

**vitalmetals**

**Investor Presentation  
November 2017**

# Disclaimer



## Competent Person's Statement

The information that refers to Mineral Resources in this presentation was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since last reported. The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Mark Strizek, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Strizek is a full time employee of the Company. Mr Strizek 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 Strizek consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears. The information in this presentation that relates to Mineral Resources for the Watershed Deposit is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Tear is a Director of H&S Consultants Pty Ltd and he consents to the inclusion of the estimates in the report of the Mineral Resource in the form and context in which they appear. This Ore Reserves statement has been compiled in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code – 2012 Edition). The Ore Reserves have been compiled by Mr Steve Craig of Orelogy Group Pty Ltd, who is a Fellow of Australasian Institute of Mining and Metallurgy. Mr Craig has had sufficient experience in Ore Reserve estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Craig consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

## Forward looking statements

Certain written statements contained or incorporated by reference in this presentation, including information as to the future financial or operating performance of the Company and its projects, constitute forward-looking statements. All statements, other than statements of historical fact, are forward-looking statements. The words "believe", "expect", "anticipate", "contemplate", "target", "plan", "intend", "continue", "budget", "estimate", "may", "will", "schedule" and similar expressions identify forward-looking statements. Forward-looking statements include, among other things, statements regarding targets, estimates and assumptions in respect of tungsten, gold or other metal production and prices, operating costs and results, capital expenditures, mineral reserves and mineral resources and anticipated grades and recovery rates. Forward-looking statements are necessarily based upon a number of estimates and assumptions related to future business, economic, market, political, social and other conditions that, while considered reasonable by the Company, are inherently subject to significant uncertainties and contingencies. Many known and unknown factors could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements. Such factors include, but are not limited to: competition; mineral prices; ability to meet additional funding requirements; exploration, development and operating risks; uninsurable risks; uncertainties inherent in ore reserve and resource estimates; dependence on third party smelting facilities; factors associated with foreign operations and related regulatory risks; environmental regulation and liability; currency risks; effects of inflation on results of operations; factors relating to title to properties; native title and aboriginal heritage issues; dependence on key personnel; and share price volatility and also include unanticipated and unusual events, many of which are beyond the Company's ability to control or predict. For further information, please see the Company's most recent annual financial statement, a copy of which can be obtained from the Company on request or at the Company's website: [www.vitalmetals.com.au](http://www.vitalmetals.com.au). The Company disclaims any intent or obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and, accordingly, not to put undue reliance on such statements.

## Cautionary Statement

The Definitive Feasibility Study (DFS) referred to in this presentation is based on a Proved and Probable Ore Reserve derived from a Measured and Indicated Mineral Resource, plus a small proportion of mining inventory, which comprises material that is currently classified as Inferred Mineral Resource. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised. The Company advises that the Proved and Probable Ore Reserve provides 93% of the total tonnage and 93% of the total WO<sub>3</sub> metal underpinning the forecast production target and financial projections, and that the additional life of mine plan material comprises less than 7% of the total tonnage and WO<sub>3</sub> metal. Furthermore, in the first five years of production, 95% of the material planned to be processed is based on Proved and Probable Ore Reserves. As such, the dependence of the outcomes of the DFS and the guidance provided in this announcement on the lower confidence Inferred Mineral Resource material contained in the life of mine plan is minimal. The Company confirms that all the material assumptions underpinning the production target, and the forecast financial information derived from the production target continue to apply and have not materially changed.

# Corporate Overview



## Capital Structure (ASX:VML)

Share price (16 Nov 2017)	A\$0.007 per share
Shares on issue	1,320 million
Market capitalisation	A\$9.3 million
Options on Issue	187 million
Cash*	A\$2.7 million
Debt	A\$1.4 million
Enterprise value	A\$8 million

## Directors

David Macoboy: Non Executive Chairman

Mark Strizek: Managing Director

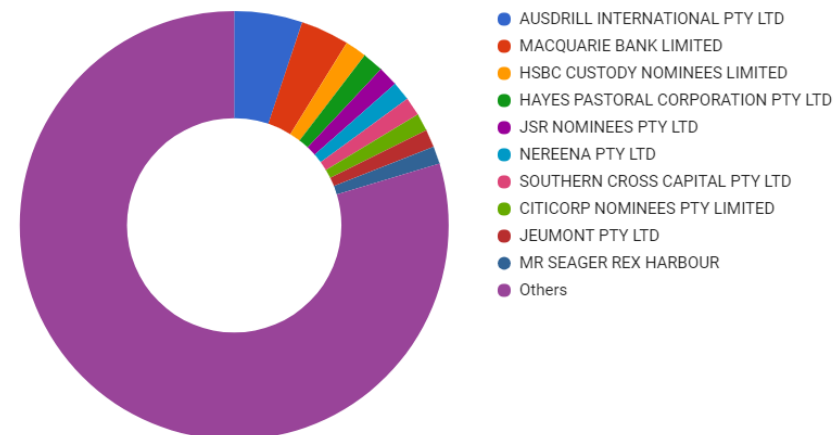
Peter Cordin: Non Executive Director

Andrew Simpson: Non Executive Director

Francis Harper: Non Executive Director

\* 30 Sep 2017

## Top 10 Shareholders



## 1 Year Share Price



# Directors



**David Macoboy**  
**Non-Executive Chairman**

Mr Macoboy holds a Bachelor of Economics and a Bachelor of Commerce from the University of WA. David is a Certified Practicing Accountant. He is a former Chairman of Ammtec Limited, AVZ Minerals Limited and Territory Resources Ltd and has served on numerous other boards. The Directors and Management of the Company believe Mr Macoboy's cross-industry experience, especially in the areas of corporate strategy, finance, treasury, risk management and international fund raising, are skills needed to ensure the company's projects are appropriately funded and promoted.



**Mark Strizek – BSc, MAusIMM**  
**Managing Director**

Mark Strizek is a qualified geologist with over 20 years' experience in the mining industry and is Member of the Australasian Institute of Mining and Metallurgy. Mark's career began in the Yilgarn in Western Australia in gold. He has experience in mining and exploration and has also worked as a resource consulting geologist. Prior to joining Vital he was involved in project development of mineral, coal and petroleum resources in both Australia and Papua New Guinea.



**Andrew V Simpson – Grad. Dip. Bus (Curtin), MAICD**  
**Non-Executive Director**

Mr Simpson holds a Graduate Diploma in Business and Administration (majoring in Marketing and Finance) from Curtin University and is currently the Managing Director and Principal of Resource and Technology Marketing Services Pty Ltd (RTM) in Perth. He formed RTM in 1999 to specialise in strategic and business planning, resource project assessment and marketing. RTM is recognised as one of Australia's leading market research consultants to the international mining industry. Mr Simpson is non-executive Chairman of Swick Mining Services Ltd. He is past Chairman of Territory Resources Ltd and India Resources Ltd. Mr Simpson is a Member of the Australian Institute of Company Directors.



**Peter G Cordin – B.Eng (Civil) (UWA), F.AusIMM, MIEA**  
**Non-Executive Director**

Mr Cordin is a civil engineer with over 35 years experience in the evaluation and operation of resource projects within Australia and overseas. He is the former Non-Executive Chairman of Dragon Mining Limited an Australian listed company with gold mines in Sweden and Finland. He has direct experience in the management of diamond and gold operations and has been involved in the development of resource projects in Kazakhstan and New Caledonia. Mr Cordin is also a non-executive director of Coal of Africa Limited and Aurora Minerals Limited.

**Francis Harper LLB (Hons) BEc**  
**Non-Executive Director**

Mr Harper is a lawyer and has been a director of Blackwood Capital since 2002 and prior to that spent 15 years with NM Rothschild in the US, UK and Australia in M&A and resources finance. Blackwood Capital has raised over \$1 billion for small caps since inception. Mr Harper (through Blackwood) financed West African Resources (WAF) and was chairman from 2009 to 2015.

[www.vitalmetals.com.au](http://www.vitalmetals.com.au)



# Diversified Developer and Explorer

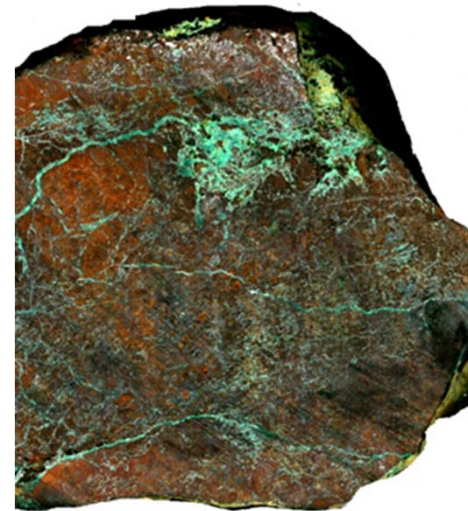


**Queensland**  
**Near Term**  
**Development**  
**Tungsten**

**West Africa**  
**Exploration**  
**Gold, Zinc**

**Queensland**  
**Exploration**  
**Gold, Copper**

**Germany**  
**Exploration**  
**Tungsten, Tin, Cobalt**



# Tungsten is a Vital Metal



- Tungsten's very high density and high temperature properties make it unique and vital for a wide range of applications
- End uses:
  - Cemented carbides (hard metals)
  - Alloy steels
  - Fabricated tungsten products
  - High performance alloys/super alloys
  - Heavy tungsten alloys
  - Tungsten chemicals
- Tungsten is critical for a range of industries and sectors:
  - Industrial engineering
  - Automotive
  - Mining and road Construction
  - Energy, oil & gas
  - Defence
  - Aviation and space
  - Health



# Watershed – Development Ready



## Project Summary

### Location

- Vital Metals acquired the Watershed Project in 2005
- Watershed is located in far north Queensland, ~115km north-west of Cairns

### Proximity to Infrastructure

- The Project is close to the Mulligan Highway connecting it to the ports of Cairns and Townsville
- A 132kv power line runs parallel to the Highway, giving the project access to cheap grid power

### Mineral Resources and Ore Reserves

- Mineral Resource of ~49Mt @ 0.14% WO<sub>3</sub> for 70,400t WO<sub>3</sub>
- Ore Reserve of ~21Mt @ 0.15% WO<sub>3</sub> for 31,400t WO<sub>3</sub>

### Excellent Exploration Opportunity

- Significant exploration potential to add additional life to the proposed mine development – deposit is open at depth and along strike

## Key Value Drivers

### Positive DFS

- DFS (2014) has confirmed a 2.5Mtpa operation will deliver high-quality tungsten concentrate over an initial mine life of ~10 years

### Fully permitted

- All Mining Leases, Environmental Authority and Indigenous Land Use Agreements in place

### Straight forward mining and simple mineralogy

- Simple open cut mining operation using excavators & trucks, no pre-strip. Scheelite in a molybdenum-free variety is the only important tungsten mineral occurring at Watershed, producing a high-grade tungsten concentrate with low contaminants

### Market Factors

- Market forces expected to lead to a structural supply deficit in tungsten
- Falling input costs mean this is a great time to back & build a mining project in Australia
- Market conditions conducive for up to 20% operating cost reduction over DFS baseline
- Continuous DFS review has identified savings in pre-prod CAPEX (targeting ~US\$870M)

## Mineral Resources and Ore Reserves

Mineral Resources	Tonnage Mt	WO <sub>3</sub> %
Measured	9.5	0.16
Indicated	28.4	0.14
Inferred	11.5	0.15
<b>Total</b>	<b>49.3</b>	<b>0.14</b>

Mineral Resources	Tonnage Mt	WO <sub>3</sub> %
Proved	6.4	0.16
Probable	15	0.14
<b>Total</b>	<b>21.3</b>	<b>0.15</b>

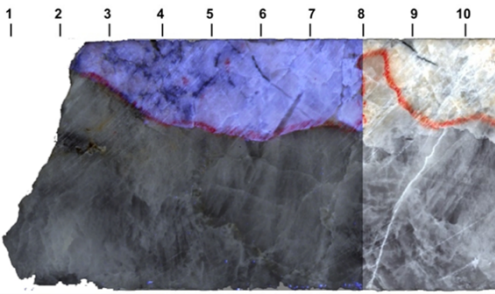
Exploration Potential	Tonnage Range Mt	Grade Range WO <sub>3</sub> %
<b>Exclusive of current Mineral Resource<sup>1</sup></b>	<b>49 - 80</b>	<b>0.10 – 0.19</b>



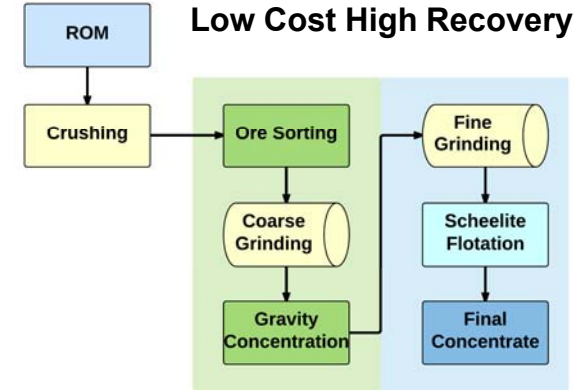
1. These Exploration Targets are conceptual in nature, and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource



# Watershed – Development Ready

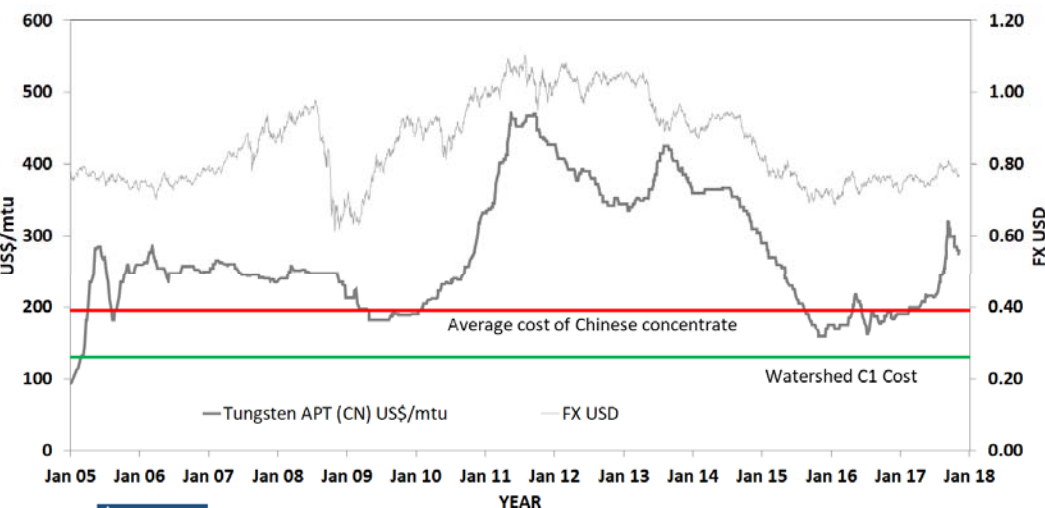


High grade scheelite in veins



High grade (>65% WO<sub>3</sub>)  
High quality  
High purity  
Scheelite concentrate

- No Molybdenum (Mo) - BDL
- No Radioactivity
- No Arsenic



Source: METAL-PAGES

### Estimated Pre-Prod Capex<sup>^</sup>

	A\$2.5M	US\$2M
Mining	A\$2.5M	US\$2M
Processing Plant	A\$70M	US\$56M
Site Infrastructure	A\$25M	US\$20M
Working Capital	A\$2.9M	US\$2.3M
Total	A\$100M	US\$80M

### Project Returns<sup>#</sup>

	Pre Tax	Post Tax
NPV @ 5%	\$225M	\$150M
IRR	40%	32%
Payback Years		2
Free Cashflow A\$	\$330M	\$230M
LoM Cash Costs A\$/ mtu	164	-
LoM Total Cost A\$/ mtu	204	-
LoM Cash Costs US\$/ mtu	130	-
LoM Total Cost US\$/ mtu	161	-

Activity	Watershed Provisional Timetable							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Design	█	█						
Earthworks		█	█	█				
Construction		█	█	█	█			
Commissioning					█	█		
Commercial production						█	█	█
Offtake							█	█

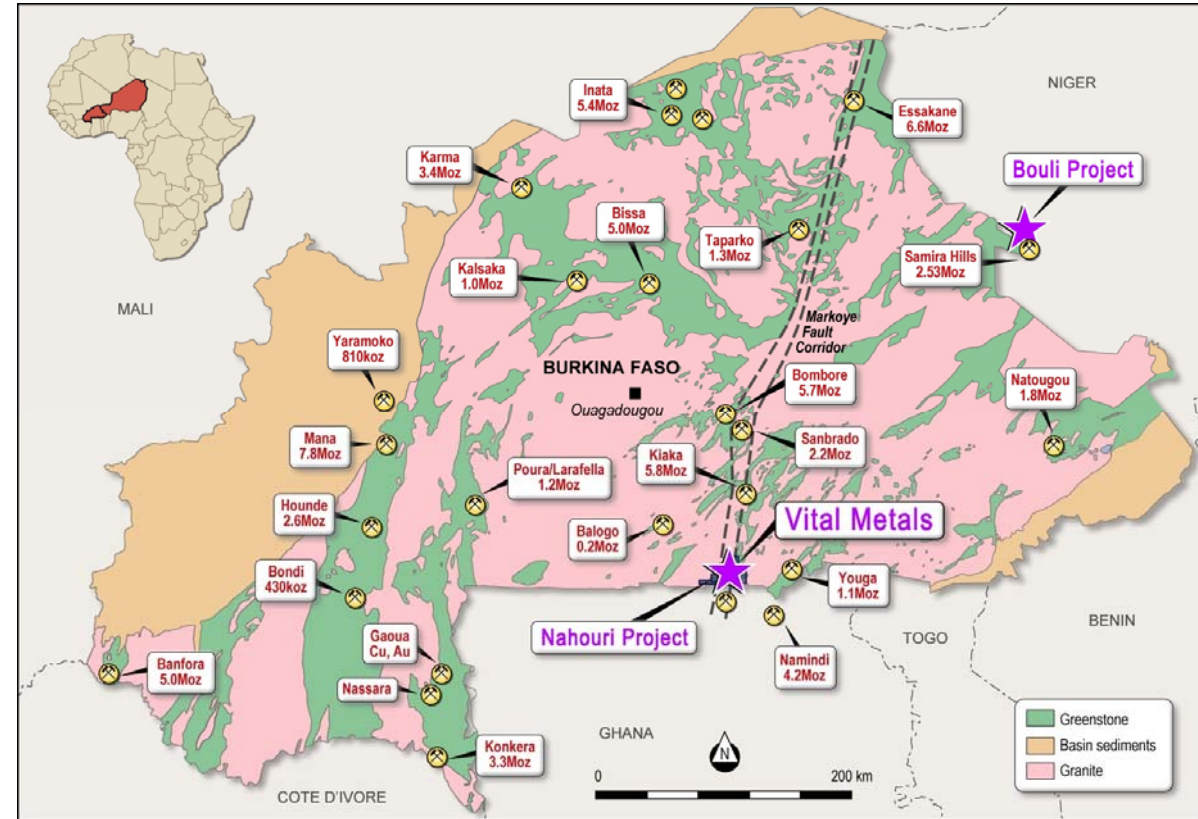
<sup>^</sup> Capex target of ~US\$80M and 100% equity case # Using APT US\$287/mtu, FX of 0.80 and 100% equity case  
Updated DFS figures reported in ASX release 22 January 2015, 29 June 2015, 5 September 2017. See accompanying Forward Looking and Cautionary Statements



# Niger – Bouli Project



- Exploration Agreement signed to earn interest in a portfolio of three highly prospective gold permits located in Niger, West Africa\*
- Bouli is located 20km to North of the 2.5Moz Samira Hill project
- High-grade gold intercepts returned from limited diamond drilling in 2016:
  - 17.9m @ 7.92 g/t Au from 57.2m
  - 1.6m @ 16.58 g/t Au from 63.7m
  - 7.1m @ 2.73 g/t Au from 16m
  - 5.8m @ 2.60 g/t Au from 45.8m

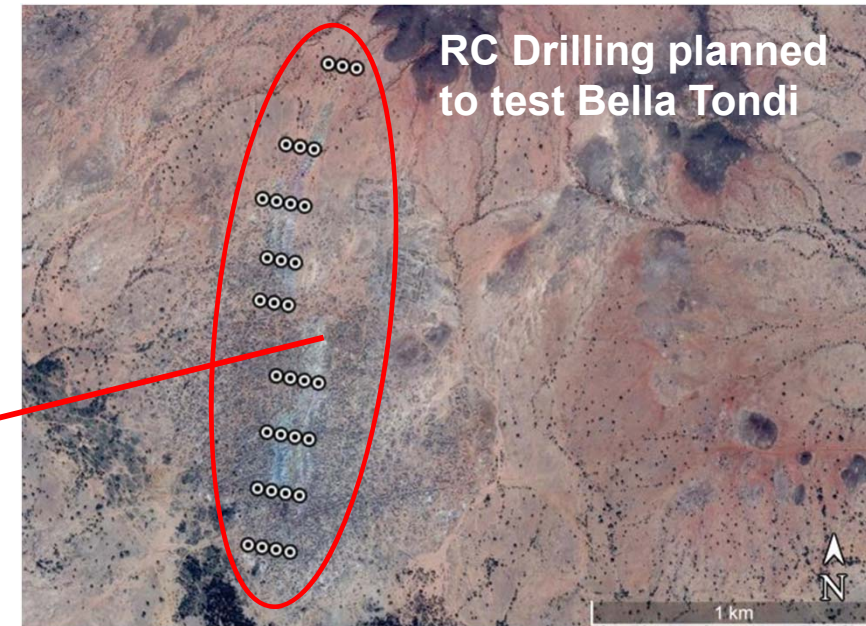
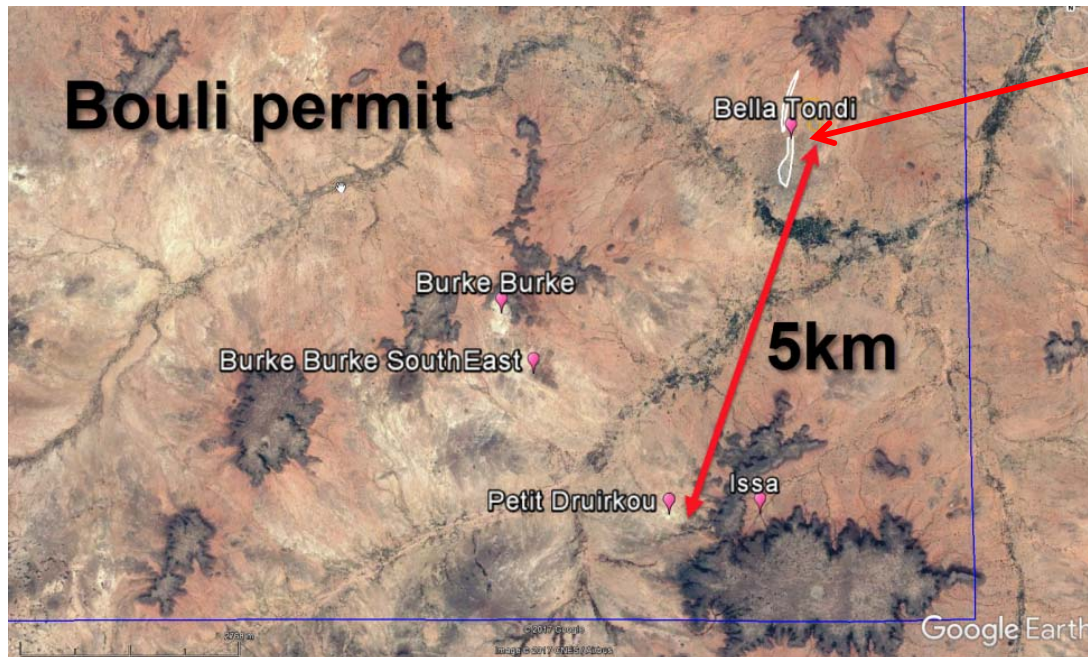


\* Reported previously 18/10/2017. This information was prepared and first disclosed under the JORC Code 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcements.

# Niger – Bouli Project



- Bella Tondi - 20,000 artisanal miners have been working a strike length of over 1.5km has never been drill tested
- 3,000m RC drilling program to test 1.5km structure at Bella Tondi

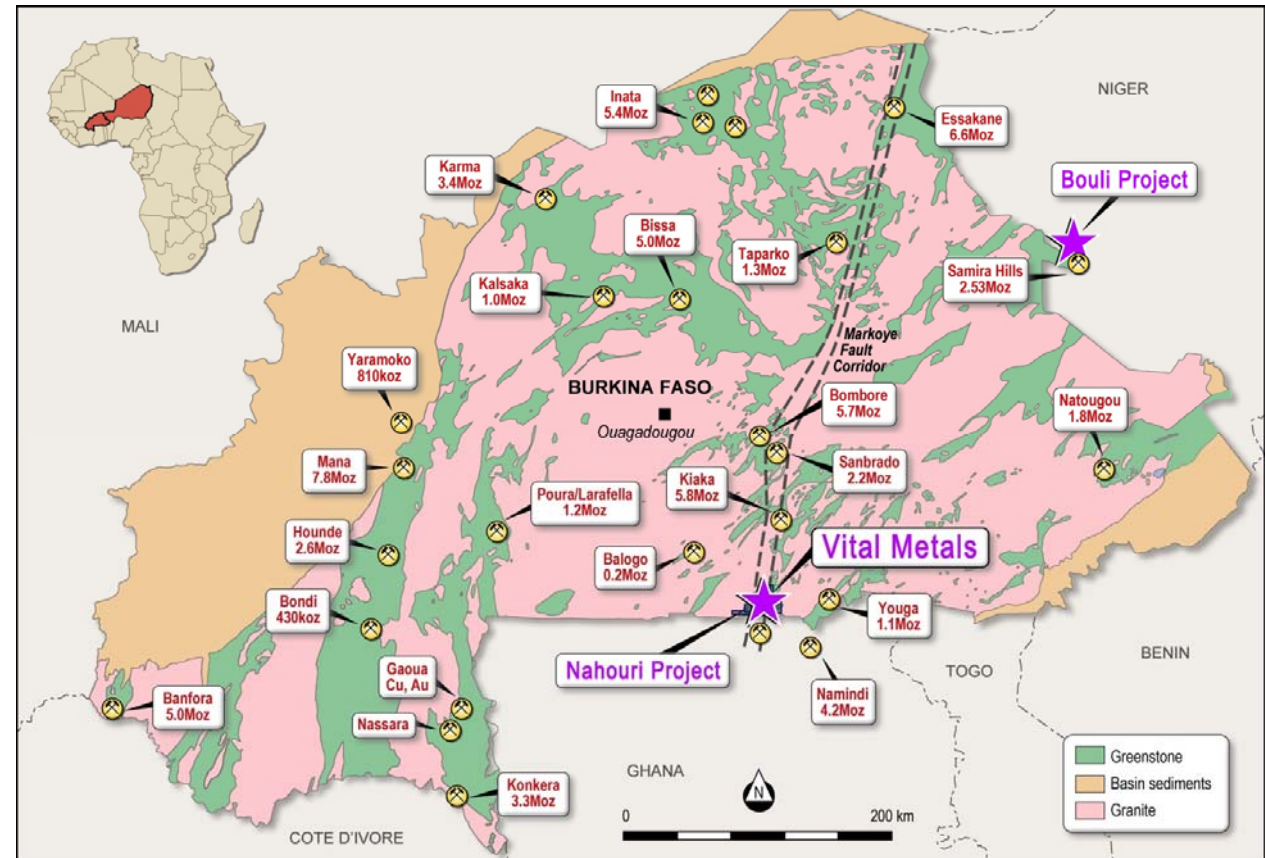




# Burkina Faso - Growing Gold Producer



- 4<sup>th</sup> largest gold producer in Africa
- 8 gold mines commissioned since 2007 with most recent being:
  - Karma (Endeavour Mining TSX:EDV)  
AISC of US\$750/oz
  - Yaramoko (Roxgold Inc TSX.V:ROG)  
AISC of US\$760/oz
- Exceptional geological potential - still underexplored
- Mining friendly Government

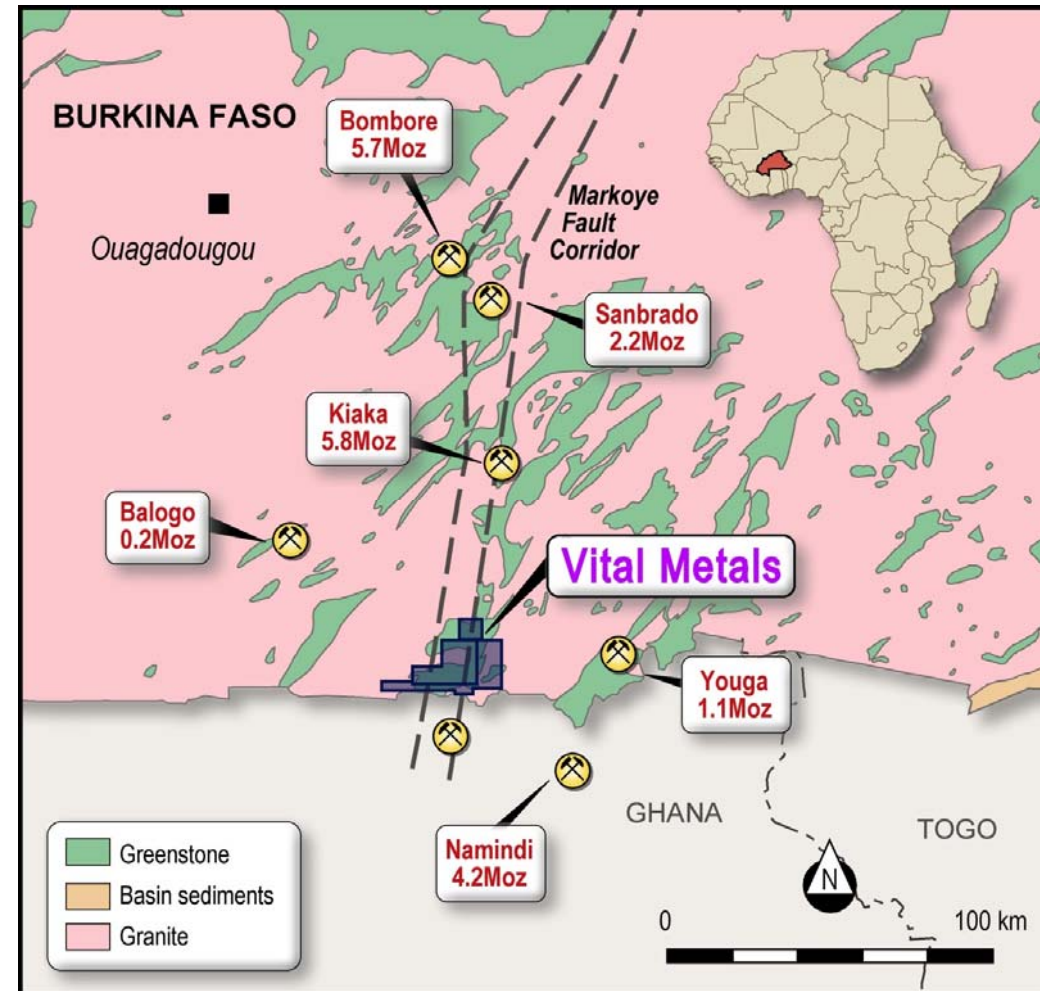




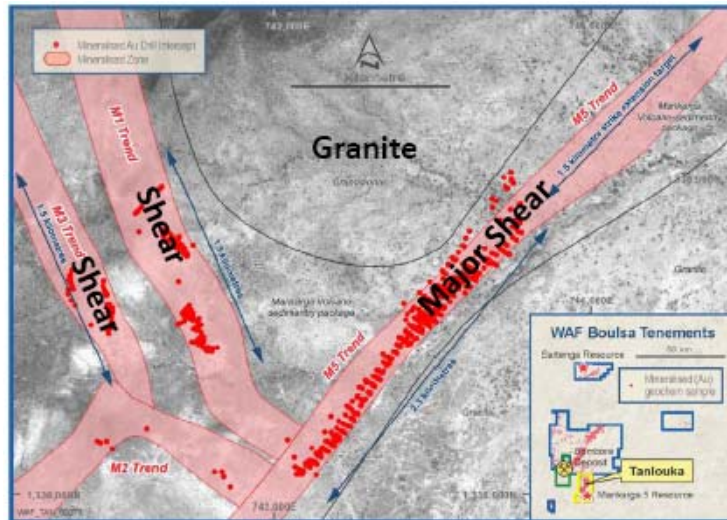
# Located in a Multi Million Ounce Belt



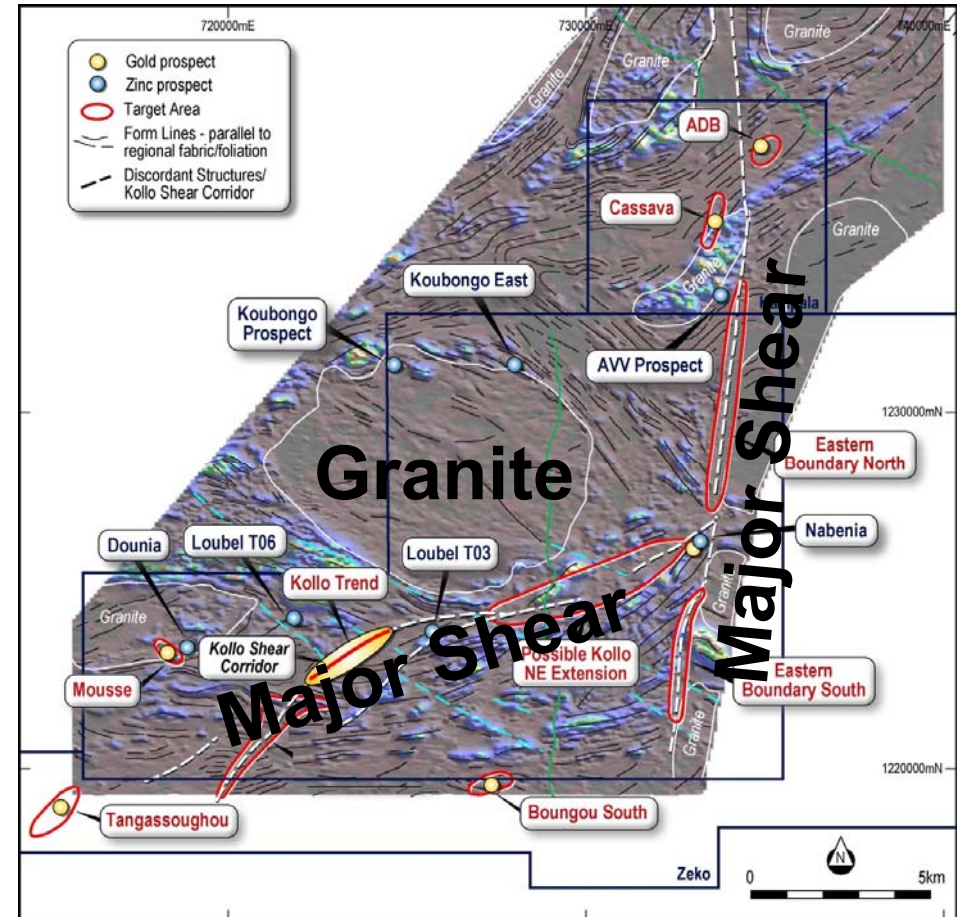
- Nahouri project located in a premier gold corridor – the fertile Markoye Fault Corridor
- Markoye is delivering company making gold grades for those that drill
- Three 100% owned exploration permits of Birimian Greenstone
- Along strike from a number of +1Moz deposits
- Potential mineral endowment remains largely untested



# Nahouri - Similar Structural Setting to Sanbrado



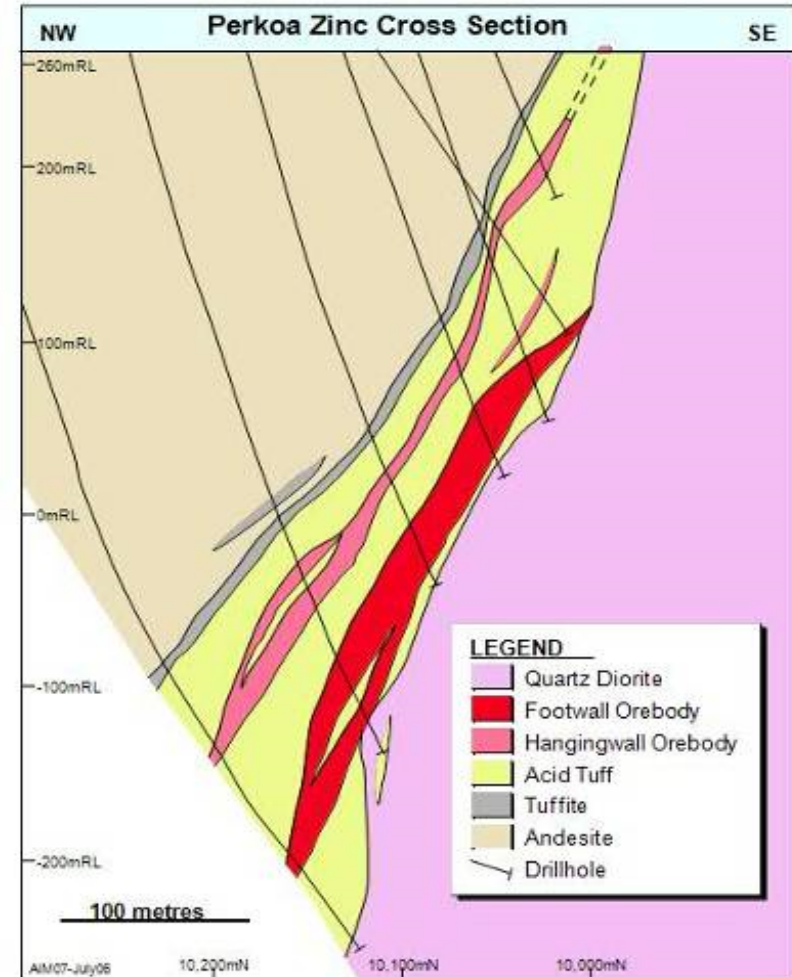
- Strong parallels with WAF's +2Moz Sanbrado
  1. Major regional structure that wraps a granite
  2. Intersection/interplay between structures
  3. Sub-vertical mineralisation
  4. Local very high grades



# Nahouri – Zinc Exploration



- Historical exploration work has defined multiple Zn-Pb-Cu anomalies over 30 km of lightly explored contact around the Tiebele dome
- Previous drill holes only tested depleted oxide zone or shallow mineralisation
- Targeting Perkoa style VMS occurrences
- Perkoa mine\* recently purchased by Trevali Mining Corporation from Glencore:
  - Mineral Resource 4.26Mt @ 15% Zn\*
  - High recovery 93%
- Massive and disseminated / stringer mineralisation
- Sericite-chlorite-talc-carbonate alteration

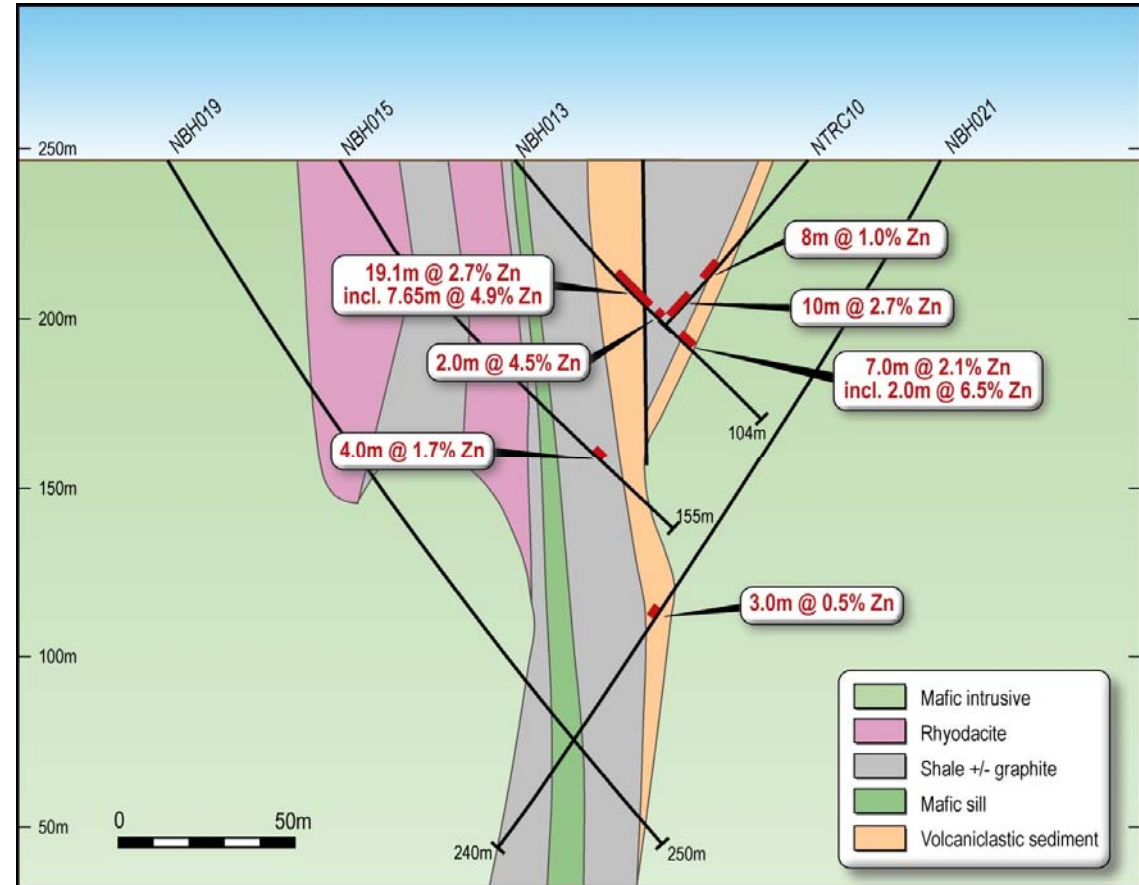




# Nabenia Zinc Prospect



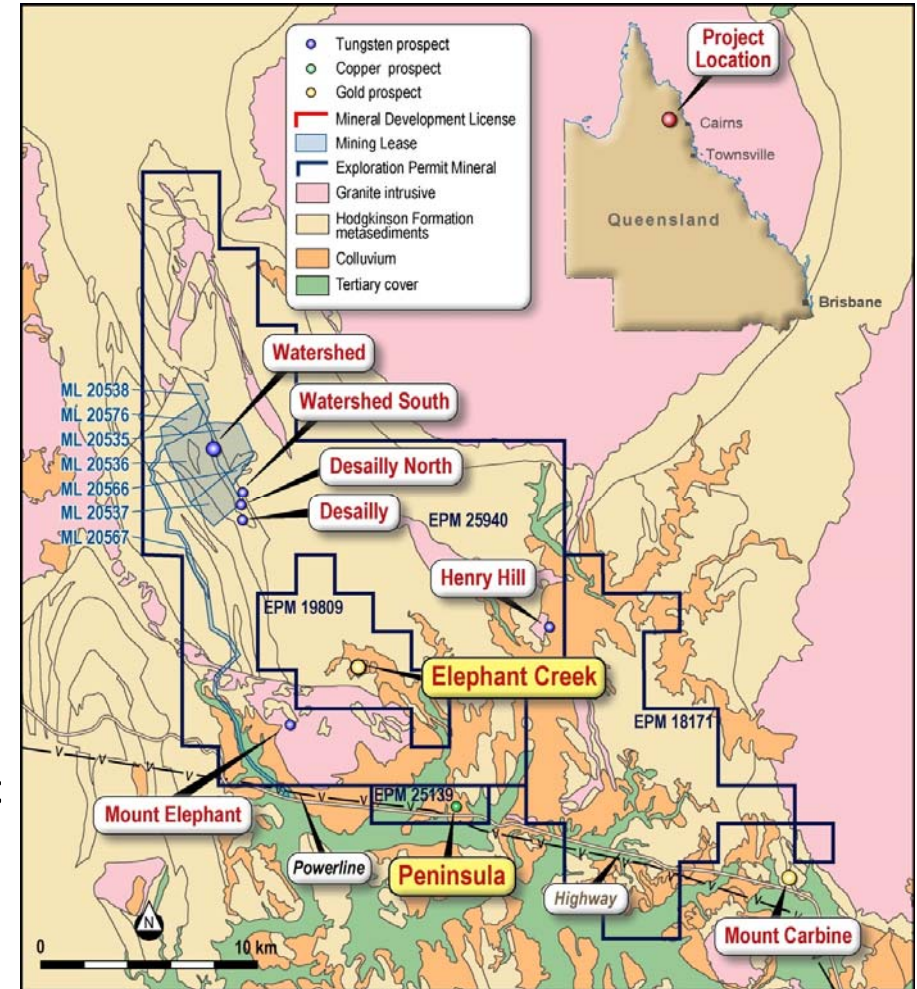
- Highly prospective for VMS style mineral deposit - 150 x 800m multi-element soil geochemical anomaly
- Historic ore grade drill intercepts of:
  - 14.2m @ 3.1% Zn from 44m
  - 6m @ 2.6% Zn from 30m
  - 10m @ 2.7% Zn from 59m including 2m @ 8.3% Zn
- Mineralisation style is massive and disseminated / stringer associated with sericite-chlorite-talc-carbonate alteration



# Queensland: Gold and Copper Exploration



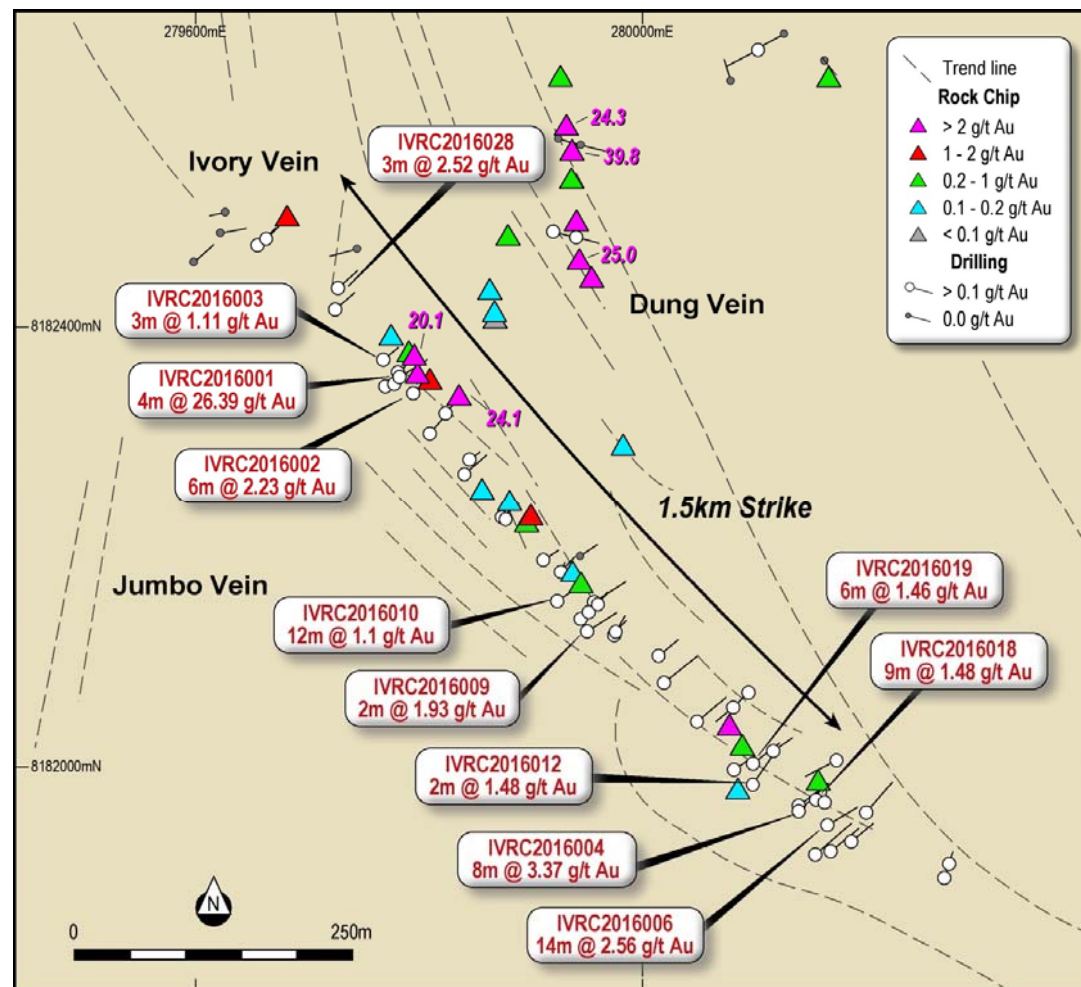
- Elephant Creek (gold) and Peninsula (copper) located in Far North Queensland
- 2016 exploration at Elephant Creek identified outstanding epithermal gold potential with numerous targets
- Copper mineralisation observed at Peninsula is malachite and azurite within a gossanous sediment located on an aeromagnetic high
- Peninsula is thought to be analagous to the historic Diane Copper mine situated near Cannibal creek, where 90,000t at 25% Cu was direct shipped to Japan in the 1980's



# Elephant Creek: Emerging Gold system



- 2016 RC drilling on Ivory:
  - 4m @ 26.39 g/t Au from 17m
  - 6m @ 2.23 g/t Au from 18m
  - 8m @ 3.37 g/t Au from 42m
  - 14m @ 2.56 g/t Au from 28m
  - 9m @ 1.48 g/t Au from 5m
  - 6m @ 1.46 g/t Au from 51m
  - 3m @ 2.52 g/t Au from 9m
- Further drilling required to test high priority targets



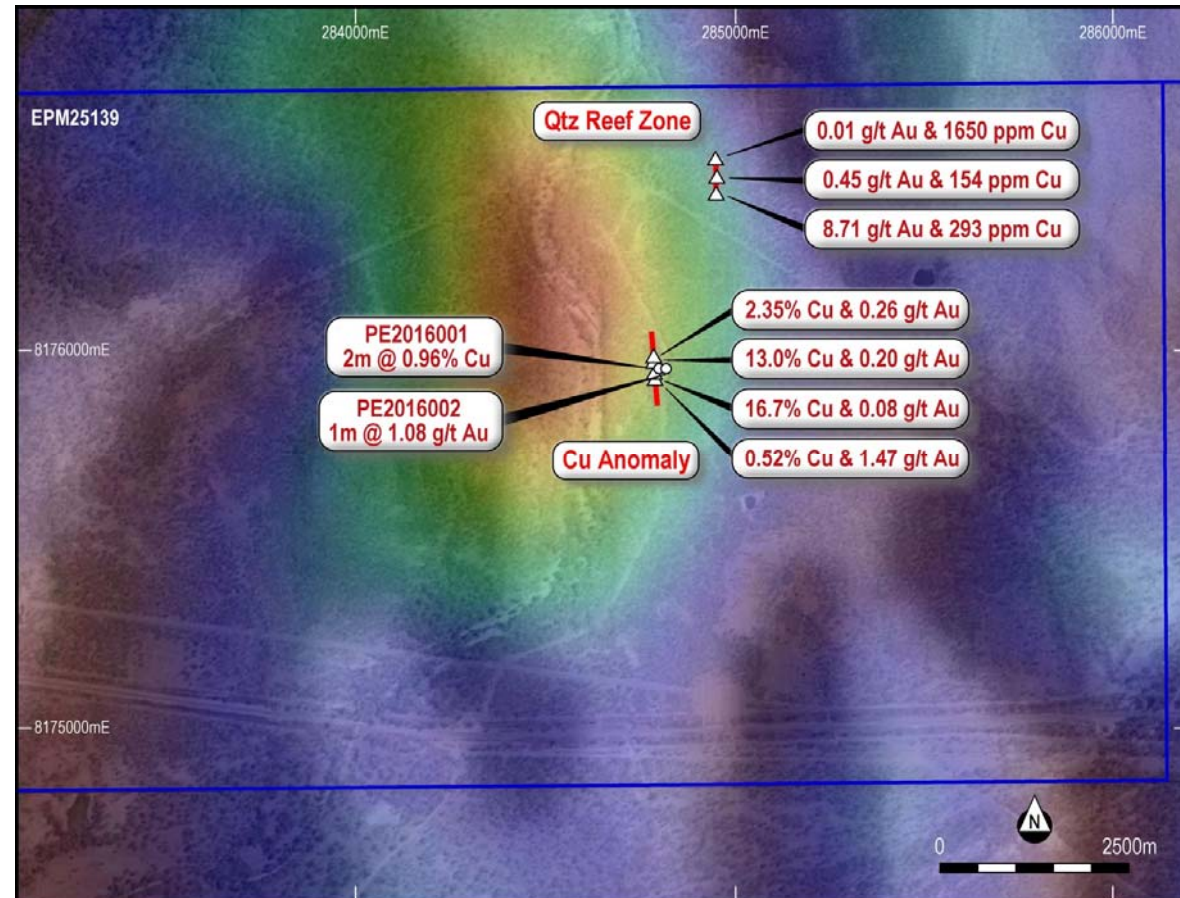
Results reported 29/12/2016 and 3/11/2016. This information was prepared and first disclosed under the JORC Code 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcements.



# Peninsula: Copper Potential

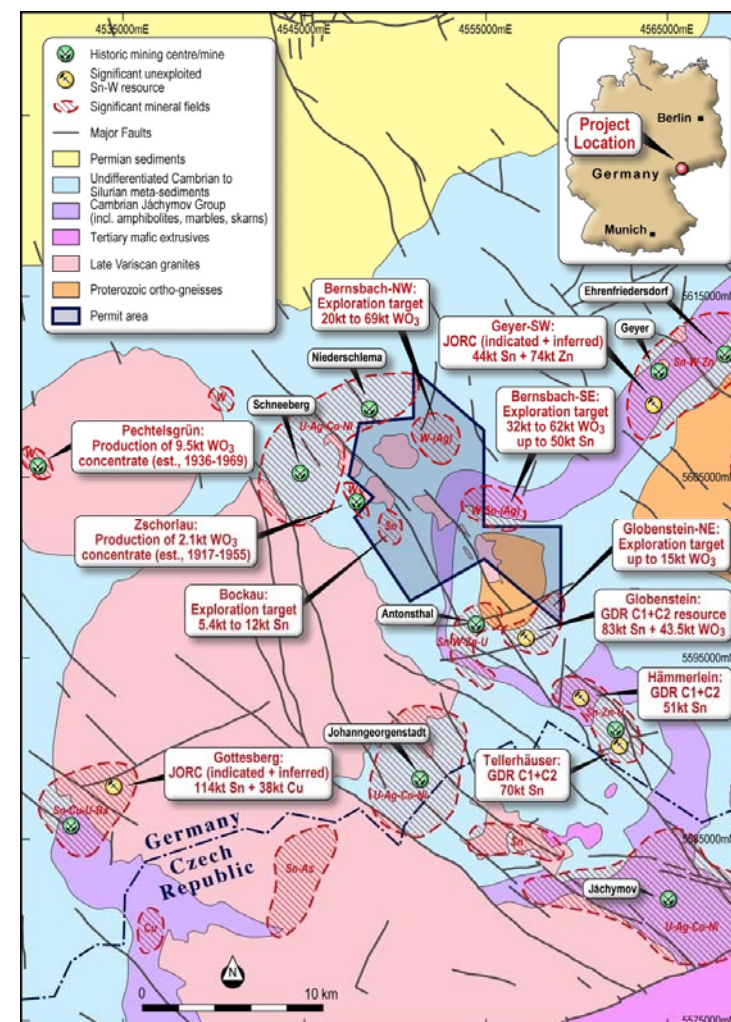


- ~150m of copper-gold rich gossan on surface c.10km south of Elephant Creek
- May represent sulphide mineralisation at depth
- Coincident with a *magnetic/gravity* anomaly
- First pass reconnaissance drilling intercepted anomalous copper and gold
- More work needed....



# Germany – Tungsten, Tin and Cobalt

- Aue Exploration Permit is prospective for tungsten, tin, cobalt, silver and uranium mineralisation
- Located in the western Erzgebirge region, the heart of one of Europe's most famous mining regions, a world-class mineral field
- Large tungsten potential with extensive drilling undertaken in the 1970s by a former Soviet-German mining company (Wismut) - underground channel sampling of quartz veins returned grades of over 20%  $WO_3$
- Region is known to host cobalt mineralisation which was mined at Schneeberg, located immediately northwest of the Aue permit
- Schneeberg produced 12,000 tonnes of Co+Ni from mainly hand-picked ore from the 16<sup>th</sup> Century to the cease of production in about 1937 from Biconi veins which host cobalt and nickel arsenides (skutterudite, rammelsbergite) and native bismuth
- It is thought that small-scale mining on sulphide lenses of the type mined at Schneeberg also occurred on the Aue permit during this period



# In Summary...



- Watershed Tungsten Project in Queensland is a near term development opportunity
- Currently working to update – resource, metallurgy, project capex, arranging offtake and project finance
- 3,000m RC drilling program to test the 1.5km Bella Tondi prospect in Niger
- Substantial exploration upside:
  - Resource extension opportunity within Watershed Tungsten Project
  - Gold exploration in West Africa – Niger and Burkina Faso
  - Gold and copper prospects in Queensland
  - Tungsten, tin and cobalt prospects in Germany
- Strong re-rating potential from an enterprise value of ~A\$8 million compared to peers