



# Quarterly Report

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December 2019

# Quarterly Report – December 2019

## Highlights

- ✕ **Major Mineral Resource estimate update for Mulgine Trench deposit completed** - the revised Inferred Mineral Resource is **207 million tonnes at 0.11% WO<sub>3</sub>, 272 ppm Mo, 0.13 g/t Au and 5 g/t Ag**.
- ✕ 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** from the previous Mineral Resource estimate.
- ✕ 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.
- ✕ Drilling continues to demonstrate the significance of mineralisation with results subsequent to Mineral Resource estimate intersecting substantial widths of polymetallic mineralisation. Better holes include:
  - **192m at 0.13% WO<sub>3</sub> and 240 ppm Mo** from surface (0 metres) in MMC381
  - **244m at 0.10% WO<sub>3</sub> and 330 ppm Mo** from 2 metres in MMC455
  - **226m at 0.12% WO<sub>3</sub> and 330 ppm Mo** from surface (0 metres) in MMC420
- ✕ Drilling has intersected significant zones of gold-silver mineralisation within the tungsten envelope at Mulgine Trench with better intersections as follows:
  - **24m at 0.63 ppm Au, 0.07% WO<sub>3</sub>, 200 ppm Mo and 6.6 ppm Ag** from 16m in MMC350
  - **60m at 0.36ppm Au, 0.06% WO<sub>3</sub>, 310 ppm Mo and 21 ppm Ag** from 46m in MMC418
  - **56m at 0.31ppm Au, 0.14% WO<sub>3</sub>, 470 ppm Mo and 6.4 ppm Ag** from 2m in MMC418
- ✕ **Process flowsheet development underway** - Engineering work to optimise the process flow and flowsheet design commenced with engineering firm Ausenco.
- ✕ **Re-submission of NVCP application** – Environmental approvals were further advanced with the re-submission of the Mulgine Hill NVCP during the quarter.
- ✕ **Cash position** – The Company's cash position as at 31 December 2019 was \$27.6m.

## Commentary

Tungsten Mining continues to implement its strategy directed at building a tungsten business of scale, growing its resource inventory during the quarter to 37 million MTU's (metric tonne units) of WO<sub>3</sub> (tungsten trioxide) and a further 57,000 tonnes of Mo (molybdenum), 850,000 ounces of Au (gold) and 35 million ounces of Ag (silver) (refer accompanying Mineral Resource Statements).

This very substantial increase in the Company's resource inventory follows the release of the updated Mulgine Trench Mineral Resource estimate, not only has there been a substantial increase in contained tungsten and molybdenum, but also defined a maiden resource for other potential by-products of gold and silver.

Tungsten Mining's CEO Craig Ferrier commented, *"We have continued to make excellent progress on the Mt Mulgine PFS and the results to date have exceeded our expectations. Results for drilling subsequent to the MRE update demonstrate the considerable consistency in the polymetallic mineralisation of the Mulgine Trench Deposit. As the infill drilling program progresses, we are extremely encouraged that the very substantial widths of mineralisation intersected in the initial phase of drilling are continuously being repeated"*.

## Tungsten Mining

Tungsten Mining NL ("the Company") is focussed on the discovery and development of tungsten deposits in Australia. The Company's key projects are Mt Mulgine, Big Hill and Kilba in Western Australia, Watershed in north east Queensland and Hatches Creek in the Northern Territory (Figure 1).

Through exploration and acquisition, the Company has grown its resource inventory to 37 million MTU's (metric tonne units) of  $\text{WO}_3$  (tungsten trioxide) and a further 57,000 tonnes of Mo (molybdenum), 850,000 ounces of Au (gold) and 35 million ounces of Ag (silver) comprising Measured Resources of 10Mt at 0.16%  $\text{WO}_3$ , Indicated Resources of 58Mt at 0.14%  $\text{WO}_3$  and 20ppm Mo and Inferred Resources of 250Mt at 0.11%  $\text{WO}_3$ , 230ppm Mo, 0.11g/t Au and 4g/t Ag at a cut-off grade of 0.05%  $\text{WO}_3$  (refer accompanying Resource Statement). This provides the platform for the Company to become a globally significant player within the primary tungsten market through the development of low-cost tungsten concentrate production.

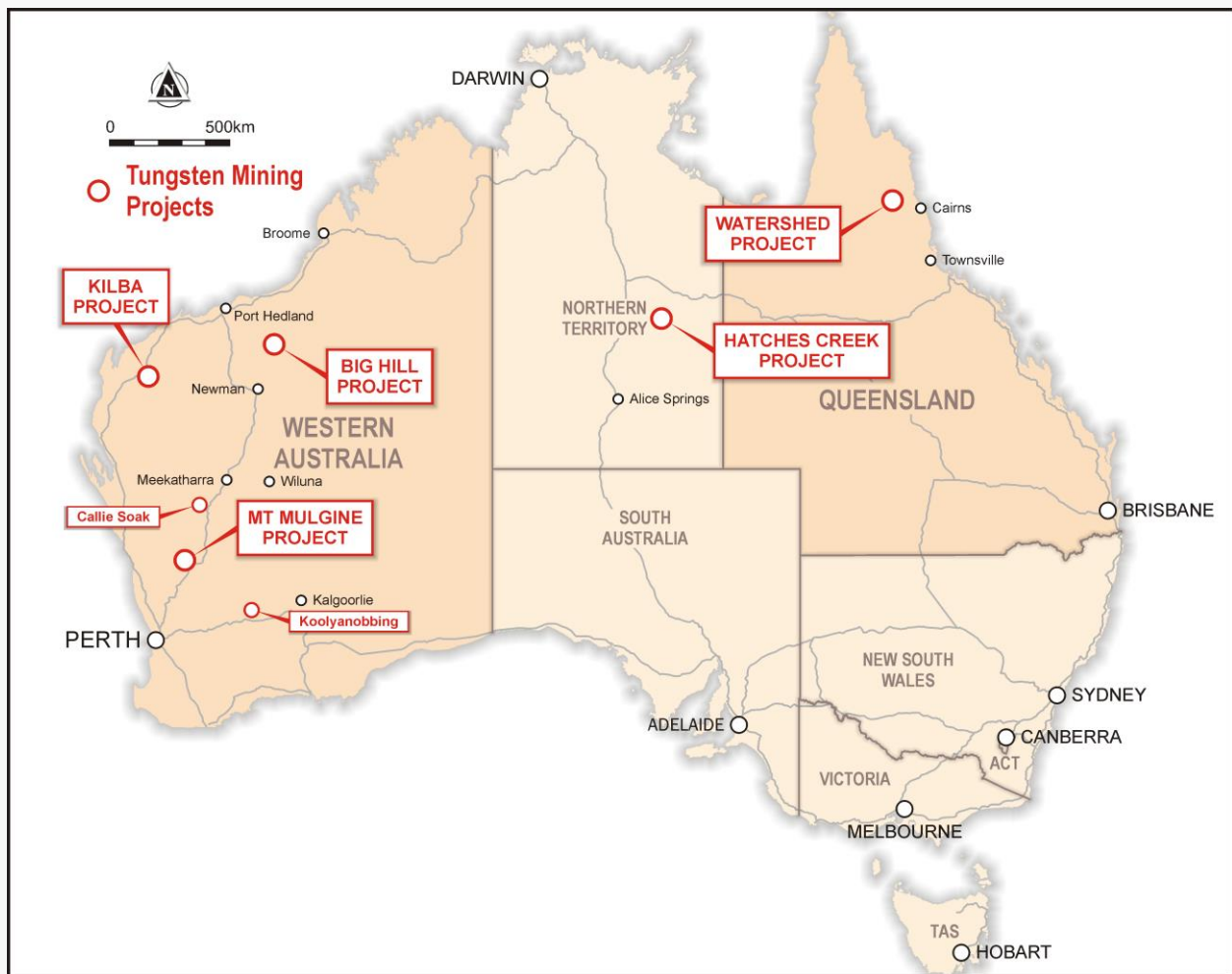


Figure 1 – Projects location map



# Mt Mulgine Project, Murchison WA

The Mt Mulgine Project remains the highest priority development project for the Company, responsible for the majority of activity during the quarter.

It is located within the Murchison Region of Western Australia, approximately 350km north northeast of Perth. The Company has 100% of the tungsten and molybdenum rights on a contiguous group of tenements that have been the subject of significant previous exploration for tungsten and molybdenum. The Company also has the rights to all by-products from the mining of tungsten and molybdenum.

Two near surface Mineral Resources have been delineated at the Mulgine Trench and Mulgine Hill deposits. Currently, there is a combined Mineral Resource estimate of 219Mt at 0.11% WO<sub>3</sub>, 260ppm Mo, 0.12g/t Au and 5g/t Ag (0.05% WO<sub>3</sub> cut-off) comprising Indicated Resources of 8.3Mt @ 0.18% WO<sub>3</sub> and 130ppm Mo and Inferred Resources of 210Mt @ 0.11% WO<sub>3</sub>, 270ppm Mo, 0.12g/t Au and 0.05g/t Ag.

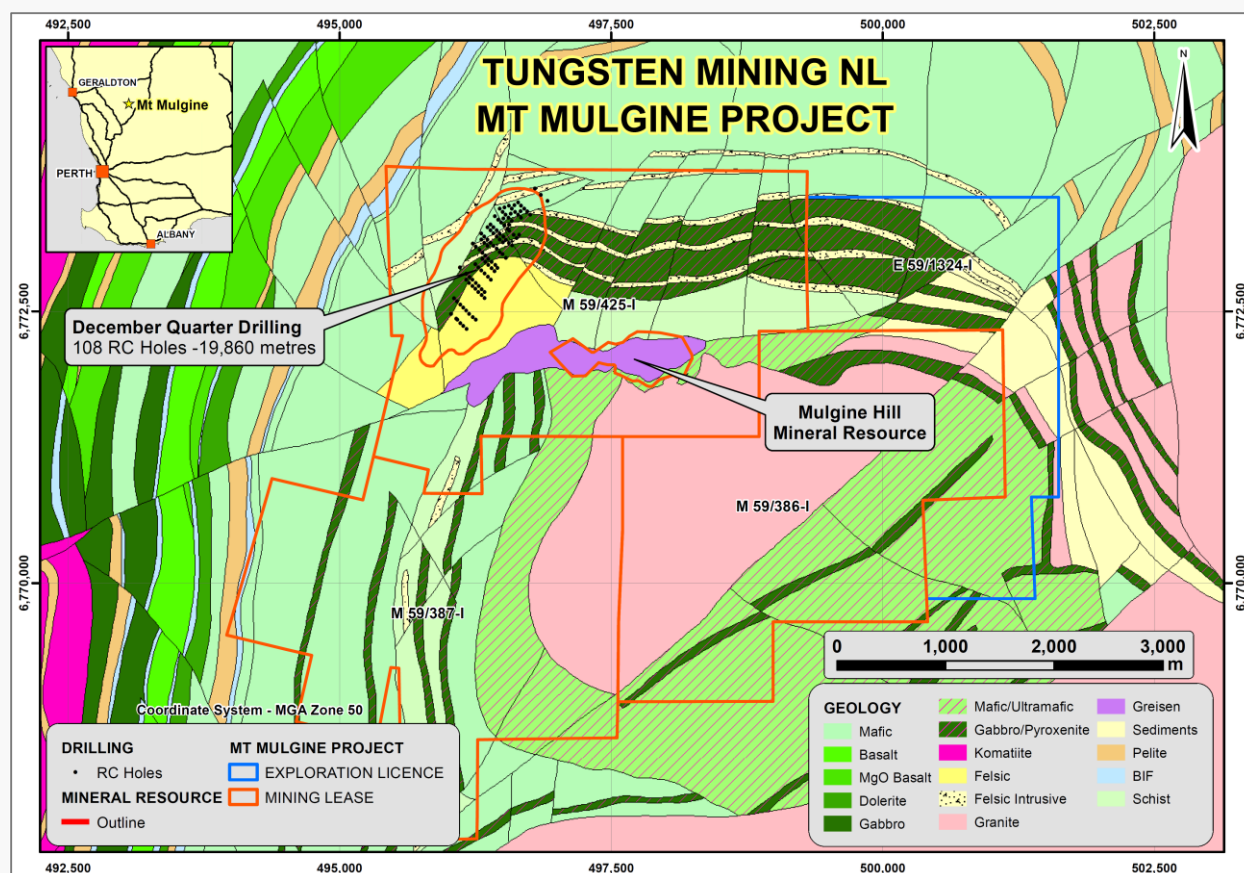


Figure 2 Location of Mulgine Hill Mineral Resource and Mulgine Trench RC drilling for the December quarter

## Mt Mulgine Development

The PFS schedule remained on track during the quarter, maintaining a forecast August 2020 completion date.

Resource development drilling continued during the December quarter, with 108 reverse circulation (RC) holes for 19,860m drilled.

The results of the drilling program captured up to 22 November were used to deliver an updated Mineral Resource Estimate for the Trench deposit (see ASX announcement 19 December 2019).

The flotation and gravity testwork advanced during the quarter and continued to show high tungsten and molybdenum concentrate grades and recoveries for the lithologies tested. Test work specific to the recovery of by-products continued during the quarter.

Engineering work to optimise the process flow and flowsheet design commenced with engineering firm Ausenco and is expected to be completed in April 2020.

Environmental approvals were further advanced with the re-submission of the Mulgine Hill NVCP during the quarter.

## December Quarter Activities

For the December quarter, work continued to focus on advancing the PFS, with major activities being:

- ✕ Progression of phase 2 resource infill drilling;
- ✕ Completion of an updated Mineral Resource Estimate for the Mulgine Trench Deposit (see ASX announcement 19 December 2019) by independent resource consultants, Optiro;
- ✕ Development of project site water strategy;
- ✕ Continuation of metallurgical test work program;
- ✕ Commencement of process engineering study for the design of the processing plant;
- ✕ Completion of power supply options study;
- ✕ Re-submission of revised NVCP application in support of the clearing envelope identified for the Mulgine Hill deposit.

## Planned Activities – March 2020 Quarter

The major activities planned for the March quarter will be to;

- ✕ Complete resource drilling;
- ✕ Preparation of an updated Mineral Resource Estimate and pit optimisation for the Trench deposit following completion of infill drilling;
- ✕ Receive final geo-metallurgical report as applied to the mineral resource;
- ✕ Continue with other studies and surveys required to deliver the PFS according to the master schedule;
- ✕ Complete the metallurgical test work program;
- ✕ Continue with the process engineering study for the design of the processing plant;
- ✕ Re-submit a revised Mining Proposal for the Mulgine Hill deposit.

# Geology and Resources

## Mulgine Trench

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 2). The granite intrudes a greenstone sequence composed of micaceous schists, amphibolite and talc-chlorite schist which were formerly metasediments, mafic and ultramafic rocks respectively.

Tungsten-molybdenum mineralisation at Mulgine Trench is associated with altered and quartz veined mafic and ultramafic units that form a 140 metre to 220 metre thick zone over 1.4 kilometres of strike and dips shallowly towards the northwest.

### Mulgine Trench Mineral Resource

In July 2019, the Company commenced resource definition drilling at Mulgine Trench with results from the first 123 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. The revised Mineral Resource estimate for Mulgine Trench as of 19<sup>th</sup> December 2019 above a 0.05% WO<sub>3</sub> reporting cut-off grade is as follows:

**Table 1: JORC-2012 Mineral Resource estimates for Mulgine Trench at 0.05% WO<sub>3</sub> reporting cut-off grade**

Mulgine Trench Inferred Mineral Resource – December 2019									
Oxidation	Mt	WO <sub>3</sub> %	WO <sub>3</sub> (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
<b>Total</b>	<b>207</b>	<b>0.11</b>	<b>230,000</b>	<b>272</b>	<b>56,000</b>	<b>0.13</b>	<b>850,000</b>	<b>5</b>	<b>35</b>

Refer ASX Announcement 19 December 2019, "Major Mineral Resource Estimate Update for Mulgine Trench Deposit".

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.

At a 0.05% WO<sub>3</sub> cut-off grade and compared against the previous 2014 Mineral Resource estimate, drilling completed by the Company to 22 November 2019 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**.

Since completion of the Mulgine Trench Mineral Resource estimate, Tungsten Mining have drilled an additional 86 RC holes into the Mulgine Trench Mineral Resource. Interpretation of all new data is proceeding and a revised estimate is planned for release in April 2020.

### **Resource Definition Drilling**

In July 2019, the Company commenced a phased drilling program as part of the Mt Mulgine Project PFS with the objective of upgrading the dominantly Inferred Mulgine Trench Mineral Resource estimate to a dominantly Indicated status. Phase 1 of the program was completed in the September quarter and 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 over a conceptual pit optimisation and is expected to be completed in Mid-February 2020.

During the December quarter a further 108 RC holes for 19,860m were completed making a total of 216 holes for 36,217 metres drilled since commencing in July 2019. The Company have reported extremely encouraging results from 177 holes, for which assay results had been received, intersecting multiple broad zones of tungsten-molybdenum-gold-silver mineralisation within a 140 metre to 220-metre thick horizon over 1.4 kilometres of strike (Figure 3). Refer ASX announcements dated 9 October 2019, 20 November 2019, 5 December 2019 and 16 January 2020 for full details of drilling results.

The significance of mineralisation present is highlighted by drilling with multiple tungsten intersections within a mineralised zone over substantial widths (Figure 4). Better holes are as follows:

- **192m at 0.13% WO<sub>3</sub> and 240 ppm Mo** from 0m in MMC381
- **244 metres at 0.10% WO<sub>3</sub> and 330 ppm Mo** from 2 metres in MMC455
- **226m at 0.12% WO<sub>3</sub> and 330 ppm Mo** from surface (0 metres) in MMC420
- **210m at 0.10% WO<sub>3</sub> and 400 ppm Mo** from surface (0 metres) in MMC399

Within the broad tungsten envelope, drilling defined a Lower Tungsten-Molybdenum Domain the forms a 50m to 120m wide zone with significant molybdenum (Figure 5). Better holes from this zone include the following:

- **110m at 0.11% WO<sub>3</sub> and 410 ppm Mo** from 50m in MMC376
- **92m at 0.10% WO<sub>3</sub> and 560 ppm Mo** from 116m in MMC346
- **78 metres at 0.10% WO<sub>3</sub> and 600 ppm Mo** from 44 metres in MMC424

Drilling has intersected significant zones of gold-silver mineralisation within the tungsten envelope at Mulgine Trench with better intersections as follows:

- **24m at 0.63 ppm Au, 0.07% WO<sub>3</sub>, 200 ppm Mo and 6.6 ppm Ag** from 16m in MMC350
- **16m at 0.90 ppm Au, 0.05% WO<sub>3</sub>, 830 ppm Mo and 20.0 ppm Ag** from 94m in MMC425
- **60m at 0.36ppm Au, 0.06% WO<sub>3</sub>, 310 ppm Mo and 21.1 ppm Ag** from 46m in MMC418
- **56m at 0.31ppm Au, 0.14% WO<sub>3</sub>, 470 ppm Mo and 6.4 ppm Ag** from 2m in MMC418

### **Mulgine Hill**

At Mulgine Hill, mineralisation is associated with the sub-horizontal upper contact of a mafic schist unit and overlying quartz-muscovite greisen. Tungsten occurs as scheelite in coarse disseminations within the greisen or within numerous quartz and greisen veins in both the mafic schists and the quartz-muscovite greisen.

The Mineral Resource estimate for Mulgine Hill as of 21 March 2019 is 7,300,000 tonnes at 0.22% WO<sub>3</sub> and 129 ppm Mo (Refer to ASX announcement dated 12 April 2019).

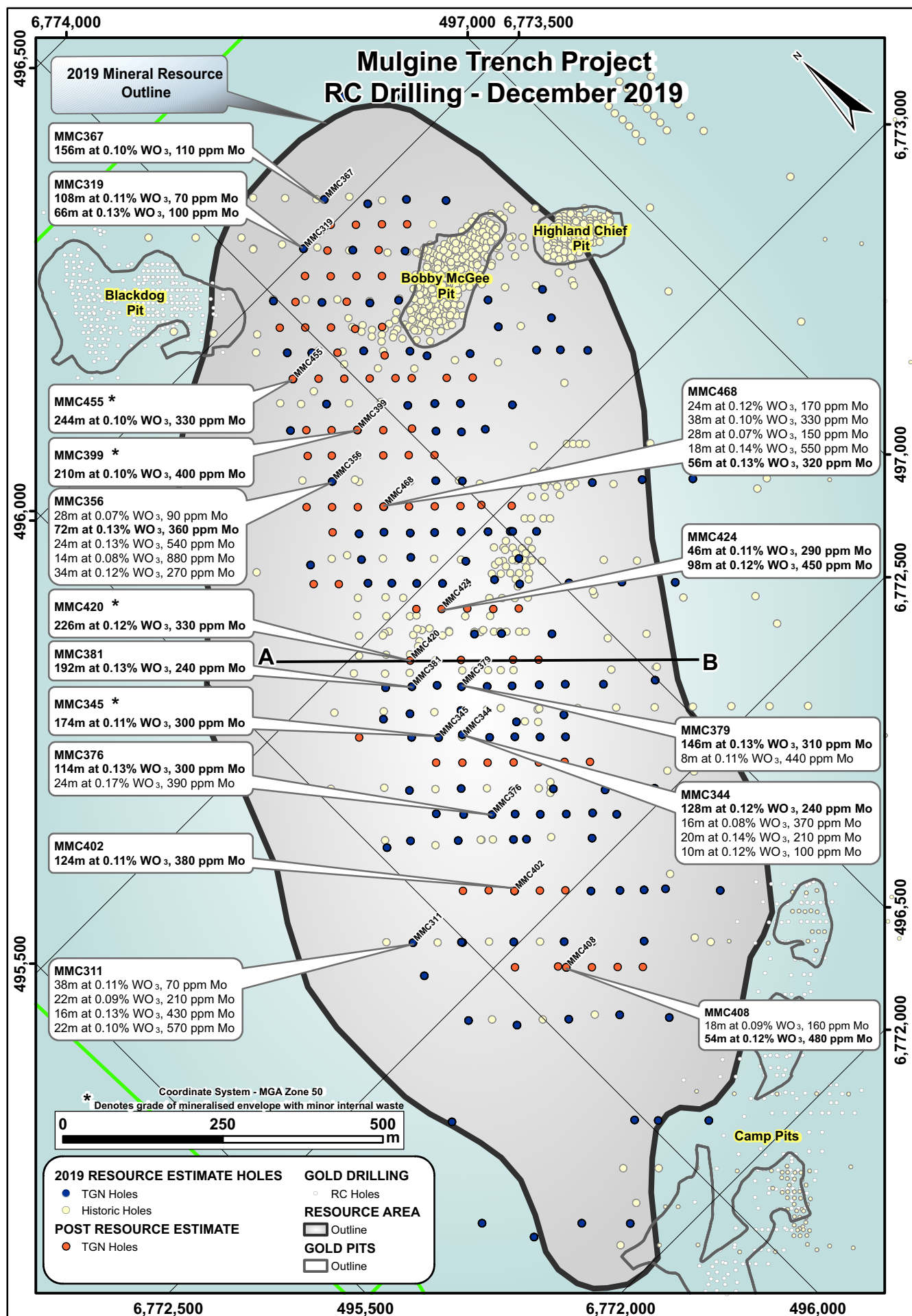
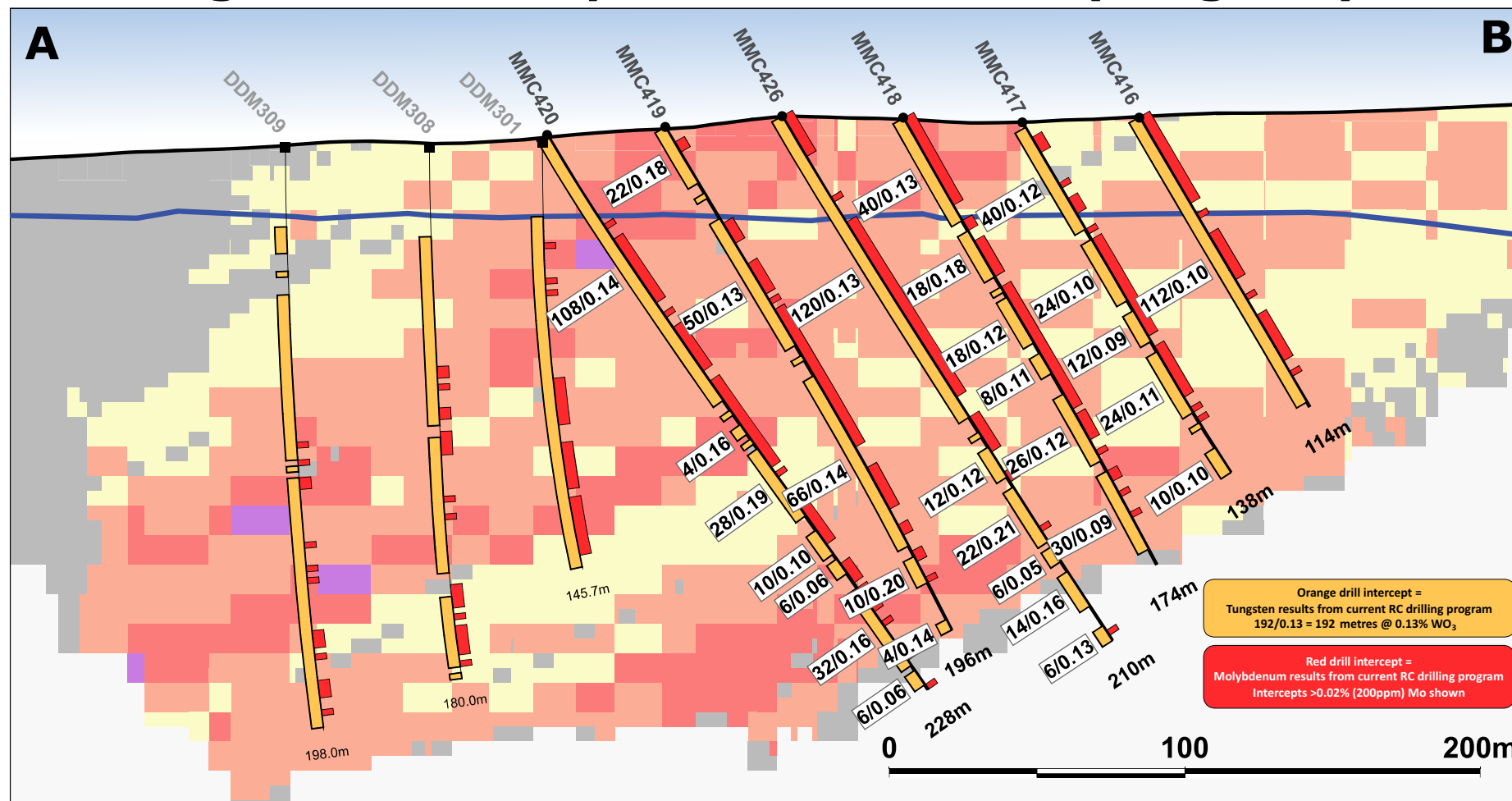


Figure 3. Plan showing location of holes and better intersections at Mulgine Trench. Holes drilled since 2019 Mineral Resource estimate are displayed as black circles. \* Denotes grade of overall mineralised envelope with minor internal waste.



# Mulgine Trench Deposit: Section A - B (Tungsten)



MMC426 TGN RC hole - current drill program  
DDM308 Drilling from previous program  
Base of oxidation (interpreted)

Left: Tungsten intersection > 0.05% WO<sub>3</sub>  
Right: Molybdenum intersection > 0.02% Mo (200 ppm)

2019 Block

**Inferred 207Mt @  
0.11% WO<sub>3</sub>,  
272 ppm Mo  
(at 0.05% WO<sub>3</sub> cutoff)**

2019 Block Model

< 0.05% WO<sub>3</sub>  
0.05 - 0.10% WO<sub>3</sub>  
0.10 - 0.15% WO<sub>3</sub>  
0.15 - 0.20% WO<sub>3</sub>  
>0.20% WO<sub>3</sub>

Figure 4 Cross section showing 0.05% WO<sub>3</sub> intersections in infill drilling over the 2019 Mulgine Trench Mineral Resource. Location of section is displayed on Figure 3.



# Mulgine Trench Deposit: Section A - B (Molybdenum)

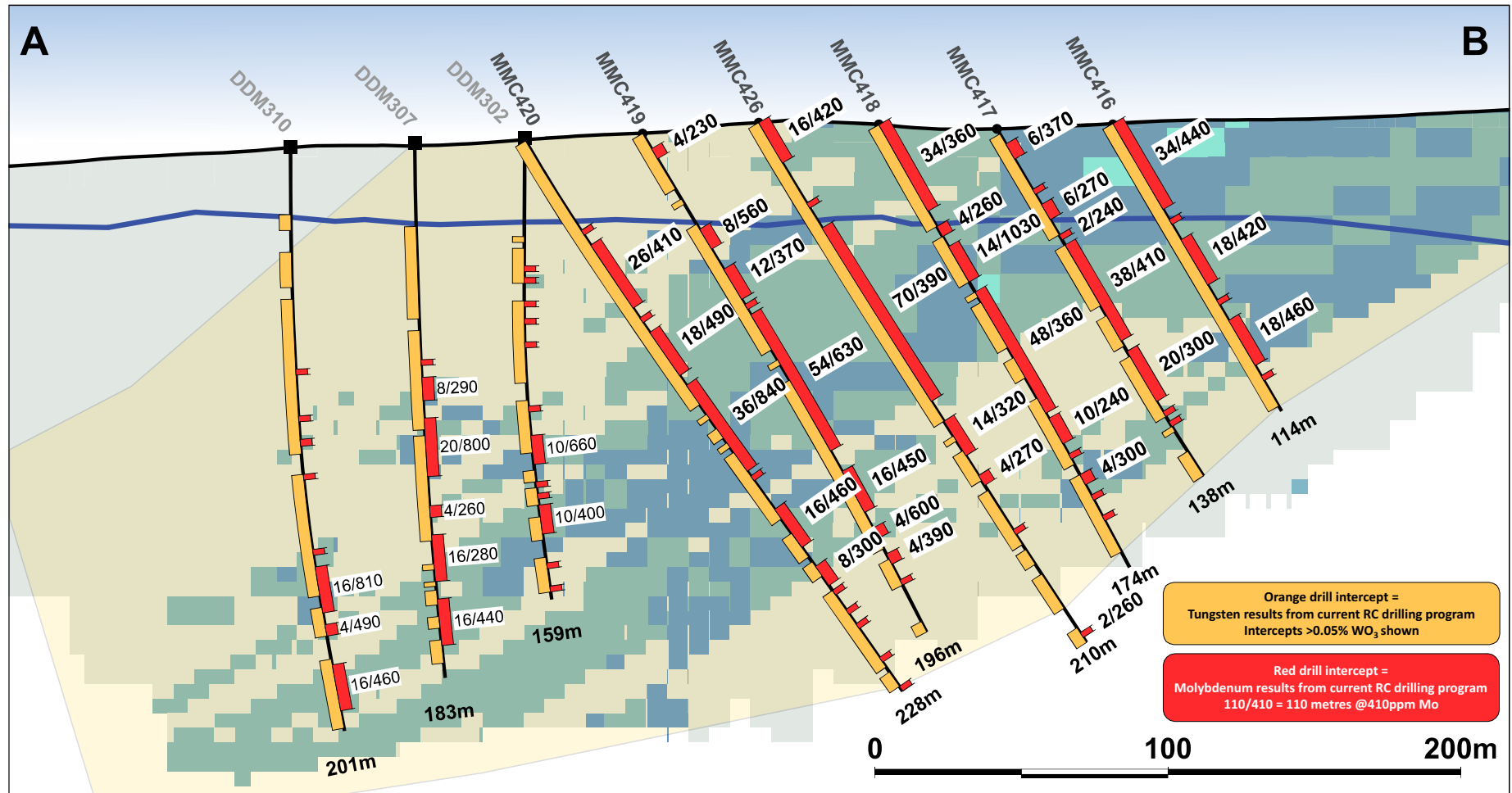


Figure 5. Cross section displaying Lower Tungsten-Molybdenum domain defined by molybdenum block model and intersections greater than 200ppm Mo.

# Development – Mt Mulgine

## Metallurgy

### *Geo-metallurgy*

The Company together with its specialist consultants developed an initial geo-metallurgical model of the Trench deposit. The results have identified the type and volume of each ore type in the deposit. This work has significantly de-risked the representativity of samples selected for metallurgical test work and subsequent processing at plant scale.

### *PFS Metallurgical Testwork*

Metallurgical testwork continued using the samples recovered from the Mulgine Trench PQ core.

The flotation and gravity testwork advanced during the quarter and continued to show high tungsten and molybdenum concentrate grades and recoveries for the lithologies tested. The program continues to test a coarse grind option to confirm the optimal flowsheet.

There continues to be a focus in maximising the value from the by-products present in the ore. Test work specific to the recovery of by-products to quantify metal deportment and determine optimum recovery methodology continued during the quarter.

Engineering work to optimise the process flow and flowsheet design commenced with engineering firm Ausenco and is expected to be completed in April 2020.

## Environmental

The Company continued to work with its environmental advisers and the Department of Mines, Industry Regulation and Safety (DMIRS) in relation to the re-submission of its NVCP and Mining Proposal application.

Following the desktop hydrogeological study, an options strategy was commissioned to determine potential water sources for operational purposes.

Other activities included;

- Preparation of an approvals strategy and update of management plans;
- Completion of fauna preclearance surveys prior to any clearing being undertaken for drilling activities;
- Completion of subterranean fauna assessments resulting in no subterranean fauna being detected; and
- Liaison and meeting with DBCA to establish site familiarisation and Acacia Sulcicaulis flora populations.

## Site Layout

The preliminary site layout for the PFS study has been completed. This site layout will direct further environmental surveys, heritage surveys, test work and sterilisation drilling. This work will be used to confirm the locations for all major site infrastructure.

## Other Projects

### Hatches Creek Polymetallic Project, Davenport Province, NT

The Hatches Creek Project consists of two granted exploration licences covering 31.4 km<sup>2</sup> (EL22912 and EL23462), which cover the entire historic Hatches Creek tungsten mining centre. Hatches Creek is a large historical high-grade tungsten mining centre where mining was undertaken between 1915 and 1957. Previous recorded production is approximately 2,840 tonnes of 65% WO<sub>3</sub>. Bismuth concentrate and copper ore have also been produced.

On 3 June 2019 the Company announced that it had executed an agreement with GWR Group Limited (ASX: GWR) ("GWR") to farm-in to the Hatches Creek Project. The Farm-in Agreement provides for Tungsten Mining to direct and manage exploration and development activities at Hatches Creek where past drilling by GWR confirmed multiple high-grade polymetallic tungsten prospects and demonstrated potential for a large high-grade polymetallic tungsten deposit (refer GWR announcements dated 17 July 2018 and 22 May 2019).

The Project is located 375 km north east of Alice Springs in the Northern Territory of Australia (Figure 6).

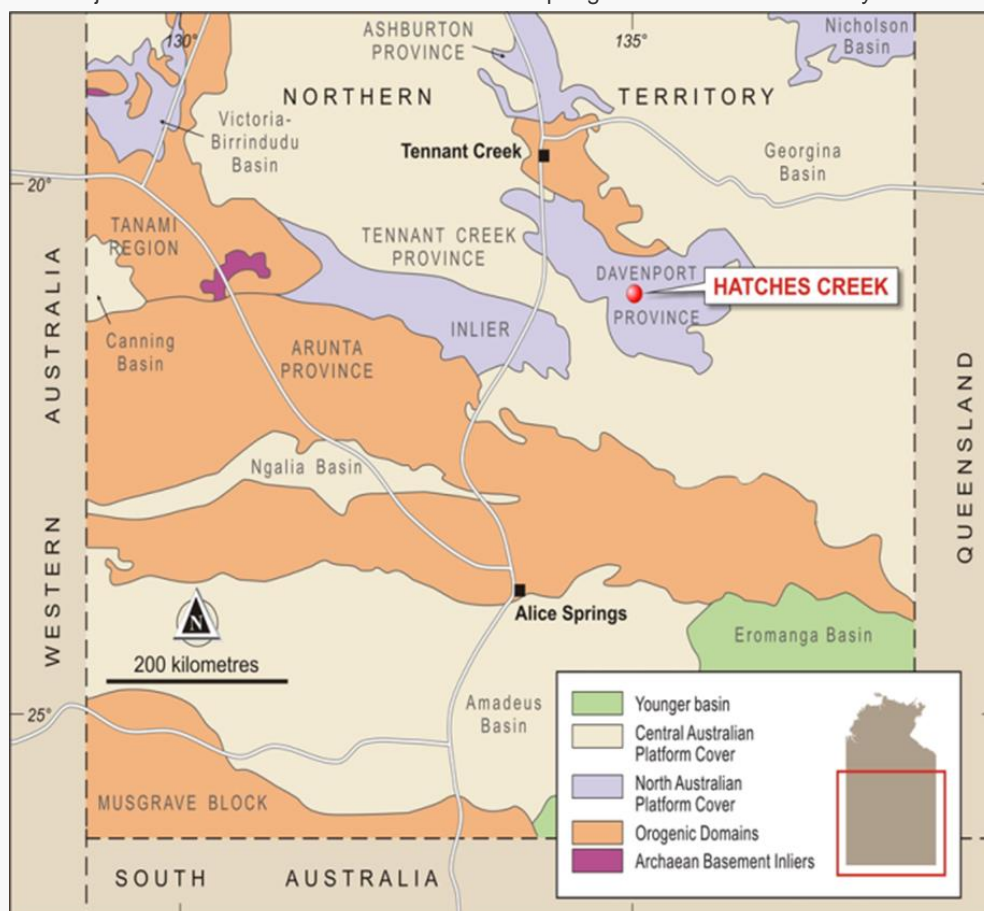


Figure 6 Hatches Creek Project location map

Pursuant to the terms of the Farm-in Agreement, summarised in the announcement dated 3 June 2019, the Company acquired an initial 20% interest in the Project by reimbursing GWR for past exploration expenditure. Tungsten Mining can increase its interest to 51% by the expenditure of \$3,000,000 on exploration, development and mining activities within 5 years of the commencement date. Should a decision to mine be made by Tungsten Mining whilst in the sole fund stage, the Company has an option to acquire GWR's remaining interest for \$6.96m (indexed for CPI).

During the December quarter Company personnel attended a site meeting with the aboriginal owners and representatives of the Central Land Council (CLC). The Company received formal notification from CLC of its consent to, amongst other things, the transfer of the initial 20% interest in the Hatches Creek Project to Tungsten Mining.

Further details on the results of recent and past drilling programs, Mineral Resource Estimate for surface dumps and the Exploration Target Estimate for the Hatches Creek Project are set out in GWR's ASX announcements dated 17 July 2018 and 22 May 2019.

## Watershed Project, Far North, Queensland

Watershed is located 130km north of Cairns in a mining friendly jurisdiction, with granted Mining Leases and an Environmental Authority for an open-pit development. Former project owner, Vital Metals Limited (Vital Metals) completed a Definitive Feasibility Study (DFS) for the project in 2014.

The Watershed Project substantially adds to Tungsten Mining's global resource inventory and boasts a JORC 2012 Mineral Resource Estimate of 49.3Mt grading 0.14% WO<sub>3</sub> comprising Measured Resources of 9.5Mt at 0.16% WO<sub>3</sub>, Indicated Resources of 28.4Mt at 0.14% WO<sub>3</sub> and Inferred Resources of 11.5Mt at 0.15% WO<sub>3</sub> at a cut-off grade of 0.05% WO<sub>3</sub> (refer ASX announcement dated 31 July 2018 - June Quarterly Report p23).

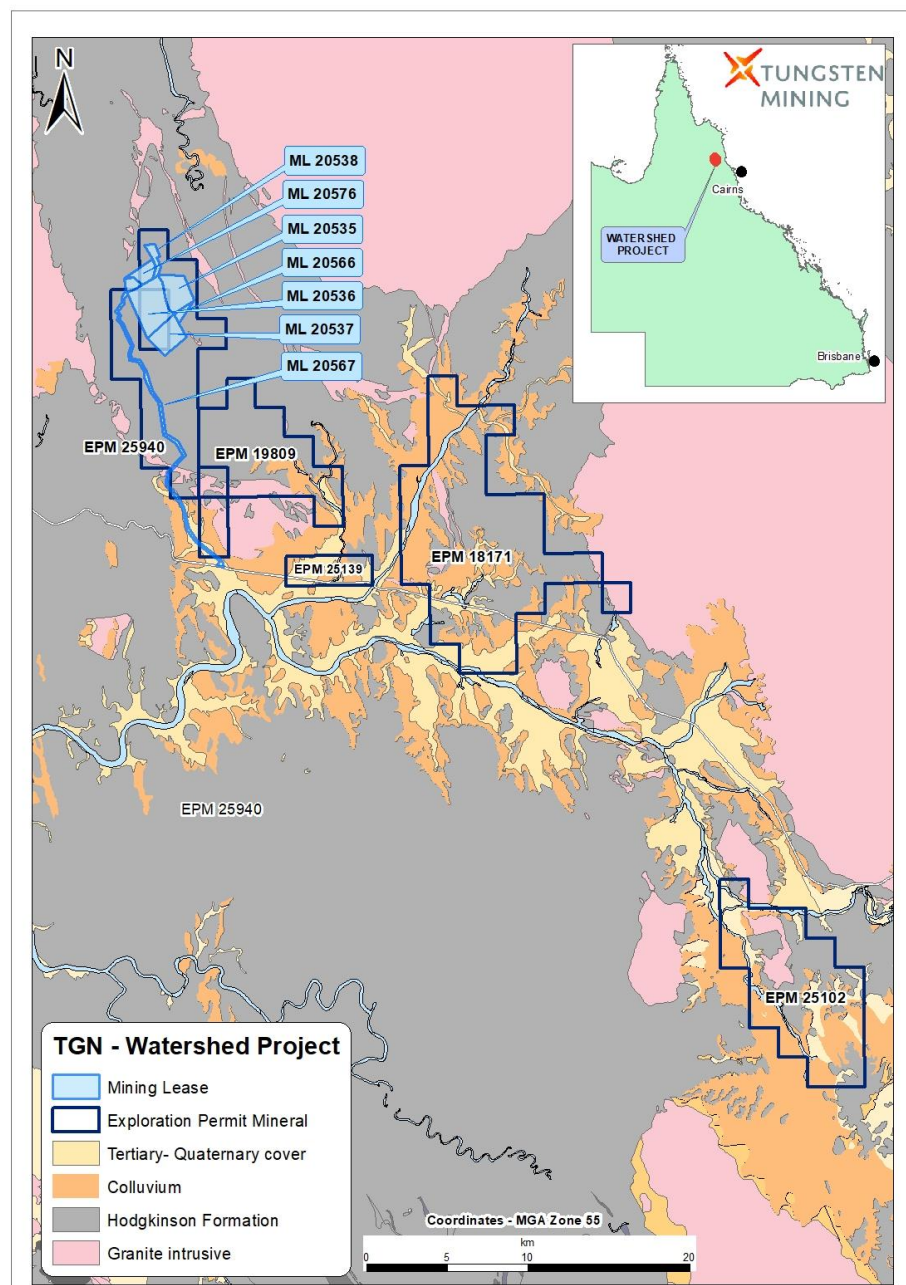


Figure 7 Watershed Project location map

Tungsten Mining progressed activities directed at rationalising the tenement holdings of North Queensland Tungsten Pty Ltd, a wholly owned subsidiary of Tungsten Mining, focusing on the exploration permits (EPM's) surrounding and adjacent to the Watershed Project mining leases. In addition, an application for a temporary suspension of the Environmental Authority for the Watershed Project was approved by the Queensland Department of Environment and Science, materially reducing project holding costs. There were no field activities during the quarter.



## Big Hill Project, Eastern Pilbara, WA

The Big Hill Project area is located approximately 30km northeast of the Nullagine township in the Eastern Pilbara of Western Australia. The project contains the Big Hill deposit where 22,871 metres of diamond and RC drilling have defined a JORC-2012 Mineral Resource estimate totalling 11.5Mt at 0.15% WO<sub>3</sub> (0.10% WO<sub>3</sub> cut-off) comprising an Indicated Resource of 6.2Mt at 0.16% WO<sub>3</sub> and an Inferred Resource of 5.3Mt at 0.13% WO<sub>3</sub>.

Metallurgical test work conducted on samples from Big Hill at bench and pilot scale has produced high quality tungsten concentrates at acceptable scheelite recoveries. This work has identified a simple and potentially low cost processing route.

Retention License R46/003 was granted in April 2017. There are no planned activities for the Big Hill Project in the next quarter.

## Kilba Project, Ashburton Region, WA

The Kilba Project is located within the Ashburton Region of Western Australia, 250km southwest of Karratha. To date, Tungsten Mining has focused on the historic Zones 8, 11 and 12 that Union Carbide discovered in the 1970s. Drilling has targeted high-grade tungsten mineralisation associated with skarns and calc-silicate units situated close to the Kilba granite.

This work has defined a JORC-2012 compliant Mineral Resource totalling 5.0Mt at 0.24% WO<sub>3</sub> (0.10% WO<sub>3</sub> cut-off) comprising an Indicated Resource of 4.1Mt at 0.25% WO<sub>3</sub> and an Inferred Resource of 0.8Mt at 0.20% WO<sub>3</sub>.

Metallurgical test work shows that the tungsten is present as coarse-grained scheelite that will respond well to conventional gravity separation. Test work completed in 2015 has demonstrated the ability to produce an extremely high grade tungsten concentrate.

In May 2017, DMIRS approved a 5 year exemption from expenditure for M08/314 pursuant to the Mining Act. There are no planned activities for the Kilba Project in the next quarter.

## Other Projects, Regional WA

Tungsten Mining has two other projects in Western Australia prospective for tungsten, the Koolyanobbing and Callie Soak projects. Work on these projects continues to be in the initial stages of reconnaissance and target generation and it is hoped that these tenements will yield additional mineralisation that Tungsten Mining can exploit.

# Corporate

## Tungsten Pricing

Global tungsten prices (by reference to price quotations for European ammonium paratungstate – APT) improved by 17.7% over the December quarter. Prices have remained stable through early January and optimism remains for prices to improve in 2020 reflecting a more balanced market and reduction in tensions following the US/China trade deal.

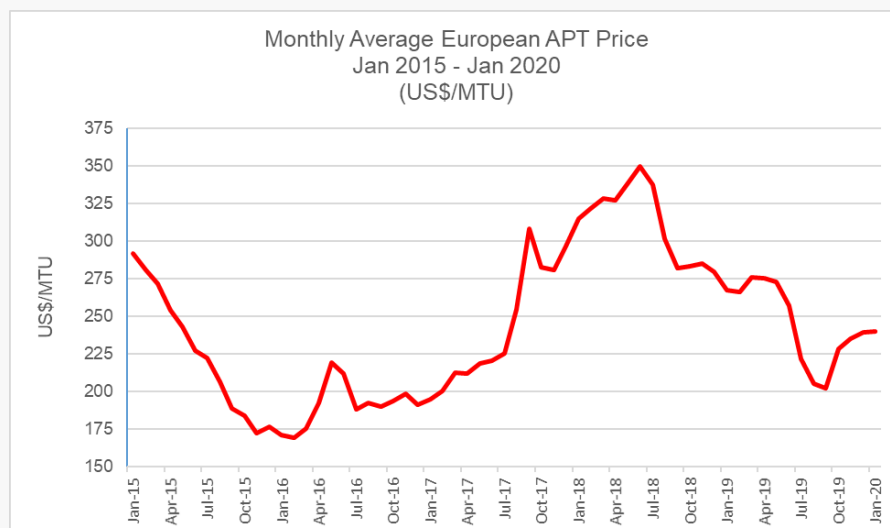


Figure 8 – APT Price (source: Metal Bulletin, Argus)

## Other

The Company's cash position as at 31 December 2019 was \$27.6. This includes an amount of \$1.24m received during the quarter upon the exercise of options expiring on 31 December 2019.

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

### For further information:

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## Competent Person's Statement

The information in this report that relates to Exploration Targets and Exploration Results 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.

The information in this report that relates to Mineral Resources at Mulgine Hill, Big Hill and Kilba are extracted from the reports titled 'Update on Activities at Mount Mulgine' released to the Australian Securities Exchange (ASX) on 12 April 2019, 'Big Hill June 2016 Mineral Resource Update' released to the ASX on 23 June 2016, and 'Kilba Mineral Resource Update' released to the ASX on 30 January 2015, all are available to view at [www.tungstenmining.com](http://www.tungstenmining.com). The information in this report that relates to Mineral Resource at Watershed is extracted from the report titled 'Watershed Mineral Resources Restatement JORC Code (2012)' released to the ASX on 4 July 2018 by Vital Metals Limited. The information in this report that relates to Mineral Resources at Mulgine Trench is extracted from the report titled 'Major Mineral Resource Estimate Update for Mulgine Trench Deposit' released to the ASX on 19 December 2019 and available to view at [www.tungstenmining.com](http://www.tungstenmining.com). To the end of December 2019, Tungsten Mining have drilled an additional 86 RC holes into the Mulgine Trench Mineral Resource. Interpretation of all new data is proceeding and a revised estimate is planned for release in April 2020. Other than the aforementioned review, the Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement and that all material assumptions and technical parameters underpinning the estimates in original ASX announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original ASX announcements.

## About Tungsten Mining

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

Tungsten (chemical symbol W), occurs naturally on Earth, not in its pure form but as a constituent of other minerals, only two of which support commercial extraction and processing - wolframite ((Fe, Mn)WO<sub>4</sub>) and scheelite (CaWO<sub>4</sub>).

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.



## Tenement Summary

Tenement Name	Tenement	Interest held at 30 September 2019	Interest acquired/ disposed of during quarter	Interest Held at 31 December 2019
Kilba Well	E08/2139	100%	N/A	100%
Kilba Well	M08/314	100%	N/A	100%
Kilba Well	E08/2780	100%	N/A	100%
Koolyanobbing*	E77/2279	100% mineral rights for tungsten, 20% for other commodities	N/A	100% mineral rights for tungsten, 20% for other commodities
Callie Soak	E20/854	100%	N/A	100%
Mt Mulgine**	E59/1324-I	100% mineral rights for tungsten and molybdenum	N/A	100% mineral rights for tungsten and molybdenum
Mt Mulgine**	M59/386-I	"	N/A	"
Mt Mulgine**	M59/387-I	"	N/A	"
Mt Mulgine**	M59/425-I	"	N/A	"
Mt Mulgine	L59/161	100%	N/A	100%
Mt Mulgine	L59/162	100%	N/A	100%
Big Hill	L46/70	100%	N/A	100%
Big Hill	R46/3	100%	N/A	100%
Watershed	ML20535	100%	N/A	100%
Watershed	ML20536	100%	N/A	100%
Watershed	ML20537	100%	N/A	100%
Watershed	ML20538	100%	N/A	100%
Watershed	ML20566	100%	N/A	100%
Watershed	ML20567	100%	N/A	100%
Watershed	ML20576	100%	N/A	100%
Watershed	EPM25102	100%	N/A	100%
Watershed	EPM18171	100%	N/A	100%
Watershed	EPM25940	100%	N/A	100%
Watershed	EPM19809	100%	N/A	100%
Watershed	EPM25139	100%	N/A	100%
Hatches Creek	EL22912	20%	N/A	20%
Hatches Creek	EL23463	20%	N/A	20%

\* This tenement is held by Lithium Australia NL and subject to the terms of the Seabrook Rare Metals Venture

\*\* Certain Mt Mulgine tenements are registered in the name of Minjar Gold Pty Ltd with Mid-West Tungsten Pty Ltd (MWT), a subsidiary of Tungsten Mining NL being the holder of the Tungsten and Molybdenum Mineral Rights. MWT is the registered holder of Miscellaneous Licenses L59/161 and 162.



## Tungsten Mining NL – Resource Inventory at 0.10% WO<sub>3</sub> Cut-Off

Class	Million Tonnes	Grade WO <sub>3</sub> %	WO <sub>3</sub> MTU *	Grade Mo (ppm)	Mo Tonnes	Grade Au(g/t)	Au (oz)	Grade Ag (g/t)	Ag (Moz)
<b>Mulgine Trench (December 2019) <sup>1</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	-	-
Inferred	125	0.13	16,000,000	269	33,000	0.13	520,000	6	23
<b>Total</b>	<b>125</b>	<b>0.13</b>	<b>16,000,000</b>	<b>269</b>	<b>33,000</b>	<b>0.13</b>	<b>520,000</b>	<b>6</b>	<b>23</b>
<b>Mulgine Hill (June 2017) <sup>2</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	5.6	0.23	1,290,000	133	700	-	-	-	-
Inferred	1.7	0.19	320,000	113	200	-	-	-	-
<b>Total</b>	<b>7.3</b>	<b>0.22</b>	<b>1,610,000</b>	<b>129</b>	<b>900</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Mt Mulgine (Total)</b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	5.6	0.23	1,300,000	130	700	-	-	-	-
Inferred	126	0.13	16,200,000	270	33,700	0.13	520,000	6	23
<b>Total</b>	<b>130</b>	<b>0.13</b>	<b>17,000,000</b>	<b>260</b>	<b>34,400</b>	<b>0.12</b>	<b>520,000</b>	<b>5</b>	<b>23</b>
<b>Watershed (July 2018) <sup>3</sup></b>									
Measured	4.4	0.25	1,110,000	-	-	-	-	-	-
Indicated	11.5	0.24	2,760,000	-	-	-	-	-	-
Inferred	4.7	0.26	1,230,000	-	-	-	-	-	-
<b>Total</b>	<b>20.7</b>	<b>0.25</b>	<b>5,070,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Big Hill (June 2016) <sup>4</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	6.2	0.16	980,000	-	-	-	-	-	-
Inferred	5.3	0.13	700,000	-	-	-	-	-	-
<b>Total</b>	<b>11.5</b>	<b>0.15</b>	<b>1,670,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Kilba (January 2015) <sup>5</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	4.1	0.25	1,040,000	-	-	-	-	-	-
Inferred	0.8	0.20	170,000	-	-	-	-	-	-
<b>Total</b>	<b>5.0</b>	<b>0.24</b>	<b>1,210,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Resource Inventory</b>									
Measured	4.4	0.25	1,100,000	0	0	-	-	-	-
Indicated	27	0.22	6,100,000	30	700	-	-	-	-
Inferred	137	0.13	18,000,000	250	33,700	0.12	520,000	5	23
<b>Total</b>	<b>170</b>	<b>0.15</b>	<b>25,000,000</b>	<b>204</b>	<b>34,400</b>	<b>0.10</b>	<b>520,000</b>	<b>4</b>	<b>23</b>

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. \* - MTU equals metric tonne units (10kg) of WO<sub>3</sub>

1. Refer ASX (Tungsten Mining) Announcement 19 December 2019, "Major Mineral Resource Estimate Update for Mulgine Trench Deposit".

2. Refer ASX (Tungsten Mining) Announcement 12 April 2019, "Update on Activities at Mt Mulgine".

3. Refer ASX (Vital Metals) Announcement 4 July 2018, "Watershed Mineral Resources Restatement JORC Code (2012)".

4. Refer ASX (Tungsten Mining) Announcement 23 June 2016, "Big Hill June 2016 Mineral Resource Update".

5. Refer ASX (Tungsten Mining) Announcement 30 January 2015, "Kilba Mineral Resource Update".

6. The Resource table only includes projects where Tungsten Mining holds a 100% interest.

## Tungsten Mining NL – Resource Inventory at 0.05% WO<sub>3</sub> Cut-Off

Class	Million Tonnes	Grade WO <sub>3</sub> %	WO <sub>3</sub> MTU *	Grade Mo (ppm)	Mo Tonnes	Grade Au(g/t)	Au (oz)	Grade Ag (g/t)	Ag (Moz)
<b>Mulgine Trench (December 2019) <sup>1</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	-	-
Inferred	207	0.11	23,000,000	272	56,000	0.13	850,000	5	35
<b>Total</b>	<b>207</b>	<b>0.11</b>	<b>23,000,000</b>	<b>272</b>	<b>56,000</b>	<b>0.13</b>	<b>850,000</b>	<b>5</b>	<b>35</b>
<b>Mulgine Hill (June 2017) <sup>2</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	8.3	0.18	1,490,000	128	1,100	-	-	-	-
Inferred	4.0	0.12	480,000	118	500	-	-	-	-
<b>Total</b>	<b>12.3</b>	<b>0.16</b>	<b>1,970,000</b>	<b>125</b>	<b>1,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Mt Mulgine (Total)</b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	8.3	0.18	1,500,000	130	1,100	-	-	-	-
Inferred	210	0.11	23,000,000	270	56,000	0.13	850,000	5	35
<b>Total</b>	<b>219</b>	<b>0.11</b>	<b>25,000,000</b>	<b>260</b>	<b>57,000</b>	<b>0.12</b>	<b>850,000</b>	<b>5</b>	<b>35</b>
<b>Watershed (July 2018) <sup>3</sup></b>									
Measured	9.5	0.16	1,520,000	-	-	-	-	-	-
Indicated	28.4	0.14	3,970,000	-	-	-	-	-	-
Inferred	11.5	0.15	1,720,000	-	-	-	-	-	-
<b>Total</b>	<b>49.3</b>	<b>0.14</b>	<b>7,040,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Big Hill (June 2016) <sup>4</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	15.8	0.11	1,680,000	-	-	-	-	-	-
Inferred	22.7	0.09	1,930,000	-	-	-	-	-	-
<b>Total</b>	<b>38.5</b>	<b>0.09</b>	<b>3,620,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Kilba (January 2015) <sup>5</sup></b>									
Measured	-	-	-	-	-	-	-	-	-
Indicated	5.7	0.20	1,150,000	-	-	-	-	-	-
Inferred	1.5	0.15	220,000	-	-	-	-	-	-
<b>Total</b>	<b>7.2</b>	<b>0.19</b>	<b>1,370,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Resource Inventory</b>									
Measured	9.5	0.16	1,500,000	-	-	-	-	-	-
Indicated	58	0.14	8,300,000	20	1,100	-	-	-	-
Inferred	246	0.11	27,000,000	230	56,000	0.11	850,000	4	35
<b>Total</b>	<b>314</b>	<b>0.12</b>	<b>37,000,000</b>	<b>180</b>	<b>57,000</b>	<b>0.08</b>	<b>850,000</b>	<b>3</b>	<b>35</b>

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. \* - MTU equals metric tonne units (10kg) of WO<sub>3</sub>

1. Refer ASX (Tungsten Mining) Announcement 19 December 2019, "Major Mineral Resource Estimate Update for Mulgine Trench Deposit".
2. Refer ASX (Tungsten Mining) Announcement 12 April 2019, "Update on Activities at Mt Mulgine".
3. Refer ASX (Vital Metals) Announcement 4 July 2018, "Watershed Mineral Resources Restatement JORC Code (2012)".
4. Refer ASX (Tungsten Mining) Announcement 23 June 2016, "Big Hill June 2016 Mineral Resource Update".
5. Refer ASX (Tungsten Mining) Announcement 30 January 2015, "Kilba Mineral Resource Update".
6. The Resource table only includes projects where Tungsten Mining holds a 100% interest.

## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

**Name of entity**

Tungsten Mining NL

**ABN**

67 152 084 403

**Quarter ended ("current quarter")**

31 December 2019

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	30	60
1.2 Payments for		
(a) exploration & evaluation	(3,857)	(5,405)
(b) development	-	-
(c) production	-	-
(d) staff costs (see note 5)	(706)	(1,369)
(e) administration and corporate costs	(533)	(827)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	126	328
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(4,940)</b>	<b>(7,213)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	(63)
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	(85)
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (security deposit)	-	(25)
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>(173)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	1,246	1,246
3.4	Transaction costs related to issues of shares, convertible notes or options	(3)	(3)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>1,243</b>	<b>1,243</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	31,338	33,784
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(4,940)	(7,213)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	(173)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,243	1,243
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>27,641</b>	<b>27,641</b>



5. <b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1    Bank balances	3,101	2,860
5.2    Call deposits	24,540	28,478
5.3    Bank overdrafts	-	-
5.4    Other (provide details)	-	-
<b>5.5    Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>27,641</b>	<b>31,338</b>

**6.    Payments to directors of the entity and their associates**

- 6.1    Aggregate amount of payments to these parties included in item 1.2
- 6.2    Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3    Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Current quarter \$A'000
122
-

Payments to Directors for fees and consulting.

**7.    Payments to related entities of the entity and their associates**

- 7.1    Aggregate amount of payments to these parties included in item 1.2
- 7.2    Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3    Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Current quarter \$A'000
31
-

Payments to associate entity GWR Group Limited for the reimbursement of exploration expenses incurred by GWR Group on behalf of the Company.

**8.    Financing facilities available**

*Add notes as necessary for an understanding of the position*

- 8.1    Loan facilities
- 8.2    Credit standby arrangements
- 8.3    Other (please specify)

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
-	-
-	-
-	-

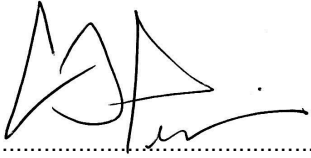
- 8.4    Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

9. Estimated cash outflows for next quarter		\$A'000
9.1	Exploration and evaluation	4,000
9.2	Development	-
9.3	Production	-
9.4	Staff costs	700
9.5	Administration and corporate costs	350
9.6	Other	-
9.7	<b>Total estimated cash outflows</b> (see note 4)	<b>5,050</b>

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	<i>Watershed</i> EPM 25940	Partial relinquishment of tenement	100%	100%
10.2	Interests in mining tenements and petroleum tenements acquired or increased				

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:   
 (Chief Executive Officer)

Date: 22 January 2020

Print name: Craig Ferrier

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. The estimated cash outflows for the next quarter include forecast expenditures related to the Pre-feasibility study of the Mt Mulgine Tungsten Project, the timing of which will vary from quarter to quarter.
5. These staff costs include exploration and evaluation related staff costs of approximately \$380K.