

# Quarterly Report – December 2016

#### Highlights

- **Successful \$5.27m equity raising** Fully underwritten Entitlement Offer to existing shareholders at 4cps raised A\$5.27m. The equity raising, completed in early January has enabled the retirement of debt and provided funding to advance the Mt Mulgine Strategic Development Plan.
- **Coarse scheelite confirmed in fresh material at Mt Mulgine** –. Scanning Electron Microscopy (SEM) identified the vast majority of scheelite particles are less than 300um, however in terms of mass, greater than 90% of the scheelite mass exists in the plus 1mm size fraction.
- Oxide mineralogical studies identifies rare tungsten mineral SEM has identified hydrokenoelsmoreite (WO3.0.5H2O) in the oxide layer at Mt Mulgine. R&D activities have commenced to determine a metallurgical extraction route that will add significant value to the project.
- X-ray Ore Sorting technology has been successful in both identifying and preconcentrating tungsten – The head grade of the test samples increased significantly by rejecting up to 43% of the mass as waste whilst maintaining up to 96% tungsten yield.
- Environmental Surveys indicate no significant risks Level 2 Biological surveys progressed with results indicating no significant risk from flora or fauna that may impact the Mt Mulgine Project Development.
- **Preparation of EPA and EPBC Referral Underway** Results of the level 2 biological survey work and mining studies have been used to create a project footprint and referral document to be submitted to the EPA and EPBC in the first quarter of 2017.
- China market development Release of an updated presentation specifically targeted to the Chinese tungsten market with both English and Mandarin versions available via a relaunched website. The website contains information on the Company and its projects in both English and Mandarin to support an increasing engagement with the tungsten industry in the People's Republic of China. Initial meetings held in China with Chinese tungsten companies and research institutions.
- **Cash position** The Company's cash position as at 31 December 2016 was \$1.59m. Following the issuing of Entitlement Issue shares on 4 January, a further \$2.77m was added to the cash balance.



Tungsten Mining NL Quarterly Activities Report December 2016

#### **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 Projects, all in Western Australia.

Through exploration and acquisition, the Company has established a portfolio of advanced tungsten projects with Mineral Resources at a 0.10% WO<sub>3</sub> cut-off comprising Indicated Resources of 15.4Mt at 0.20% WO<sub>3</sub> and 26ppm Mo and Inferred Resources of 73.2Mt at 0.17% WO<sub>3</sub> and 220ppm Mo, totalling 88.6Mt at 0.18% WO<sub>3</sub> and 186ppm Mo. This represents more than 15.5 million MTU (metric tonne units) of WO<sub>3</sub> and 16,480 tonnes of contained Mo, providing 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.

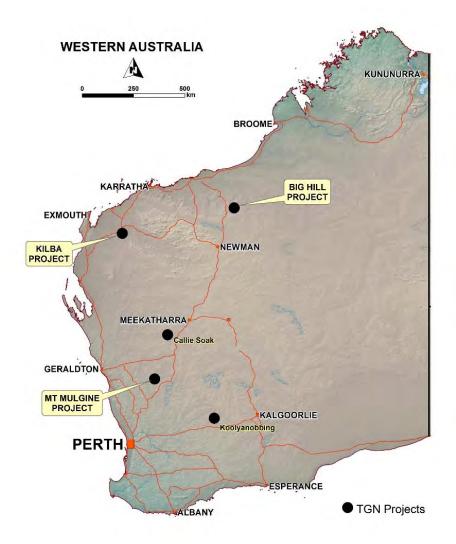


Figure 1 – Project location map

#### Mt Mulgine Project, Murchison WA

The Mt Mulgine Project 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.

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 72.2Mt at 0.18% WO<sub>3</sub> and 230ppm Mo (0.10% WO<sub>3</sub> cut-off) comprising Indicated Resources of 5.1Mt @ 0.20% WO<sub>3</sub> and 80ppm Mo and Inferred Resources of 67.1Mt @ 0.17% WO<sub>3</sub> and 240ppm Mo.

Historical metallurgical test work conducted in the 1970s/1980s indicates tungsten is present as coarsegrained scheelite that will respond well to conventional gravity separation and is capable of producing commercial grade concentrate.

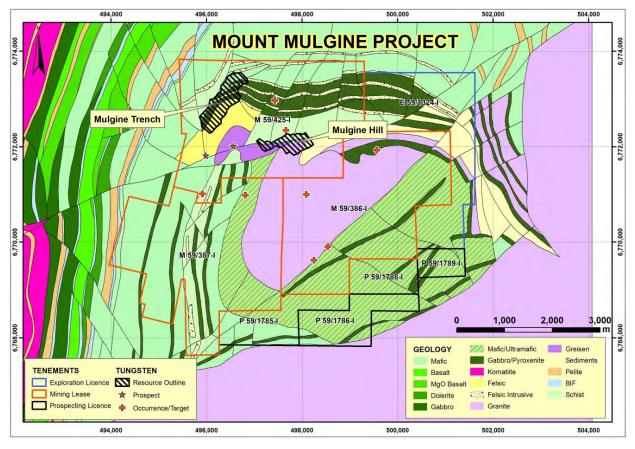


Figure 2 –Mt Mulgine project geology

#### Mt Mulgine Strategic Development Plan

The Company has developed a Strategic Development Plan for the Mt Mulgine Project, directed towards the production of tungsten concentrate within two years.

Leveraging off the project's proximity to existing infrastructure and facilities, a staged development approach will be adopted with the initial focus on the Mulgine Hill deposit, while concurrently progressing metallurgical test work and development activities on the significantly larger Mulgine Trench deposit. This strategy aims to produce early cash flow and ensure tungsten production is sustainable long term.

Tests		2016		2017			2018	
Task	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun
hared Infrastructure agreements								
lear surface drilling & Resource update								
Narketing & offtake	1000							
Aineralogy								
Aetallurgy								
nvironmental studies and approvals								
iloting								
Aining Studies								
ngineering design & selection								
inancial analysis and financing								
/ining Approvals								
inal Investment Decision								

Figure 3 – Mt Mulgine Strategic Development Plan - Project Schedule

For the December quarter, the key focus areas were commencement of metallurgy studies, discussions in relation to shared infrastructure on the Mt Mulgine tenement, commencement of Spring environmental studies, mining studies as well as discussions with potential offtake partners.

#### **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.

Minefields Exploration NL (Minefields) and Australian and New Zealand Exploration Company (ANZECO) drilled 213 diamond drill holes at Mulgine Hill over several campaigns from 1970 to 1980.

In June 2016, Tungsten Mining updated the Mulgine Hill Mineral Resource in accordance with the guidelines provided by the 2012 JORC Code. Interpretation of data during the resource modelling process identified a number of shallow targets with open extensions.

During August 2016, a total of 26 reverse circulation (RC) holes for 1,007 metres and five large diameter (PQ) diamond holes for 202.4 metres were completed at Mulgine Hill to test shallow tungsten mineralisation (Refer ASX Announcement 23 September 2016). The drilling programme tested four of these shallow targets where historic drilling defined thick zones of tungsten mineralisation close to surface (Figure 4). Mineralisation at all four targets have shallow dips and the objective of drilling was to confirm continuity of mineralisation and targeted strike extensions within 40 metres of the surface.

Results from this drilling were encouraging, intersecting thick zones of tungsten mineralisation at all target areas. Drilling confirmed continuity of mineralisation within the existing Mineral Resource plus defined extensions in both fresh and weathered material along strike and down dip as shown in Figure 5.

Better intersections included:

- 19 metres at 0.42% WO<sub>3</sub> from 1 metre in MMC002.
- 16 metres at 0.15% WO<sub>3</sub> from 4 metre and 9 metres at 0.40% WO<sub>3</sub> from 25 metre in MMC018.
- 18 metres at 0.21% WO<sub>3</sub> from 3 metre in MMC019.

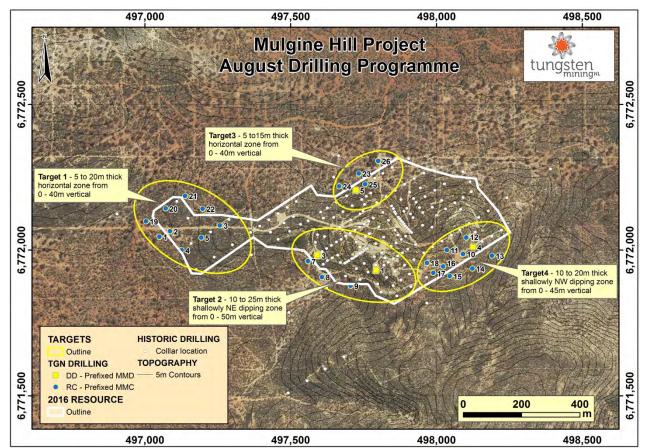


Figure 4 – Plan displaying hole location, shallow targets and 2016 Mineral Resource outline at Mulgine Hill.

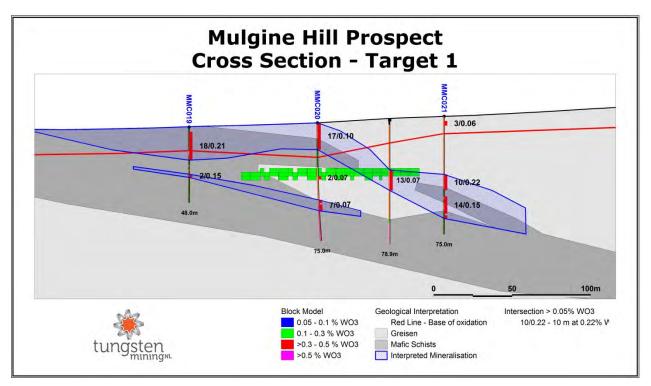


Figure 5 – Cross section showing August 2016 drilling (MMC prefix) and interpretation with 2016 block model.

#### Diamond Drilling

Five PQ diamond holes were also drilled to provide representative material for metallurgical test work from the mafic schist unit and overlying greisen. Work has commenced on this material, with the major objective to confirm previous metallurgical studies that indicated conventional treatment produces a saleable WO<sub>3</sub> concentrate at Mulgine Hill.

Twenty three samples from this core were sent for mineralogical examination to investigate the metallurgy of fresh scheelite mineralisation present at Mulgine Hill. The results of this work are described later in this report under the heading "*Mineralogical Studies*".



Figure 6: Diamond core from August 2016 drilling program showing course grained scheelite under UV

#### Historic Core Sampling

Minefields and ANZECO drilled 213 diamond drillholes at the Mulgine Hill prospect over several campaigns from 1970 to 1980. Diamond holes were logged and UV lamped to determine mineralised material and only these mineralised intervals were assayed. Inspection of core under UV light indicated Minefields/ANZECO selective sampling potentially missed significant tungsten mineralisation.

In April 2016, the Company sampled 249.75 metres of BQ and NQ core and submitted them for tungsten analysis. Results from this sampling were considered highly encouraging adding to existing intersections plus identify new zones of mineralisation.

In August 2016, Tungsten Mining sampled a further 862.1 metres of Minefields/ANZECO core and submitted 862 samples (half core) to Nagrom Laboratories for tungsten analysis by x-ray fluorescence (XRF).

Results from the April and August 2016 sampling programs returned 143 samples greater than  $0.05\% WO_3$  that were either adjacent to existing intersections or in a new intersection of 2 metres at  $0.05\% WO_3$  or better. These 143 samples averaged  $0.11\% WO_3$ . Results included 10.9m at  $0.14\% WO_3$ , 10.7m at  $0.11\% WO_3$  and 8.6m at  $0.24\% WO_3$ .

Further historic core has been identified as containing un-sampled scheelite mineralisation and this will be sampled in the March Quarter.

#### **Mulgine Trench**

Tungsten mineralisation at Mulgine Trench is hosted by quartz-scheelite veins in mafic and ultramafic volcanics in a 100 to 250 metre thick zone that extends over 1.5 kilometres of strike. Mineralisation is open along strike and down dip and is associated with foliation parallel quartz veins generally less than 10 centimetres in width. Mineralisation is strongest where quartz veining averages 15 - 20% of the total rock volume.

Tungsten Mining's strategy at Mulgine Trench is to target potentially low strip ratio fresh tungsten mineralisation beneath and adjacent to the Bobby McGee pit and gain a greater understanding of the Mulgine Trench oxide layer.

#### **Reverse Circulation Drilling**

During August 2016, the Company drilled 9 RC holes for 476 metres at Mulgine Trench to test tungsten mineralisation adjacent to and beneath the Bobby McGee pit (Figure 7).

Results from this drilling have been extremely encouraging, intersecting substantial thicknesses of low to medium grade tungsten mineralisation including 72 metres at 0.16% WO<sub>3</sub> and 0.02% Mo from surface in MMC030 (Figure 8).

One metre cone-split samples were received during the December quarter for mineralisation identified by preliminary five metre composite samples in MMC028. These confirmed the 5m sampling returning an intersection of 37 metres at 0.08% WO<sub>3</sub> and 0.12% Mo from 3 metres in oxide material (Figure 8).

#### Historic Drilling Data Review

A review of historical drilling that targeted gold mineralisation at Black Dog highlighted the scale of the mineralised system at Mulgine Trench. A number of the RC holes and one deep diamond hole were assayed for tungsten by mixed acid digest/ICP-AES analysis.

Diamond hole BDD006 at Black Dog intersected multiple zones of tungsten mineralisation that form an intersection of 248 metres at 0.08% WO<sub>3</sub> (Figure 8). This newly identified intersection shows the potential to increase the Mineral Resource at Mulgine Trench with mineralisation open down dip over the 1.5 kilometres of strike as well as along strike.

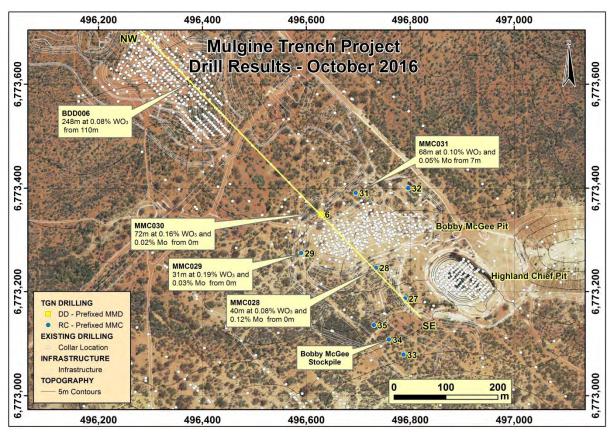


Figure 7 – Plan displaying better results from Tungsten Mining's drilling around the Bobby McGee pit and the location of BDD006.

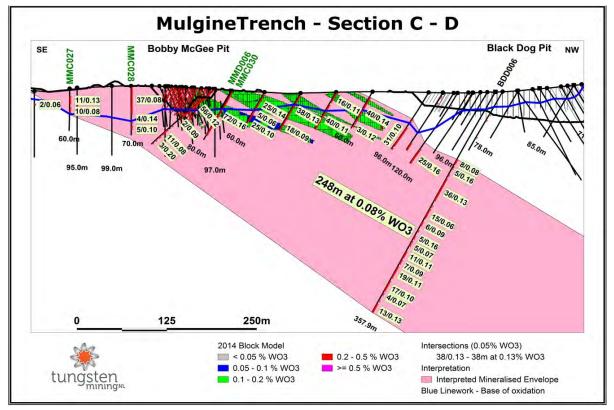


Figure 8 - Cross section at Mulgine Trench showing recent drilling (MMC028, MMC030 and MMD006), 2014 Mineral Resource and BDD006 drilled in 2014 that intersected 248m at 0.08% WO<sub>3</sub>.

#### Bobby McGee Stockpile Sampling

Three of the RC holes completed in the August 2016 campaign were drilled to evaluate a stockpile containing tungsten mineralisation constructed by Minjar Gold Pty Ltd during mining of the Bobby McGee pit which formed part of the Trench deposit. Results confirmed the stockpile has tungsten mineralisation associated with dominantly weathered material assaying 0.10 - 0.15% WO<sub>3</sub>.

#### **Diamond Drilling**

In August 2016, the large diameter (PQ) diamond hole MMD006 was drilled to provide material for metallurgical studies of the oxide layer at Mulgine Trench. This hole twinned MMC030 that assayed 32 metres at 0.13% WO<sub>3</sub> over the corresponding interval.

Four samples from MMD006 containing tungsten mineralisation were examined to determine the mineralogy and distribution of tungsten in the Mulgine Trench oxide layer, the details of which are described further below.

#### Mineralogical Studies

Samples recovered from recent drilling at Mulgine Hill and Trench at the Mt Mulgine Project were prepared and submitted for mineralogical investigation to:

- 1. Identify the type of tungsten mineralisation and determine the particles sizes, abundance and other minerals present in the fresh samples from Mulgine Hill, with the aim of streamlining the metallurgical test work program;
- Identify the tungsten mineral(s) present in the non-fluorescing samples assayed for tungsten in the oxide/weathered zone from Mulgine Hill and Trench, with the aim of progressing a metallurgical R&D program to determine a metallurgical extraction route.

#### **Mulgine Hill Samples**

#### Fresh Mineralisation

Nineteen samples from the Mulgine Hill deposit were chosen based on the presence of visible scheelite under UV light, different host rock and scheelite particle size. Polished thin sections were then prepared and examined using Scanning Electron Microscopy (SEM).

The dominant lithologies were greisen (muscovite quartz feldspar), mafic schist and quartz veins. Eighteen of the nineteen samples contained detectable tungsten mineralisation present as predominantly scheelite with traces of wolframite and the lead tungstate, stolzite.

The scheelite was present in a wide range of angular grainsizes, ranging from less than 100  $\mu$ m (micron), to 13mm in one sample. The vast majority of scheelite particles are less than 300um, however in terms of mass, greater than 90% of the scheelite mass exists in the plus 1mm size fraction.

X-ray ore sorting and gravity concentration of scheelite appears the likely extraction methodology with a distinct mass of scheelite at ~1mm for both the schist and greisen material and the main gangue minerals are low density silicates. Pyrite is the main higher density mineral likely to be present in the initial concentrates.

#### Oxide Mineralisation

Six pulps were submitted for examination from material that represents weathered tungsten mineralisation at Mulgine Hill. The pulps were from one metre RC samples that contained tungsten mineralisation from four different rock types assaying between 0.31 to 0.63% WO<sub>3</sub>. Samples were screened to -63 microns and concentrated in heavy media (density >2.95) using a centrifuge, with X-ray diffraction (XRD) analysis

of the concentrate. A small portion of the concentrates were mounted as loose powders and briefly examined by SEM.

Tungsten minerals were detected in four of the six samples. The mineral hydrokenoelsmoreite  $(WO_3.0.5H_2O)$  also identified at Mulgine Trench was found in two greisen samples and a mafic schist sample. Scheelite was also detected in the two mafic schist samples at depths from the surface to 5 metres vertical.

#### Mulgine Trench Samples

The Bobby McGee Pit is located in the northern end of the Trench deposit and has provided the ability to access both fresh and weathered material in an area of closed spaced drilling.

Four drill core samples assaying between 0.20% and 0.39% WO<sub>3</sub> from drill hole MMD006 were submitted for examination and represent the oxide/weathered portion of tungsten mineralisation at the Bobby McGee Pit.

Samples were initially pulped and analysed semi quantitatively by XRD. Polished thin sections were also made of the drill cores, followed by an SEM examination with regard to the nature of the tungsten mineralogy. The samples were composited, screened to -63 microns and concentrated in heavy media (density >2.95) using a centrifuge, with XRD analysis of the concentrate. A small portion of the concentrates were mounted as loose powders and examined by SEM.

The tungsten in these altered four drill core samples is predominantly hydrokenoelsmoreite and is invariably associated with titanium, mainly anatase and altered ilmenite. It appears that the tungsten has been mobilized and precipitated onto the relic iron titanium oxides during weathering. The X-ray maps show that the grainsizes of the tungsten mineral are very fine, commonly less than 5 microns.

This work will assist in designing a metallurgical test program to determine an extraction route for hydrokenoelsmoreite and any other tungsten minerals identified. As previously reported, Tungsten Mining have engaged Australia's pre-eminent minerals research facility at CSIRO to support components of this activity and an initial review of past work was completed in August 2016 and a forward work plan presented.

The completion and outcome of the mineralogical studies will provide an opportunity to further refine the proposed forward work plan and focus efforts relative to this increasing body of knowledge.

#### **Metallurgical Test Work**

The metallurgical test work program for the quarter consisted of sample preparation and x-ray ore sorting.

Two composites, schist and greisen, were prepared, based on the predominent lithology of the ore body.

Sample ID	W0 <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mn0	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Mg0	As	S	Мо	Cu	F
	%	%	%	%	%	%	%	%	%	%	ppm
Schist Comp head assay	0.63	6.86	0.15	56.04	11.33	10.85	<10	3.11	0.01	0.00	2500
Greisen Comp head assay	0.28	2.19	0.05	74.17	12.73	1.91	<10	0.88	0.01	0.00	9500

Table 1 below shows the head assay results of the greisen and schist composites.

Table 1 – schist and greisen composite head assays.

"Sighter" x-ray ore sorting test work was conducted at Tomra in New South Wales on a small sample mass from each composite. The major aims of the test work was to determine whether tungsten mineralisation

could be detected in the first instance and whether or not waste material could be rejected to improve the grade of the recovered material while at the same time the yield of tungsten was not overly compromised.

Figure 2 below shows a schist ore particle sample with visible tungsten inclusions (dark spots) detected in raw and classified image.

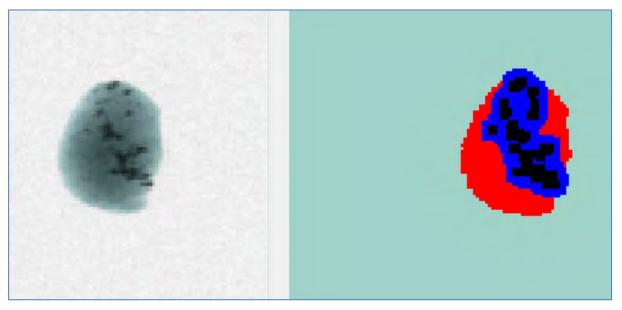


Figure 2 – image of schist particle under x-ray showing tungsten inclusions (dark spots).

The "sighter" test results were extremely encouraging with both composites having easily detectable tungsten. The greisen sample grade increased from 0.40 to 0.66% WO<sub>3</sub> whilst at the same time rejecting 43% of the mass as waste and maintaining 96% WO<sub>3</sub> yield. For the schist sample, the grade has increased from 0.99 to 1.38% WO<sub>3</sub> whilst at the same time rejecting 31% of the mass as waste and maintaining 97% WO<sub>3</sub> yield (\* head assays of the samples used for x-ray sorting test work differ from the head grades quoted in Table 1. This is due to the coarse scheelite particle size and the "poddy" nature of the scheelite mineralisation in the drill core).

2 x 150kg bulk samples of schist and greisen material were sent for further ore sorting test work, using machine parameters determined from the "sighter" test work.

For the greisen bulk sample, the head grade increased from 0.34% to 0.52% WO<sub>3</sub> by removing 40% of the feed mass as waste. At the same time, the yield of WO<sub>3</sub> remained high at 92%.

For the schist composite, the head grade increased from 0.69% to 1.15% WO<sub>3</sub> by removing 43% of the feed mass as waste. At the same time, the yield of WO<sub>3</sub> remained high at 96%.

Gravity concentration on the ore sorting concentrate and whole of ore flotation test work are planned activities for the next quarter.

#### Big Hill Project, Eastern Pilbara, WA

The Big Hill Project area is located approximately 30 km northeast of the Nullagine township in the Eastern Pilbara of Western Australia. The project contains 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 have produced high quality tungsten concentrates at acceptable scheelite recoveries. This work has identified a simple and potentially low cost processing route.

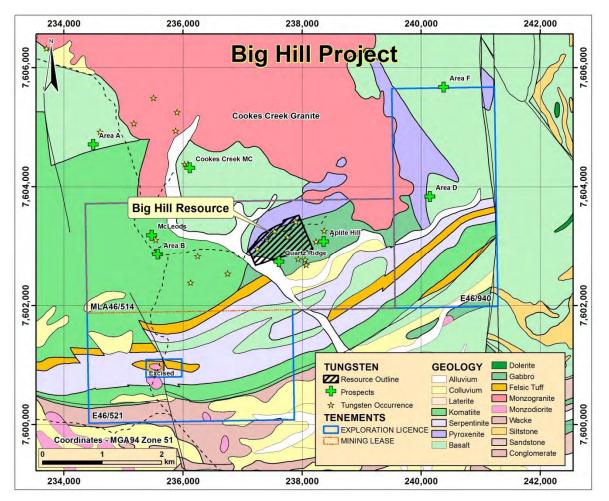


Figure 10 – Big Hill project geology

A site inspection was undertaken by Company personnel and six members of the Njamal Claimant Group, representatives of the traditional custodians for the land on which the Big Hill Project is located. The site visit followed an earlier meeting in Port Hedland in May 2016 and presented an opportunity for Tungsten Mining, as new owners of the Big Hill Project, to meet with the Njamal and discuss the Company's plans including a proposed Retention License application. A Retention License application (being a conversion of part of E46/521-I) was submitted on 8 September 2016.

Rehabilitation of drilling at Big Hill was completed during the quarter. There are no planned activities for the Big Hill Project in 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.

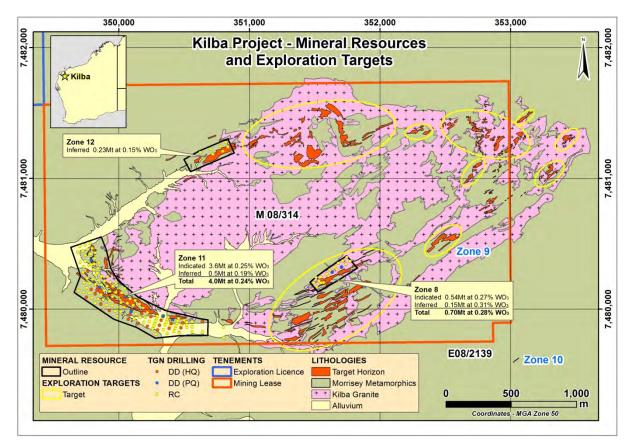


Figure 11 - plan displaying location of recent drilling and Mineral Resource at the Kilba Project

No additional study work was undertaken on the Kilba project during the December quarter.

#### **Other Projects**

Tungsten Mining has a portfolio of other projects in Western Australia prospective for tungsten. These include Loves Find in the Ashburton region (which also hosts the Kilba Project), the Koolyanobbing Project and Callie Soak.

Work on these projects is in the initial stages of reconnaissance and target generation and it is hoped that these tenements will yield additional mineralisation, which Tungsten Mining can exploit.

#### Ashburton Region

The Ashburton region includes the Loves Find project that is in close proximity to the Kilba Project. At Loves Find, geological mapping, UV lamping and rockchip sampling has identified tungsten mineralisation associated with garnet-epidote-clinozoisite-diopsite skarns. Two selective rockchip samples from these skarns returned assays of 4.2% WO<sub>3</sub> and 5.6 WO<sub>3</sub>.

Although Tungsten Mining has identified high-grade tungsten mineralisation at Loves Find, mineralisation is considered to be small and poddy. The company has decided to focus attention on the much larger Mt Mulgine Project and to surrender the Loves Find tenements in the near future.

#### Koolyanobbing Project – Seabrook Rare Metals Venture

Tungsten Mining entered into a binding agreement with Lithium Australia NL (ASX: LIT) that provides for LIT to explore for lithium and other metals, on the shores of Lake Seabrook, approximately 60km northeast of Southern Cross, Western Australia. The agreement concerns tenements comprising Tungsten Mining's Koolyanobbing Project, notably E77/1853, E77/1854, E77/1855, E77/2021, E77/2022 and E77/2035 and extends to an area of influence of 20km outside of the Tungsten Mining's Tenements.

The Seabrook Rare Metals Venture provides LIT with a right to earn an 80% interest to all metals other than tungsten, the right of which remain or are vested in Tungsten Mining.

#### Callie Soak Project, Murchison WA

The Callie Soak Project is located approximately 550km north northeast of Perth and 40km west of Cue within the Murchison Region of Western Australia. The Exploration Licence E20/854 was granted on the 9 September 2016 and covers five tungsten occurrences. The most significant of these is Martin's Lode where tungsten is associated with a 30 metre wide greisen unit. In 1969, Carr Boyd Minerals Ltd drilled eight vertical percussion holes and four diamond holes at Martin's Lode. Results from this drilling were encouraging intersecting up to 30.5 metres at 0.48% WO<sub>3</sub>.

In November 2016, Tungsten Mining conducted a two-day reconnaissance visit to Callie Soak to inspect these tungsten occurrences. Two rock chip samples collected from the greisen unit at Martin's Lode assayed 0.29% and 0.50% WO3. Target size is considered small with a strike limited 80 metres of on strike, but there is potential for additional mineralisation down dip or down plunge.

Orientation soil sampling defined strongly anomalous tungsten and anomalous molybdenum, bismuth and copper associated with mineralisation at Martin's lode. A review of historical reports located 12 additional tungsten occurrences that were not visited during the November field trip.

#### Corporate

The Company completed an underwritten Entitlement Offer to shareholders during the December quarter. Following the final allotment of securities in early January, the Company had successfully raised \$5.27m (before costs).

A total of 62.5 million fully paid shares were allotted in December pursuant to initial acceptances from shareholders, representing a participation rate of 47.4%. A further 69.3m shares were allotted on 4 January 2017 to investors at the direction of the underwriter, BlueBay Investments Group Corporation, a company controlled by Tungsten Mining director, Mr Teck Siong Wong.

In addition, 65.9m unlisted free attaching options were issued to subscribers on the basis of one option for every two shares subscribed. The options are exercisable at 4 cents each on or before 31 December 2019.

The Company has a total of 395,479,062 fully paid ordinary shares on issue as at the date of this report.

Proceeds from the Entitlement Offer were applied to retire the Company's \$1,000,000 loan facility with associated entity, GWR Group Ltd. The facility had been made available in December 2015 to facilitate the acquisition of the Mt Mulgine and Big Hill projects and was repaid in full in accordance with the loan terms in late December.

Cash at bank and on deposit at the end of December 2016 was \$1.59m. In addition, an amount of \$1.74m had been received pursuant to the Company's Entitlement Offer prior to 31 December 2016 which in accordance with Australian accounting standards has been classified as "other financial assets" (and not accounted for as cash) pending allotment of securities on 4 January 2017 (refer accompanying Appendix 5B). A further \$1.03m in share issue proceeds was received after the end of the quarter and prior to allotment on 4 January 2017.

A Company presentation titled "*Progressing Towards Production*" was released to ASX during the quarter with a China focussed update released on 12 October and a Mandarin version made available via the Company's website.

In support of the Company's development plans for the Mt Mulgine Tungsten Project, a Mandarin version of key elements of the Company's website was released in October. This can be accessed at www.tungstenmining.com/zh/home-2/ with the ability to switch between English and Mandarin content.

The People's Republic of China is the largest producer of tungsten, accounting for approximately 80% of the world's total output, and is also the world's largest consumer of the metal. As Tungsten Mining advances its development activities at Mt Mulgine, the ability to communicate progress to the wider industry in China is becoming increasingly important.

Tungsten Mining's senior management met with industry representatives in China in November and subsequently in January 2017 to engage with specialist metallurgical laboratories/research facilities and potential off-take partners.

Mr Simon Borck was appointed as joint Company Secretary during the quarter. Mr Borck is a qualified Chartered Accountant with over 15 years' experience.

#### March Quarter Activities

During the March quarter, the Company will continue to deliver on its strategic development plan to demonstrate a path to WO<sub>3</sub> production and cash flow within 2 years by progressing the following activities:

- Metallurgical test work to focus on gravity concentration methods and whole of ore flotation;
- Reporting on the results of the spring season flora and fauna survey work at Mt Mulgine;
- Submission of EPA and EPBC referral documents for the Mt Mulgine Project;
- Updating the Mulgine Hill Mineral Resource estimate following the recent drilling and core sampling programs; and
- R&D program with CSIRO to gain a greater understanding of the metallurgy of the oxide layer of the Trench and Hill deposits with a view to producing an economic extraction route.
- Pit optimisation and mining studies;
- Estimation of capital and operating costs to a +/- 30% level of accuracy;

• Progressing infrastructure access and sharing arrangements for the planned Mt Mulgine operations;

The most economic method to recover representative bulk samples for pilot plant test work will also be investigated.

The Company will also progress discussions with equipment vendors and suppliers in relation to processing plant options that would suit the planned activities at Mt Mulgine and research facilities able to contribute to the development of the Mulgine Trench deposit.

As noted elsewhere, this will include planned meetings in the People's Republic of China with industry specialists and potential off-take partners.

For further information:	For Broker and Media Enquiries:
Craig Ferrier	Andrew Rowell / Warrick Hazeldine
Chief Executive Officer	Cannings Purple
Ph: +61 8 9486 8492	Ph: +61 400 466 226 / +61 417 944 616
E: craig.ferrier@tungstenmining.com	E: arowell@canningspurple.com.au /
	whazeldine@canningspurple.com.au

#### 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 is extracted from the report titled 'June 2016 Mineral Resource Update and Core Sampling' released to the Australian Securities Exchange (ASX) on 24 June 2016 and available to view at www.tungstenmining.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement released on 24 June 2016 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.

Tungsten Mining has three advanced tungsten projects in Australia: the Mt Mulgine Project in the Murchison region, the Big Hill Project in the Pilbara region and the Kilba Project in the Ashburton region of Western Australia. The Mt Mulgine, Big Hill and Kilba Projects, together contain Mineral Resources reported at a  $0.10\%WO_3$  cut-off grade comprising Indicated Resources of 15.4Mt at  $0.20\% WO_3$  and 26ppm Mo and Inferred Resources of 73.2Mt at  $0.17\% WO_3$  and 220ppm Mo, totalling 88.6Mt at  $0.18\% WO_3$  and 186ppm Mo. This represents more than 15.5 million MTU (metric tonne units) of WO<sub>3</sub> and 16,480 tonnes of contained Molybdenum.

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

#### **Tenement Summary**

Tenement Name	Tenement	Interest held at 30 Sep 2016	Interest acquired/ disposed of during quarter	Interest Held at 31 Dec 2016
Moodong Well	E08/2139	100%	N/A	100%
Loves Find^	E08/2207	100%	N/A	100%
Loves Find^	M08/286	100%	N/A	100%
Loves Find^	M08/287	100%	N/A	100%
Kilba Well^	M08/314	100%	N/A	100%
Kilba Well	E08/2780	PENDING	N/A	PENDING
Koolyanobbing	E77/1853	100% mineral rights for tungsten, 20% for other commodities	N/A	100% mineral rights for tungsten, 20% for other commodities
Koolyanobbing	E77/1854	ű	N/A	"
Koolyanobbing	E77/1855	"	N/A	"
Koolyanobbing	E77/2021	"	N/A	"
Koolyanobbing	E77/2022	"	N/A	ű
Koolyanobbing	E77/2035	"	N/A	ű
Koolyanobbing*	E77/2279	ű	N/A	"
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**	P59/1785-I	"	N/A	"
Mt Mulgine**	P59/1786-I	"	N/A	"
Mt Mulgine**	P59/1788-I	"	N/A	"
Mt Mulgine**	P59/1789-I	"	N/A	"
Big Hill	E46/521-I	100%	N/A	100%
Big Hill	E46/940	100%	N/A	100%
Big Hill	L46/70	100%	N/A	100%
Big Hill	M46/514	PENDING	N/A	PENDING
Big Hill^^	R46/3	PENDING	N/A	PENDING

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

\* This tenement is held by Lithium Australia NL and subject to the terms of the Seabrook Rare Metals venture
\*\*Mt Mulgine tenements are registered in the name of Minjar Gold Pty Ltd with Mid-West Tungsten Pty Ltd, a subsidiary of Tungsten Mining NL being the holder of the Tungsten and Molybdenum Mineral Rights.
^ Tungsten Mining holds 100% of mineral rights excluding non-metal substances – tenements surrendered during the quarter by tenement holder SM3 Resources Pty Ltd with consent of Tungsten Mining NL.
^ Retention License application is a section 70(B) of the Mining Act 1978 conversion of part of E46/521-I.

#### Tungsten Mining Mineral Resource Estimates - reported at a WO<sub>3</sub> cut-off grade of 0.10%

Class	Tonnes	Grade	Metric Tonne	Mo (ppm)	Contained Mo
		WO₃%	WO₃		Tonnes
Mulgine Trench	(October 2014) <sup>1</sup>				
Measured	0	-		-	
Indicated	400,000	0.14	50,000	400	160
Inferred	63,400,000	0.17	11,050,000	250	15,850
Total	63,700,000	0.17	11,100,000	250	15,950
Mulgine Hill (Ju	ne 2016) <sup>2</sup>				
Measured	0	-		-	
Indicated	4,700,000	0.21	987,000	50	240
Inferred	3,700,000	0.15	555.000	64	240
Total	8,400,000	0.18		56	470
Mt Mulgine (Tota	al)				
Measured	0	-		-	
Indicated	5,100,000	0.20		80	400
Inferred	67,100,000	0.17		240	16,000
Total	72,200,000	0.18		230	16,400
Big Hill (June 20	)16) <sup>3</sup>				
Measured	0	-		-	
Indicated	6,200,000	0.16	992,000		
Inferred	5,300,000	0.13	689,000		
Total	11,500,000	0.15	1,681,000		
Kilba (January 2	2015) <sup>4</sup>				
Measured	0				
Indicated	4,100,000	0.25	1,030,000		
Inferred	830,000	0.20	170,000		
Total	5,000,000	0.24	1,200,000		
Total Resource	Inventory				
Measured	0	_			
Indicated	15,400,000	0.20	3,060,000	26	400
Inferred	73,200,000	0.17	12,460,000	220	16,000
Total	88,600,000	0.18	15,520,000	186	16,400

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.

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

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

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

+Rule 5.5

## 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 2016

Cor	nsolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(519)	(905)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	-	-
	(e) administration and corporate costs	(270)	(505)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	2	13
1.5	Interest and other costs of finance paid	(30)	(60)
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(817)	(1,457)

2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) property, plant and equipment	-	(1)
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-

+ See chapter 19 for defined terms

1 September 2016

Con	solidated 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	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	(1)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	2,501	2,501
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(15)	(15)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	(1,000)	(1,000)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	1,486	1,486

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	918	1,559
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(817)	(1,457)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	(1)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,486	1,486
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period (see note 4)	1,587	1,587

5.	Reconciliation of cash and cash equivalents 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	587	418
5.2	Call deposits	1,000	500
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,587	918

ciates
ciates

- 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

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

Payments to associate entity GWR Group Limited for management and technical services and the reimbursement of expenses incurred by GWR Group on behalf of the Company.

	Current quarter \$A'000
Î	
i	225
l	
Î	
Ī	
Í	

Current quarter \$A'000

50

\_

8.	Financing facilities available Add notes as necessary for an understanding of the position	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1	Loan facilities	-	-
8.2	Credit standby arrangements	-	-
8.3	Other (please specify)	-	-

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.

At the end of the September 2016 quarter an unsecured interest bearing (12% p.a.) loan for \$1m from associated entity GWR Group Limited was outstanding. This loan was repaid in full upon maturity in December in accordance with the terms of the loan. Accordingly, there are no outstanding loans or loan facilities at the end of December 2016.

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation	400
9.2	Development	
9.3	Production	
9.4	Staff costs	
9.5	Administration and corporate costs	230
9.6	Other (provide details if material)	
9.7	Total estimated cash outflows	630

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					
10.2					

#### 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: 31 January 2017

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. Cash at bank and on deposit at the end of December 2016 is reported as \$1.587m. This balance does not include an amount of \$1.737m, received either by the Company or the Company's Share Registry prior to 31 December 2016 in relation to the Non-Renounceable Entitlement Issue, for which securities had not been allotted.

In accordance with Australian accounting standards such amounts have been classified as "other financial assets" until such time as the relevant securities have been allotted and are therefore not reflected in the cash flows for the December Quarter. These securities were allotted on 4 January 2017.