## Progressing towards Production

August 2016



ABN 67 152 084 403

#### Disclaimer



This presentation includes certain statements that may be deemed 'forward-looking statements'. All statements, other than statements of historical fact, that refer to any future production, resources or reserves, exploration results and events that Tungsten Mining NL ('TGN' or 'the Company') expects to occur are forward-looking statements. Although the Company believes that the expectations in those forward looking statements are based upon reasonable assumptions, such statements are not a guarantee of future performance and actual results or developments may differ materially from the outcomes. This may be due to several factors, including market prices, exploration and exploitation success, and the continued availability of capital and financing, plus general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance, and actual results or performance may differ materially from those projected in the forward-looking statements. The Company does not assume any obligation to update or revise its forward-looking statements, whether as a result of new information, future events or otherwise.

The information contained in the report that relates to Mineral Resources, Exploration Targets and Exploration Results is based on information compiled or reviewed 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.

Where the Company refers to previous ASX announcements it has made, throughout this presentation and in the Appendices, it confirms that it is not aware of any new information or data that materially affects the information included in those announcements and all material assumptions and technical parameters underpinning the resource estimates referred to continue to apply and have not materially changed.

## Tungsten Mining NL



Tungsten Mining NL is an emerging Australian tungsten developer listed on the Australian Securities Exchange.

The Company's prime focus is the development of tungsten projects in Australia.



#### **Corporate Overview**



Capital Structure	ASX: TGN
Shares on issue	263,652,708 ordinary shares
Unlisted Options	Nil
Market Capitalisation	\$13.2 (at 5 cps)
Cash as at 30 June 2016	\$1.56 million
Top 20 shareholders	79%



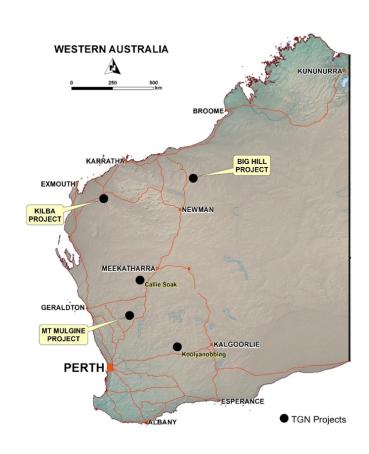
#### **Board and Management**

Gary Lyons	Non-Exec Chairman	Experienced company director and businessman
Chew Wai Chuen	Non-Exec Director	Singapore based financial advisor
Jimmy Lee	Non-Exec Director	Experienced mining engineer
Teck Siong Wong	Non-Exec Director	Malaysian based international business experience
Craig Ferrier Mark Pitts	Chief Executive Officer Company Secretary	20 yrs senior management experience 25 yrs corporate and compliance management

#### Project Portfolio



- Tungsten Mining has established a portfolio of advanced tungsten (scheelite) development projects
- Mineral Resources\* of 88.6 Million tonnes at 0.18% WO<sub>3</sub>, containing more than 15.5 million MTU (metric tonne units) of WO<sub>3</sub> at a 0.10% cut-off grade.
- Mt Mulgine Strategic Development Plan
   → focused on concentrate production
   in 2018



<sup>\*</sup> Comprising Indicated Resources of 15.4Mt @ 0.20% W0<sub>3</sub> and Inferred Resources 73.2Mt @ 0.17% W0<sub>3</sub> (refer Annexure 1)

#### Tungsten - a unique metal

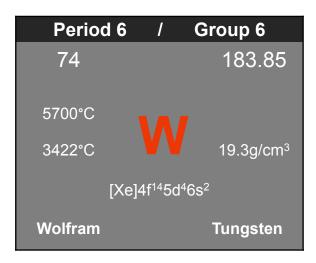


Tungsten a metal of unique characteristics

- Highest melting point
- Highest tensile strength
- Lowest co-efficient of expansion
- High density
- Non-corrosive

Making it a commodity of critical importance in today's global industry





#### Tungsten uses

tungsten mining ML

- Tungsten plays a critical role in industrial engineering and extractive industries reliant on high speed, wear resistant cutting tools and wear plates.
- The main constituent of cemented carbides is tungsten monocarbide (WC), which has hardness close to diamond.
- Cemented carbides account for approximately 60% of global tungsten consumption with a further 24% consumed in the production of steel alloys (high speed steels and tools) and super alloys (aerospace).
- The balance of demand is driven by demand from the electronics and chemical industries.



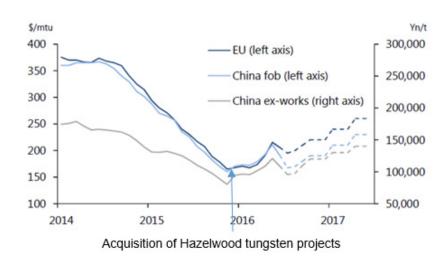
## Tungsten – a strategic element



- Tungsten's unique properties means limited or no substitution from other metals
- Global tungsten (W) production is estimated to be circa 90,000 tpa from both primary (mine production) and secondary (recycled) sources.
- Roskill estimates that China accounts for approximately 80% of global primary production with minimal exports of tungsten concentrates by China. China represents approximately 48% of global tungsten consumption.
- The EU and UK have listed tungsten as a critical raw material. Non-Chinese supply is limited and security of supply is of strategic importance to Western off-takers.

## Market low creates opportunity





Source: Argus, TGN reports

# The basics: A metric tonne unit (MTU) is 10 kilograms. 100 MTU's in a tonne WO<sub>3</sub> = tungsten trioxide W = tungsten



- Ammonium paratungstate (APT) is a key intermediate tungsten product and pricing benchmark quoted in \$US/MTU.
- Concentrates typically traded at ~20% discount to APT price.
- Tungsten Mining has taken the opportunity to acquire quality assets at the bottom of cycle
- Resource depletion and lower grade ore to constrain existing producers.
- Low prices disincentive to new supply.
- Improving outlook through 2017 to provide opportunity for small scale (low cost) production

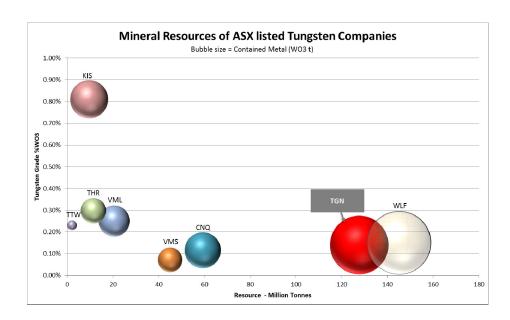
## Delivering scale and leverage



Tungsten Mining has the second largest Mineral Resource inventory of ASX listed tungsten companies providing the platform for the Company to become a globally significant player within the primary tungsten market.

#### Peer Comparison

The graph depicts
Tungsten Mining's relative
Resource size. Wolf
Minerals¹ utilises a 0.063%
WO₃ cut-off grade (COG)
for its Mineral Resource
estimates. For comparative
purposes a 0.05% COG
has been used for TGN.



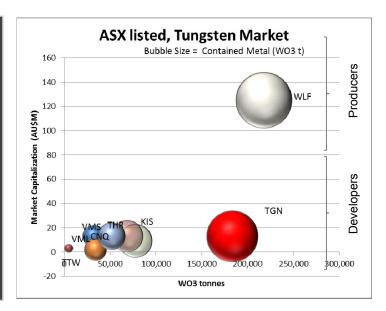
- Refer Annexure 2 for Tungsten Mining's Mineral Resource estimates based on a 0.05% WO<sub>3</sub> cut-off grade
- 2. Refer Wolf Minerals Ltd 2015 Annual Report, p 6. There is some variation in cut-off grades adopted for Annual Mineral Resource and Reserve Statements
- 3. Contained Metal is based on the data disclosed in the published 2015 Annual Mineral Resource and Reserve Statements of peer entities

#### ...and positioned for growth



Mineral Resource Multiple based on Market Capitalisation and
Milleral Resource Multiple based on Market Capitalisation and
Contained WO₃

Company	ASX Code	Cont. WO₃ (t)	Market Cap per Cont. WO₃ (MTU)
Wolf Minerals	WLF	217,800	\$5.74
Tungsten Mining	TGN	183,300	\$0.71
King Island Scheelite	KIS	77,760	\$1.16
Carbine Tungsten	CNQ	68,760	\$1.89
Vital Metals	VML	51,500	\$2.52
Thor Mining	THR	34,237	\$0.58
Venture Minerals	VMS	32,000	\$4.06
TopTung	TTW	4,922	\$6.10



#### Notes:

- 1. Market Capitalisation is as at close of trading 25 July 2016
- 2. Contained Metal is based on the data disclosed in the published 2015 Annual Mineral Resource and Reserve Statements of peer entities
- 3. TGN contained metal is based on Mineral Resource data adopting a 0.05% WO<sub>3</sub> cut-off grade for comparative purposes (refer Annexure 2)

#### Factors for success







- ✓ Large scale deposits supporting robust project economics
- Existing infrastructure driving low capital expenditure
- ✓ Low mining costs from near surface mineralisation and low strip ratios
- ✓ Simple metallurgical recovery and processing route
- ✓ Stable political climate and regulatory environment supportive of mining
- ✓ Competent and experienced management

#### Targeted acquisition & development plan



Dec 2015 – Mt Mulgine and Big Hill acquisition

\$1.2m

low acquisition cost

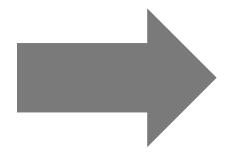
+\$15m

historical spend on projects

historical drilling (incl 40km DDH)

50,000m 83.7Mt<sup>1</sup>

@ 0.17% WO<sub>3</sub> and 197ppm Mo



Advanced project at Mt Mulgine Near term production potential from Mulgine Hill Globally significant project size Potential to utilise existing infrastructure

#### Mt Mulgine Tungsten Project



- Globally significant JORC 2012 Mineral Resource (updated in June 2016)
- Substantial past exploration and feasibility Study work.
- Tungsten and molybdenum rights held by Tungsten Mining
- Minjar Gold Pty Ltd, subsidiary of Shandong Tianye Group of China, holds gold and other mineral rights on Project tenements.
- Proximity to available supporting infrastructure such as power, water, roads and accommodation at adjacent Minjar Gold operations
- Minjar Gold and Tungsten Mining working collaboratively



Mt Mulgine - Bobby McGee pit, mined for gold, with tungsten mineralisation exposed and open



Minjar core farm – trays of diamond drilling core

#### Located in a mining province



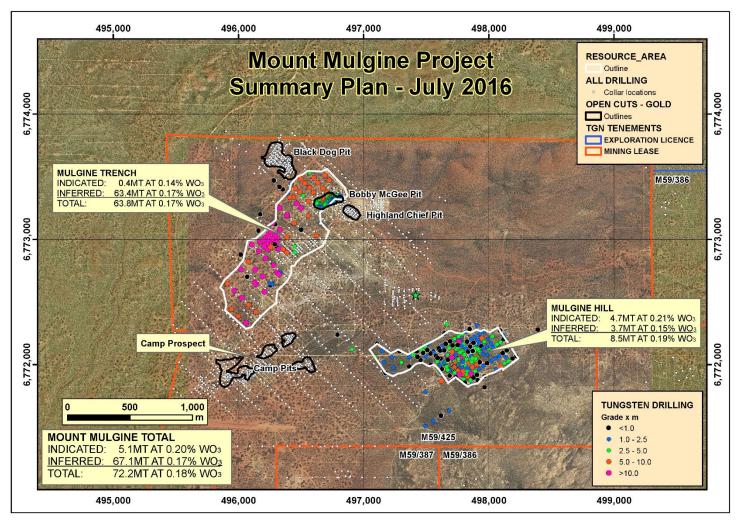


Image from Google Earth showing proximity to existing mines and existing infrastructure – 37km from Mt Mulgine project to Minjar Mill

- Mt Mulgine project located in mining province
- Less than 20 kilometres from Karara iron ore mine
- Existing haul roads link Mt Mulgine tenements and Minjar processing plant and facilities
- Mid-West region infrastructure rich, with extensive rail and road network connecting to Geraldton Port
- Camp accommodation, airstrip, water, power and other facilities servicing existing operations and utilised by Tungsten Mining

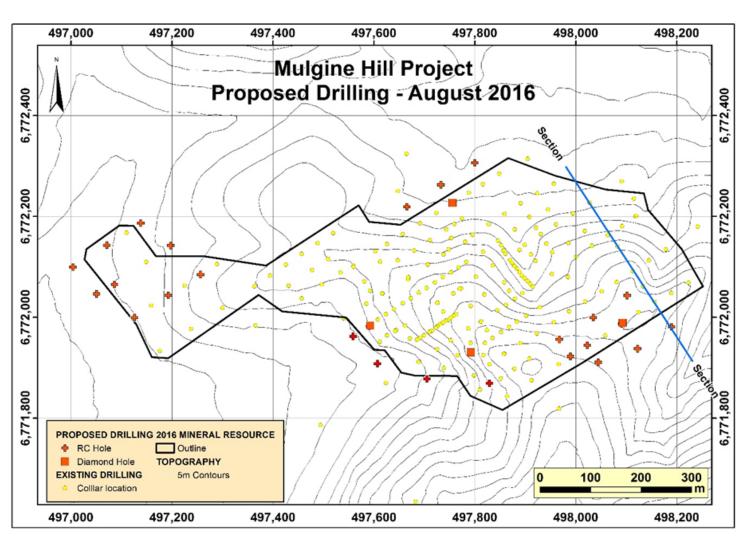
#### Mt Mulgine – Summary Plan





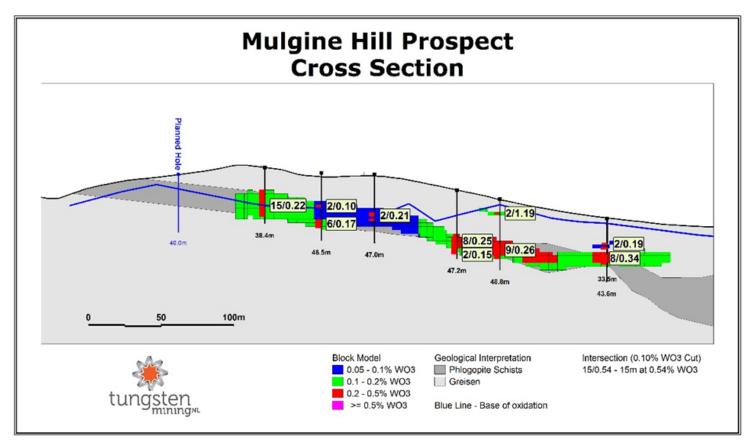
## Mulgine Hill – Summary Plan





#### Mulgine Hill Cross Section





Cross section showing planned RC drilling targeting extensions of existing mineralisation

#### Mt Mulgine Strategic Development Plan



- > Staged development approach targeting production of tungsten concentrate and early cash flow within 2 years
- > Focus on shallow mineralisation at Mulgine Hill, previously mined and stockpiled material and exposed ore in Bobby McGee pit at Trench
- > Historical metallurgical studies indicated conventional metallurgical treatment produces a saleable WO<sub>3</sub> concentrate from Mulgine Hill deposit
- > Drilling and metallurgical test work approved and to commence in Q3 2016.
- > Initial production planned from small scale production leveraging off existing infrastructure operated by Minjar Gold
- CSIRO engaged to help understanding the distribution and mineralogy of tungsten mineralisation in Trench oxide zone and potential methods of extraction and by-product recovery

#### Mt Mulgine Strategic Development Plan



Targeting small scale production facility capable of producing saleable concentrate and by-products by end 2018. In order to achieve this target the Company will undertake the following measured approach:

DRILLING	Phase 1 RC and PQ diamond drilling in progress (August 2016) – targeting shallow mineralisation at Mulgine Hill
METALLURGICAL TESTWORK	Program designed and scheduled to commence in September 2016 – building on previous work
PILOT PLANT	Nagrom and Guangzhou Research Institute of Non-ferrous Metals preferred specialist laboratories
INFRASTRUCTURE	Discussions advancing with regional operators for infrastructure access
ENGINEERING	Specialist equipment vendors including ore sorting technologies being assessed for early contractor involvement (ECI) to enable expedited engineering and equipment supply schedule

- > Engineering work undertaken by previous owners on 330ktpa concentrator
- > Production to leverage off existing infrastructure
- Modular plant where feasible

#### Mt Mulgine Development Timeline



Task	Sep 16	Dec 16	Mar 17	Jun 17	Sep 17	Dec 17	Mar 18	Jun 18
Geology and resource development								
Metallurgy								
Engineering								
Pilot Scale Testwork								
Project management, permitting and approvals								
Marketing and Commercial								
Mining								

#### Summary



Second largest resource inventory on ASX > Globally significant project scale > Significant historical exploration Underutilised infrastructure available Clear low cost pathway to production Strong management team

## Thank you



#### **Primary contact:**

Craig Ferrier
Chief Executive Officer

t: +618 9486 8492

e: craig.ferrier@tungstenmining.com

#### Media & Broker Enquiries:

Andrew Rowell Cannings Purple

t: +61 400 466 226

e: arowell@canningspurple.com.au

## Annexure 1 JORC 2012 Mineral Resources



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

Class	Tonnes	WO₃%	Mo (ppm)	
Mulgine Trench (Oct				
Measured	0	-	-	
Indicated	400,000	0.14	400	
Inferred	63,400,000	0.17	250	
Total	63,800,000	0.17	250	
Mulgine Hill (Jun 201	6) <sup>2</sup>			
Measured	0	_	_	
Indicated	4.700.000	0.21	50	
Inferred	3,700,000	0.15	64	
Total	8,500,000	0.19	56	
Mt Mulgine (Total)				
Measured	0	-	-	
Indicated	5.100.000	0.20	80	
Inferred	67,100,000	0.17	240	
Total	72,200,000	0.18	230	

Class	Tonnes	WO₃%	Mo (ppm)
Big Hill (Jun 2016) <sup>2</sup>			(1-1)
Measured	0	-	_
Indicated	6,200,000	0.16	-
Inferred	5,300,000	0.13	-
Total	11,500,000	0.15	-
Kilba (Jan 2015) <sup>3</sup>			
Measured	0	_	-
Indicated	4,100,000	0.25	-
Inferred	830,000	0.20	-
Total	5,000,000	0.24	-
Total Resource Invent	ory		
Measured	0	-	-
Indicated	15,400,000	0.20	26
Inferred	73,200,000	0.17	220
Total	88,600,000	0.18	186

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.

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

<sup>2.</sup> Refer ASX (TGN) Announcement 23 June 2016, "June 2016 Mineral Resource Update and Core Sampling

<sup>3.</sup> Refer ASX (TGN) Announcement 30 January 2015, "Kilba Mineral Resource Update"

#### Annexure 2 Mineral Resources – 0.05% COG



#### Mineral Resource inventory - reported at a WO₃ cut-off grade of 0.05%

Class	Tonnes	WO₃%	Mo (ppm)
Mulgine Trench (Oct 20	14) <sup>1</sup>		
Measured	0	-	-
Indicated	400,000	0.14	400
Inferred	71,300,000	0.16	250
Total	71,700,000	0.16	250
Mulgine Hill (Jun 2016)	2		
Measured	0	-	-
Indicated	5,100,000	0.20	50
Inferred	5,100,000	0.13	70
Total	10,300,000	0.17	60
Mt Mulgine (Total)			
Measured	0	-	-
Indicated	5,500,000	0.20	80
Inferred	76,400,000	0.16	240
Total	81,900,000	0.16	230

Class	Tonnes	Tonnes WO₃%	
Big Hill (Jun 2016) <sup>3</sup>			
Measured	0	-	-
Indicated	15,800,000	0.11	-
Inferred	22,700,000	0.09	
Total	38,500,000	0.09	-
Kilba (Jan 2015) <sup>4</sup>			
Measured	0	-	-
Indicated	5,700,000	0.20	-
Inferred	1,500,000	0.15	-
Total	7,200,000	0.19	-
Total Resource Inventor	y		
Measured	0	-	-
Indicated	27,100,000	0.15	15
Inferred	100,600,000	0.15	180
Total	127,700,000	0.15	150

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.

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

<sup>2.</sup> Refer ASX (TGN) Announcement 22 June 2016, "Mulgine Hill June 2016 Mineral Resource Update"

<sup>3.</sup> Refer ASX (TGN) Announcement 22 June 2016, "Big Hill June 2016 Mineral Resource Update"

<sup>4.</sup> Refer ASX (TGN) Announcement 30 January 2015, "Kilba Mineral Resource Update"