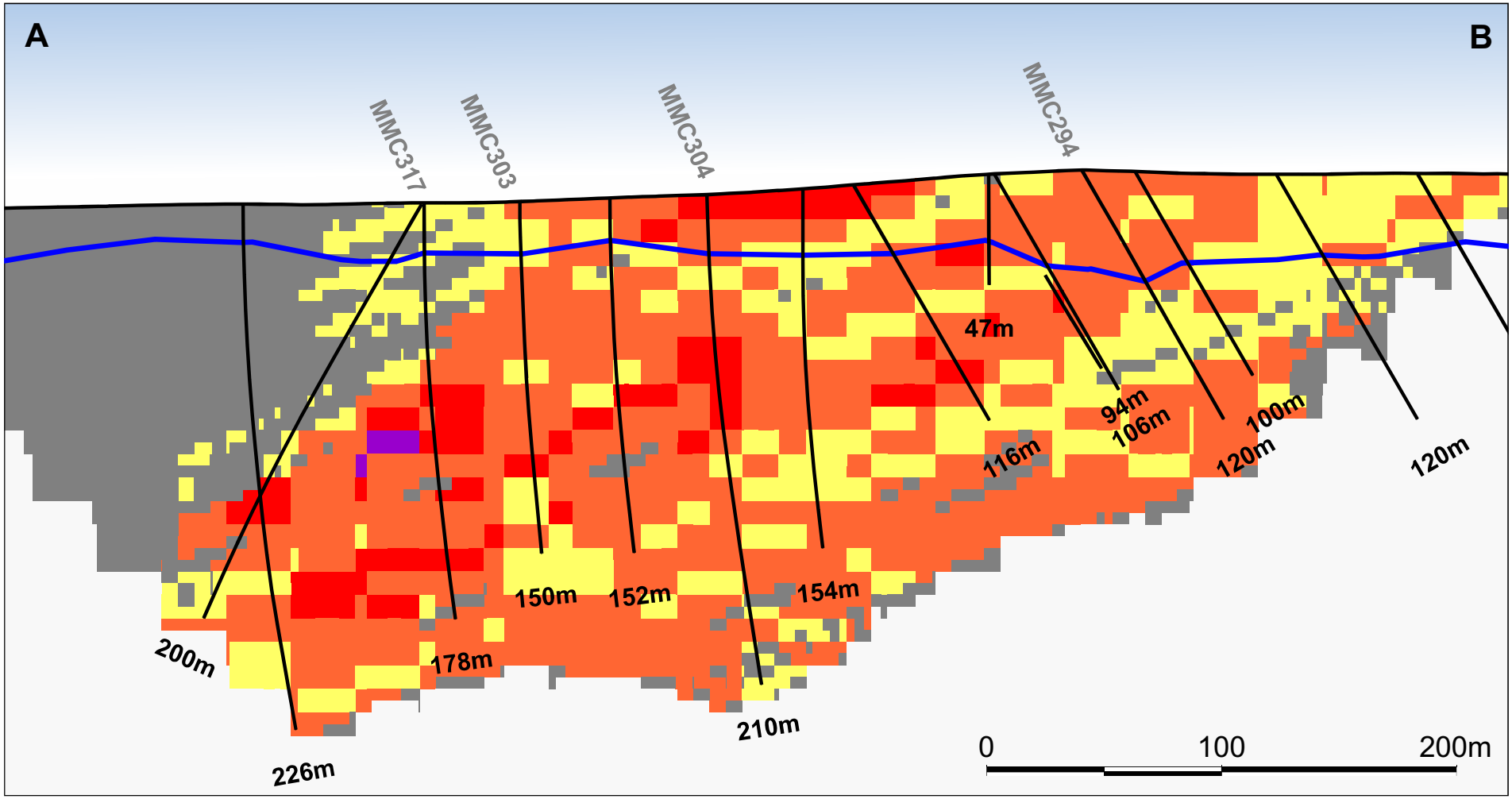
Mulgine Trench: Section A - B



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MMC375 TGN RC hole - current drill program

Base of oxidation (interpreted)

2019 Block Model

Inferred 207Mt @ 0.11% WO_3, 272 ppm Mo

(at 0.05% WO_3 cutoff)

2019 Block Model

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

Figure 2. Cross section showing recent Tungsten Mining drilling (grey labels) and block model for Mulgine Trench Mineral Resource estimate. Location of section displayed on Figure 3.

Mineralisation is associated with quartz veins generally less the 10cm and strong mineralisation tends to be associated where quartz veining averages 15 – 20% of the total rock volume.

Metallurgy

Mineralogical and metallurgical studies on the range of ore types from the Mulgine Trench deposit show scheelite well liberated at coarse sized fractions, resulting in high grades and recoveries via simple gravity techniques. Molybdenum was liberated at finer sized fractions and showed high recovery and upgrades through a flotation circuit. "Sighter" leach tests completed on two composites of low grade oxide samples resulted in a high extraction rate for gold. In addition, historical test work showed that accessory minerals gold and silver were recovered into the sulphide flotation concentrate as by-products in the process of recovering molybdenum.

Evidence gathered to date show that no major metallurgical problems are expected to affect the overall viability of the project.

Drilling

Drilling by other parties

The deposit was sampled using diamond drilling (DD) over several campaigns from 1970 to 1981 and numerous RC drilling programs targeting gold since 2001. Earlier campaigns were conducted by Minefields Exploration NL and Australian and New Zealand Exploration Company targeting tungsten-molybdenum mineralisation. The majority of this drilling was vertical with a total of 74 NQ and BQ diamond drillholes (8,517 m DD, 1,840 m pre-collars).

In 2001, focus then turned to gold exploration and multiple phases of dominantly RC and minor diamond drilling was completed by numerous companies to present. A total of 342 RC holes (19,429 m) and 3 diamond holes (828 m) have been drilled to evaluate gold at Mulgine Trench.

Tungsten Mining Drilling

In July 2019, the Company commenced a phased drilling program as part of the Mt Mulgine Project PFS with the objective of upgrading a substantial portion of the Inferred Mulgine Trench Mineral Resource estimate to Indicated status. Phase 1 of the program consisted of completing 40 metre spaced infill holes on existing sections and test possible extensions to known mineralisation. The program has progressed onto Phase 2 which involves infilling sections to a 40 metre spacing and to 18 October 2019, the Company has drilled 143 RC holes for 21,157m at Mulgine Trench. Assays were pending for 16 of the 143 holes at the time data was handed over to Optiro. An additional four HQ diamond holes for 321m were drilled to collect geotechical data and these were also assayed for tungsten.

Since drill data was handed over to Optiro, the Company has drilled an additional 59 RC holes for 10,904 metres (Figure 4). An updated Mineral Resource estimate is expected to be completed in April 2020 on completion of all resource definition drilling.

Sampling

Drilling by other parties

Minefields and ANZECO diamond holes were logged and UV lamped to determine mineralised material. These holes were initially samples on 5 feet intervals to 1977 and then 1m to 2m intervals in later campaigns. Samples were half core and submitted to either General Superintendence Co P/L or AMDEL in Perth for tungsten analysis by XRF. In addition, 201 duplicate half-core samples were collected in 2013 and submitted to ALS Chemex for a tungsten suite by XRF analysis. Results from these samples correlated well with original assays given the coarse-grained nature of scheelite mineralisation present.

Tungsten Mining Drilling

The Company's 2016 to 2019 campaign RC samples were collected on the rig by a cyclone and material was split by a cone splitter immediately beneath the cyclone to produce two 3 kg to 5 kg samples. Samples for the 2016 RC drilling were collected a 1 metre intervals and submitted to Nagrom Laboratory for analysis by XRF for a tungsten

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suite. PQ metallurgical core drilled by the Company was cut in half and then quartered. One metre quarter core samples were submitted to Nagrom for XRF analysis for a suite of elements and fire assay for gold.

During the Company's 2019 campaign, RC samples for the first 36 holes were collected at 1 metre intervals. However, given the style of mineralisation present at Mulgine Trench and after an orientation survey determined acceptability of 2m sampling intervals, later holes were sampled over 2 metre intervals. Samples from the 2019 drilling programme were submitted to Bureau Veritas Minerals Pty Ltd for a standard XRF Tungsten Suite and fire assay for gold analysis. Phase 1 holes were analysed by Laser Ablation ICP-MS for a comprehensive multi-element suite to assist geometallurgical domaining of the deposit.

Tungsten Mining's QAQC procedures included the insertion of field duplicates, blanks and commercial standards with all samples submitted.

Database

Data used in the Mineral Resource estimate is sourced from Excel spreadsheets supplied to Optiro. The drill database was provided by Hazelwood Resources Ltd and Minjar Gold Pty Ltd in December 2015 and validated by the Company in Micromine. Data was checked against original hard copy drill logs, sections and plans and, where posible, validated against UV core photographs. Drilling undertaken by the Company in 2016 to 2019 was logged on site. Ruggedised computers were used to record the logging for RC samples, while diamond logging was on paper drill logs with data entered in Perth. Global consistency was checked by plotting sections using the database and reconciling assays and geology.

Geological Interpretation

Lithological units defining basal granite, ultramafics, mafics and felsics were interpreted using a combination of logging data and bulk rock geochemistry where it was available. Wireframe models of these lithologies were developed using LeapFrog software. A sub-horizontal oxidation boundary was interpretated from a combination of logging and sulphur grade data.

Estimation and modelling techniques

Tungsten, molybdenum, silver and gold grade estimation used Ordinary Kriging (OK) in Datamine Studio RM software using top-cut 2m composited samples within the mineralised domains developed for each of the elements. Mineralised volumes were individually interpreted for each of the metals using categorical indicatory kriging (CIK) methods. The grades for each element demonstrate little statistical correlation, however, spatial correlations are more apparent and were managed by the CIK approach. Mineralisation domains were treated as hard boundaries for the estimation of all metals. The lithological and oxidation domains were applied to control the assignment of density values for tonnage estimation.

The Mulgine Trench block model was created with parent block dimensions of 20mE by 20mN by 10mRL. Block sub-celling was allowed down to a minimum block size of 5mE by 5mN by 5mRL to represent domain boundaries.

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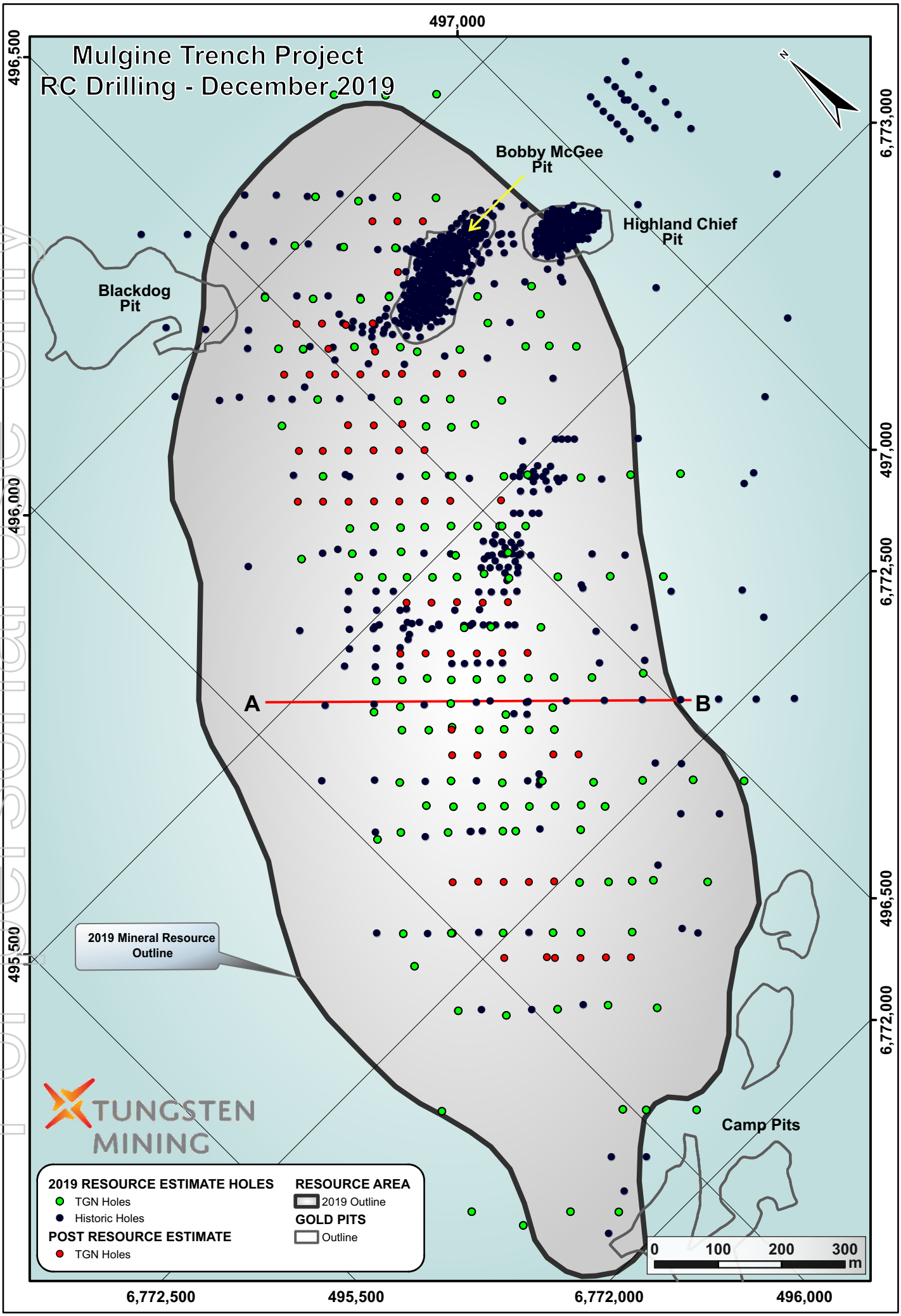

Figure 3. Plan showing location of holes used in Mulgine Trench Mineral Resource estimate. Green dots = TGN holes, navy blue holes = historic holes. Red dots = holes drilled after Resource estimate update (59 RC holes for 10,904 metres).

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A multiple search pass approach was applied that escalated the search distance if the number of informing samples did not satisfy required minimums. The primary search radii for each mineralisation domain were set to the maximum range demonstrated by the variogram model. The minimum and maximum number of informing samples remained constant between the primary and secondary searches while the minimum number of samples was reduced for the tertiary search. The primary search radii were doubled for the secondary search and multiplied by five for the tertiary search. The extent of mineralised block grade estimation was limited laterally and vertically to minimise grade extrapolation. The estimation process was also control by a number of orientation domains that were derived from a combination of visual observation of grade patterns and trends highlighted by aeromagnetic data.

A total of 1,337 density measurements are present within the drill database and these were averaged within lithological and oxidation domains. A single density value was applied to the oxidised zone as only 42 of the samples were located within this domain. The average density values were used to control the assignment of bulk density values to each lithological/oxidation domain.

The resulting interim Mineral Resource Estimate has been assigned to an Inferred category notwithstanding that there are some areas of closer spaced drilling, including grade control data from a number of small oxide gold open pits.

Mineral Resource Estimate

The reported Mineral Resource is constrained within limits defined by a pit shell with an APT price of US$400 per mtu revenue factor. This pit shell was used to demonstrate that there are reasonable prospects for eventual economic extraction in accordance with the 2012 editon of the JORC Code. The APT price was above US$400 per mtu for periods of 2011 through to 2013. The Mulgine Trench Mineral Resource is reported below using a range of WO_3 lower grade cut-offs in Table 3.

Table 3: Mineral Resource estimates for Mulgine Trench deposit at 0.05%, 0.10% and 0.15% WO_3 cut-off.

Mulgine Trench Mineral Resource Report – December 2019											
WO_3 % cut-off	Classification	Oxidation	Mt	WO_3 %	WO_3 (t)	Mo ppm	Mo (t)	Au ppm	Au (oz)	Ag ppm	Ag (Moz)
0.05	Inferred	Oxide	35	0.11	37,000	280	9,700	0.15	160,000	3	3
		Fresh	172	0.11	190,000	271	47,000	0.12	690,000	6	32
		Total	**207**	**0.11**	**230,000**	**272**	**56,000**	**0.13**	**850,000**	**5**	**35**
0.10	Inferred	Oxide	18	0.13	22,000	261	4,600	0.14	78,000	3	1.7
		Fresh	107	0.13	140,000	270	29,000	0.13	440,000	6	21
		Total	**125**	**0.13**	**160,000**	**269**	**33,000**	**0.13**	**520,000**	**6**	**23**
0.15	Inferred	Oxide	2	0.17	4,000	205	480	0.09	6,600	3	0.2
		Fresh	17	0.17	28,000	253	4,200	0.14	74,000	7	3.5
		Total	**19**	**0.17**	**32,000**	**247**	**4,600**	**0.13**	**81,000**	**6**	**3.7**

Note: Totals may differ from sum of individual numbers as numbers have been rounded in accordance with the Australian JORC code 2012 guidance on Mineral Resource reporting.

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This ASX announcement was authorised for release by Craig Ferrier, Chief Executive Officer of Tungsten Mining NL.

Competent Person's Statement

The information in this report that relates to Mineral Resources is based on, and fairly represents, information and supporting documentation prepared by Paul Blackney, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Blackney is a full-time employee of the resource industry consultancy Optiro Pty Ltd. Mr Blackney has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Blackney consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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

About Tungsten Mining

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.

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Appendix 1 - JORC Code Reporting Criteria

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 74 NQ and BQ diamond drillholes (8,517 m DD, 1,840 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. A total of 342 RC holes (19,429 m) and 3 diamond holes (828 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 were completed at the Highland Chief and Bobby McGee pits with 279 holes for 8.982 metres drilled. Holes at Bobby McGee were assayed for a suite of elements including tungsten, molybdenum, gold and silver. Holes at Highland Chief were assayed for gold only. ***Holes drilled by Tungsten Mining*** 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 18 October 2019 (Mineral Resource estimate cut-off date), the Company had drilled 143 RC holes for 21,157 metres. Assays were pending for 16 of the 143 holes at the time data was handed over to Optiro. Since 18 October 2019, the Company has drilled an additional 59 RC holes for 10,904 metres to the 30 November 2019.
	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 WO3, Mo, Au and Ag. Between 1993 to 1995, General Gold Resources NL (General Gold) and Goldfields Exploration Pty Ltd (Goldfields) drilled two RC programs (74 holes, 5,279 m) targeting gold. Holes were picked up DGPS for 31 holes and unknown method for the remainder. There is no known downhole survey data for this drilling. From 2001 to 2003, Gindalbie Gold NL (Gindalbie) completed multiple phases of RC drilling (179 holes, 8,814 m) targeting gold. 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 2012 and 2014, Minjar Gold Pty (Minjar) drilled 249 RC holes (11,048 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. 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. Four twin holes drilled by Tungsten Mining closely replicated original intersections for WO_3, Mo, Au and Ag. ***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 were considered good.

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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 programme 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 (74 holes, 5,279 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 2003, Gindalbie completed multiple phases of RC drilling (298 holes, 12,084 m) targeting gold. 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 (2012 and 2015) used a face sampling hammer with samples split in a three-tiered riffle splitter. Samples were originally submitted for fire assay AAS or FA_ICPES finish. Hazelwood resampled selective holes at Bobby McGee 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 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 first 36 RC holes (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 programme were submitted to Bureau Veritas Minerals Pty Ltd of Canningvale, WA, for a standard XRF Tungsten Suite and fire assay for gold analysis. Phase 1 holes were analysed by Laser Ablation ICP-MS for a comprehensive multi-element suite to assist geometallurgical domaining of the deposit.
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 74 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 (74 holes, 5,279 m) targeting gold. Holes ranged from 20 to 120 m, averaging 71 m. From 2001 to 2003, Gindalbie completed multiple phases of exploration RC drilling (179 holes, 8,814 m) targeting gold. Holes ranged from 10 to 179 m, averaging 49m. 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 2012 to 2015, Minjar drilled 84 exploration RC holes (4,912 m) targeting gold at Mulgine Trench. Holes ranged from 22 to 114m, averaging 58m. Hazelwood assayed many of the exploration holes for tungsten and molybdenum. In 2014, Minjar also completed a close spaced grade control RC drilling program (10 by 7 m pattern) over the Bobby McGee pit. Hazelwood assayed all the grade control holes for a standard tungsten suite. ***Holes drilled by Tungsten Mining*** TGN completed 152 RC drillholes with depths ranging from 6 to 270 m, averaging 148 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. TGN diamond and RC holes were surveyed in-rods at 20 - 30 m intervals using a North Seeking gyroscopic probe.

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Criteria	JORC Code explanation	Commentary
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.
	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 returned 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 74 Minefields/ANZECO diamond drillholes have geological logging, core photography and well preserved drill core. The drill database captures geological logging for 65% of RC holes targeting gold including some or all of the following: colour, rock type, weathering, veining, sulphides and dominant mineralogy. Hard copies of geological logging have been located for holes not captured by the digital drill database (excluding Bobby McGee grade control holes). ***Holes drilled by Tungsten Mining*** 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. During the 2019 drilling programme, 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 65% of RC holes targeting gold and is qualitative in nature. Most holes missing geological data are grade control holes from the Bobby McGee pit. ***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.

Criteria	JORC Code explanation	Commentary
	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% Minefields/ANZECO diamond holes and 65% RC holes. ***Holes drilled by Tungsten Mining*** All TGN drill holes were logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	***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. 1 metre samples of quarter core for PQ holes were 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 riffle split 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, 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 drilling programme were submitted to Bureau Veritas Minerals Pty Ltd of Canningvale, 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.

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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 six RC hole have twined other RC and diamond drilling at Mulgine Trench. These holes intersected similar grade and thickness of WO_3, Mo, Au and Ag 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, five twin holes were drilled by Tungsten mining these closely replicated original intersections for WO_3, Mo, Au and Ag. ***Holes drilled by Tungsten Mining*** Duplicate samples for tungsten, molybdenum and silver have a low to moderate scatter with R^2 of 0.87, 0.93 and 0.92 respectively. Gold displayed a higher degree of scatter with an R^2 of 0.62 and marked differences in grade for some high-grade samples. 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, gold and silver mineralisation present at Mulgine Trench.
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.
	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 programme. Partially sieved material was collected, stored in chip trays and scanned.

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Criteria	JORC Code explanation	Commentary
	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 four 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 and silver. ***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.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	No independent personnel have verified intersections in drilling. 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 six RC holes drilled by TGN twin earlier 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. Four of the RC holes twinned gold holes and two were redrills of abandoned TGN holes. Results from the twin holes returned intersections that closely repeated the original intersections for tungsten, molybdenum, gold and silver. 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 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.
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 2003 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 2014, Minjar drilled 233 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*** The first 95 2019 holes and previous programmes 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. Subsequent holes were marked out with a DGPS and have preliminary coordinates (+/- 2m N,E and +/1mm 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.
	Specification of the grid system used.	Geocentric Datum of Australia 1994 (GDA94) - Zone 50.

Criteria	JORC Code explanation	Commentary
	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 80 – 120 metre sections. Selected areas have been infilled to 30 to 40 metre section 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.	The drill spacing at Mulgine Trench was sufficient to define an Inferred Mineral Resource reported in November 2014. TGN have drilled an additional 156 holes into Mulgine Trench that were used in the interim Mineral Resource estimate being reported. Since drill data was handed over to Optiro for Resource estimation (18 October 2019 - Mineral Resource estimate cut-off date), the Company has drilled an additional 59 RC holes for 10,904 metres to the 30 November 2019.
	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 2003, 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 2012 and 2014 was sampled at 1 m intervals for 193 holes. Four metre composite sampling was used on 15 exploration holes (241 samples). ***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.	Structural logging of diamond core has confirmed that drill orientation did not introduce any bias regarding the orientation of mineralised veining.
Sample security	*The measures taken to ensure sample security.*	***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.

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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." 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. The Company intends to incorporate a third party review of its QAQC process periodically.

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 km². 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.	**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. A total of 342 RC holes (19,429 m) and 3 diamond holes (828 m) have been drilled to evaluate gold at Mulgine Trench. During mining, an additional 279 RC grade control holes (8,982 m) were drilled at the Camp and Highland Chief pits. Exploration drilling consisting of 422 RAB (11,374 m) holes was drilled across the Trench Deposit and strike extensions.

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Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	**Mulgine Trench** Stratigraphy for the Mulgine Trench deposit consists of a hangingwall amphibolites, the main mineralised horizon and footwall greisen of the Mulgine Granite. The mineralised horizon is a 140 to 220 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.
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.

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Criteria	JORC Code explanation	Commentary
Other substantive exploration data		Mineralogical and metallurgical studies on the Mulgine Trench deposit show scheelite well liberated at coarse sized fractions resulting in good recoveries via a simple gravity circuit. Molybdenum was liberated at finer sized fractions and showed high recovery and upgrades through a flotation circuit. Comminution work showed all ore types were of moderate to high hardness.
	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 has commenced to understand the range of ore types in the Trench deposit and their volumes. This will provide the basis to produce a representative master composite to complete the metallurgical testwork program. Metallurgical test work has shown that the ore as represented by the samples tested, should be readily concentrated to exceed the target of +60% WO_3 concentrate. Levels of potential deleterious contaminants reporting to the final concentrate are expected to be below the minimum threshold for specific APT conversion processes. Evidence gathered to date show that no major metallurgical problems are expected to affect the overall viability of the project.
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: • Resource definition and infill drilling of the Trench deposit; • 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.

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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 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.*	General confidence in the geological interpretation is reasonable but dependent on local data density. Aeromagnetic data suggests that some parts of the deposit are relatively simple in structural terms while other regions are more complex. Confidence in the interpretation is thus variable and a contributing factor in the resource classification.
	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 two small oxide gold pits, and aeromagnetic data. The drilling includes lithological logging and a subset of the sampling included bulk rock geochemistry. 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.	At least two lithology interpretations have been considered, however, the guidance provided by aeromagnetic data has led interpretations of orientation and structural domains.

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	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 and silver)
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 1,900 m in a northeast-southwest direction and extends for 700 m in an east-west direction. Mineralisation dips at approximately 30^0 toward the northwest with thicknesses up to 220 m extending to a maximum depth of 250 m below surface.
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 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 within a number of structural domains was used to define mineralised volumes while extrapolation was controlled using kriging variance. Grades were estimated within the mineralised (and background) zones using ordinary kriging of two metre downhole composites which had been top-cut as required. Oxidation, lithology and orientation domains were all treated as soft boundaries during these processes. Structural domains tracked strike trends highlighted by aeromagnetic information. 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. Between 0% and 12% of the 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 and second searches. The minimum required samples were reduced to eight for the final search. No more than 10 composites could be selected from a single drillhole. Maximum mineralised grade continuity was in the order of 100 m to 200 m in the mineralisation plane. Across plane continuity was less but variable by element and domain. Gold exhibited the shortest continuity ranges, which did not exceed 30 m.
	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 estimate was completed by CSA in October 2014. 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 and silver 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.

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	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 variable throughout the deposit but 80 m section lines with 40 m in-section spacing are common. Section line spacing can reduce to 40 m and closer and also open to 160 m and greater. Kriging Neighbourhood Analysis generally suggested reasonable quality block grade estimates can be obtained from the available data, however drilling is ongoing to infill the exploration grid to a nominal 40 m by 40 m pattern over the main part of the deposit
	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.

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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.*	Mineralogical and metallurgical studies on the range of ore types from the Mulgine Trench deposit show scheelite well liberated at coarse sized fractions, resulting in high grades and recoveries via simple gravity techniques. Molybdenum was liberated at finer sized fractions and showed high recovery and upgrades through a flotation circuit. "Sighter" leach tests completed on two composites of low grade oxide samples resulted in a high extraction rate for gold. In addition, historical test work showed that accessory minerals gold and silver were recovered into the sulphide flotation concentrate as by-products in the process of recovering molybdenum. However, the process recovery for these accessory minerals is currently uncertain and metallurgical test work to fully understand the deportment and recoveries is in progress as part of the PFS program. Evidence gathered to date shows that no major metallurgical problems are expected to affect the overall viability of the project.
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 1,295 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 2.26 (oxide) and 2.96 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 Trench Project. Measurements were taken from both BQ, NQ core and PQ, and from both whole core, half and quarter cut 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.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories*	The Mineral Resource Estimate has been totally assigned to an Inferred category. A reasonable prospects of eventual economic extraction limit (RPEEE) was applied by producing an optimised pit shell based on an ammonium paratungstate (APT) price of USD400 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.
	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 2019 Mineral Resource estimate apart from internal peer review by Optiro.

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	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.

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