



**SANDFIRE RESOURCES NL**

A QUALITY COPPER-GOLD COMPANY ASX Code- SFR



Exploration

Development

Expansion

Production



**Australasia Conference 2018**

Monday, 12 - Tuesday, 13 November 2018

**A quality Australian copper-gold miner**

with consistent low-cost production, strong margins and global growth pipeline

13 November 2018 – Karl Simich, Managing Director and CEO

# Important Information and Disclaimer



## Forward-Looking Statements

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Currency in AUD unless otherwise stated.

# Sandfire – Investment Overview



Consistent mid-tier performer

- **+6 years of consistent, safe operations**
- **+420kt Cu and +240koz Au produced to date**
- **\$3.2 billion in revenue to end-FY18**

Consistent, low-cost production base

- **FY2018 production: 64,918t Cu, 39,273oz Au – record low C1 US\$0.93/lb**
- **Group cash: \$218M at 30 September 2018; no debt**
- **FY2019 guidance: 63-67kt Cu, 37-40koz Au; C1 US\$1.00-1.05/lb**

Strong organic growth pipeline

- **New Monty UG mine on stream Q2 FY2019; consolidated 100% ownership**
- **86% owned Black Butte Copper Project, USA – EIS nearing completion**
- **Major exploration push continuing at Doolgunna (A\$20M annual budget)**

Vision to become a diversified base metal miner

- **Rising high-grade production profile from FY2020**
- **Expanding international growth pipeline – USA, Australia**
- **Recent strategic investments in Alaska and Bosnia-Herzegovina**
- **Strong in-house team targeting global business development opportunities**



# Key Corporate, Financial and Shareholding Data

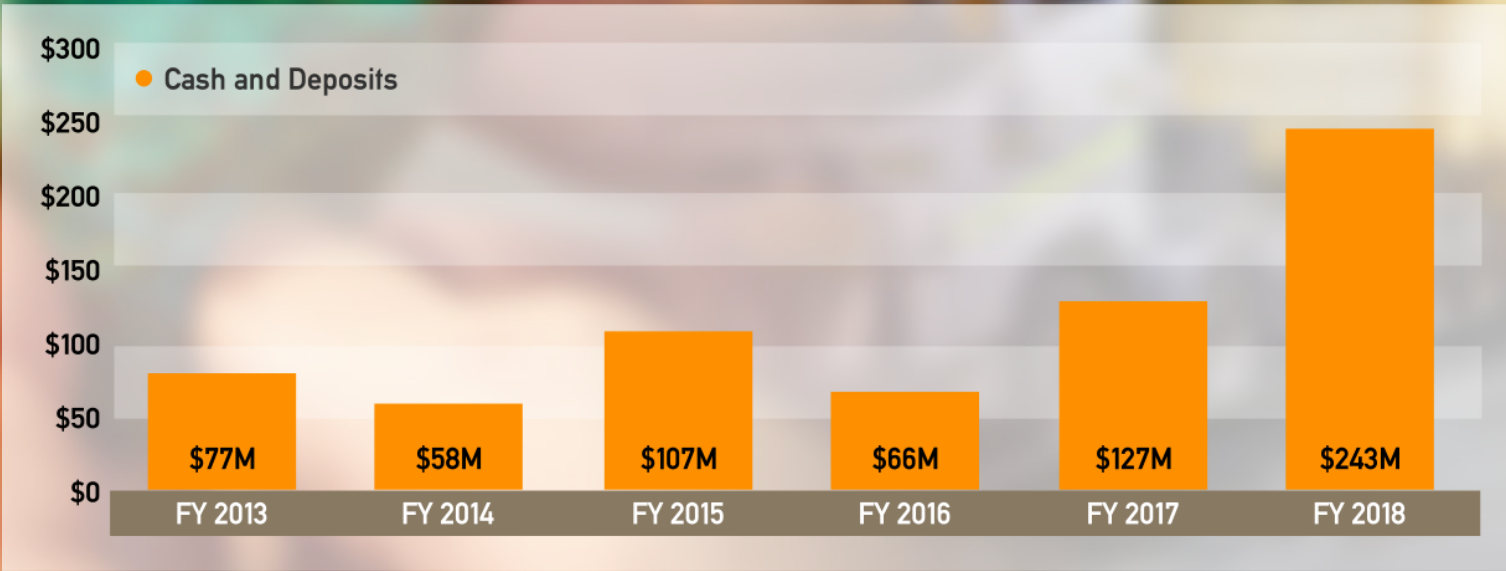


## Key Corporate Data

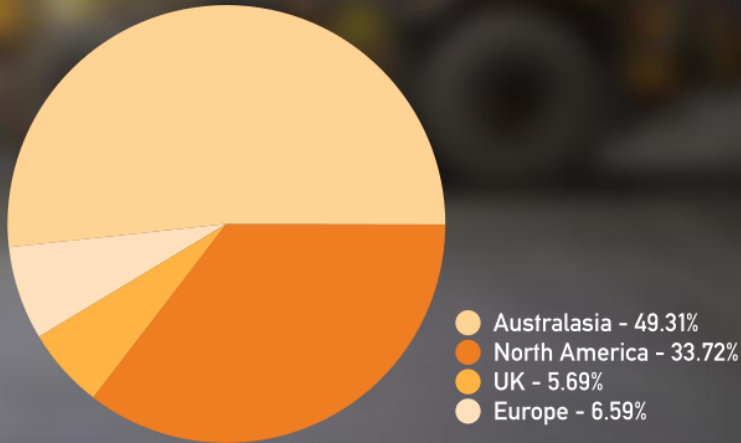
Issued Capital	Market Capitalisation	Cash	Debt
159.6 MILLION	~\$1.18 BILLION	\$218 MILLION	NIL
Shares	at \$7.40	At 30 September 2018	Repaid FY2017



## Growing Cash Balance



## Geographic Analysis of Investors



# Record Revenue, Cash-Flow and Dividends in FY2018



FINANCIAL OVERVIEW:	FY 2013	FY 2014	FY 2015	FY2016	FY2017	FY2018
Revenue	\$492.8M	\$529.6M	\$532.0M	\$485.8M	\$532.5M	\$606.7M
Operating Cash-flow*	\$272.4M	\$249.5M	\$250.1M	\$166.5M	\$248.3M	\$284.6M
NPAT**	\$88.0M	\$78.2M	\$69.0M	\$48.0M	\$77.5M	\$123.0M
Earnings per Share (basic)	57.48c	50.22c	44.18c	30.54c	49.16c	77.85c
Cash + Deposits	\$77M	\$58M	\$107M	\$66M	\$127M	\$243.3M
Debt	\$285M	\$160M	\$120M	\$50M	NIL	NIL
Dividends	N/A	10c unfranked	13c 10c franked	11c 11c franked	18c 18c franked	27c 27c franked

\*Prior to exploration expenditure  
\*\*attributable to members

## Cumulative financial performance

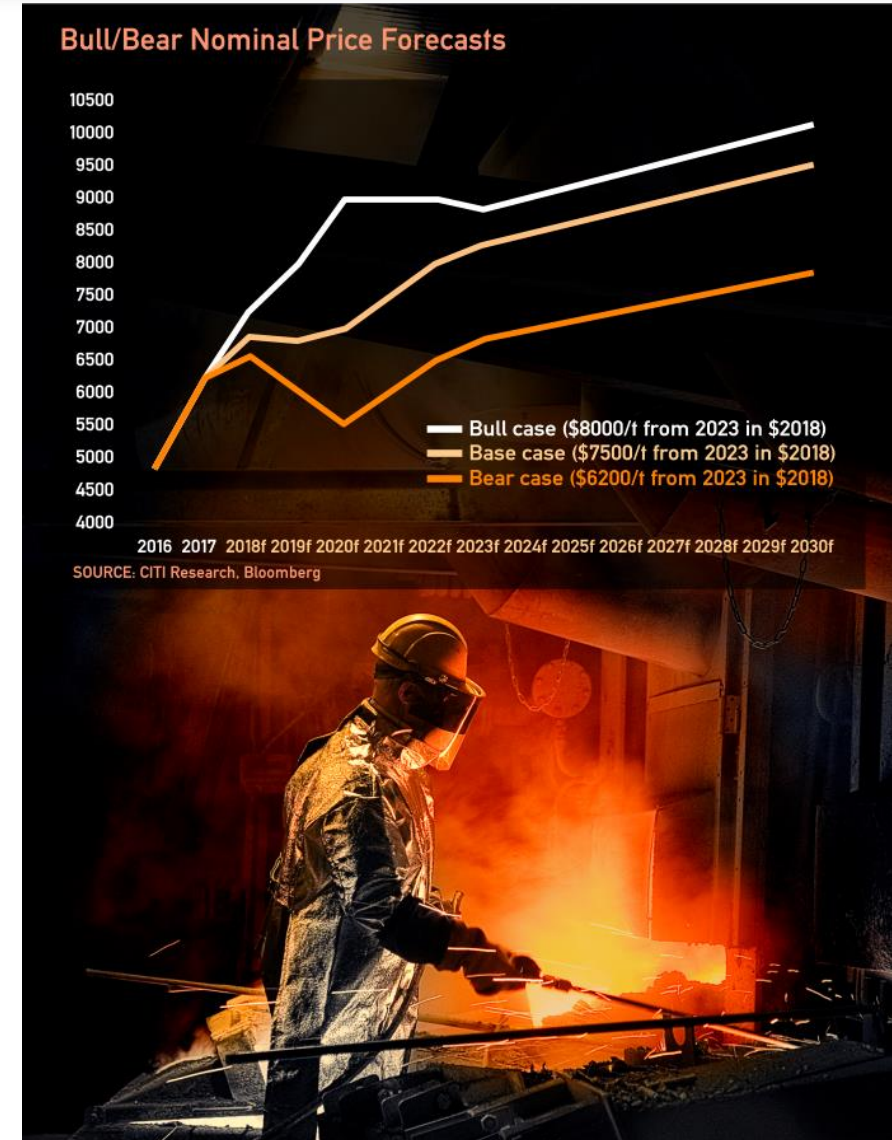
Sales Revenue
<b>\$3.2</b>
BILLION
Operating Cash Flow
<b>\$1.5</b>
BILLION
Profits
<b>\$483.7</b>
MILLION
Dividends
<b>79</b>
CENTS

# Copper – Despite the Recent Pullback....It's Not All Over



- ▶ ~15% retracement in copper price in Q1FY2019 to US\$5,800-6,000/t due to escalating trade frictions and “risk-off” investment climate
- ▶ Some forecasters like S&P have revised their price forecasts down for 2018 to US\$6,000/t
- ▶ However, the current copper price is not sufficient to incentivise new supply to meet demand over the coming decade
- ▶ Citi estimates that prices need to rise to ~US\$7,500/t given longer term market fundamentals, which remain strong

LME COPPER HISTORICAL PRICE GRAPH



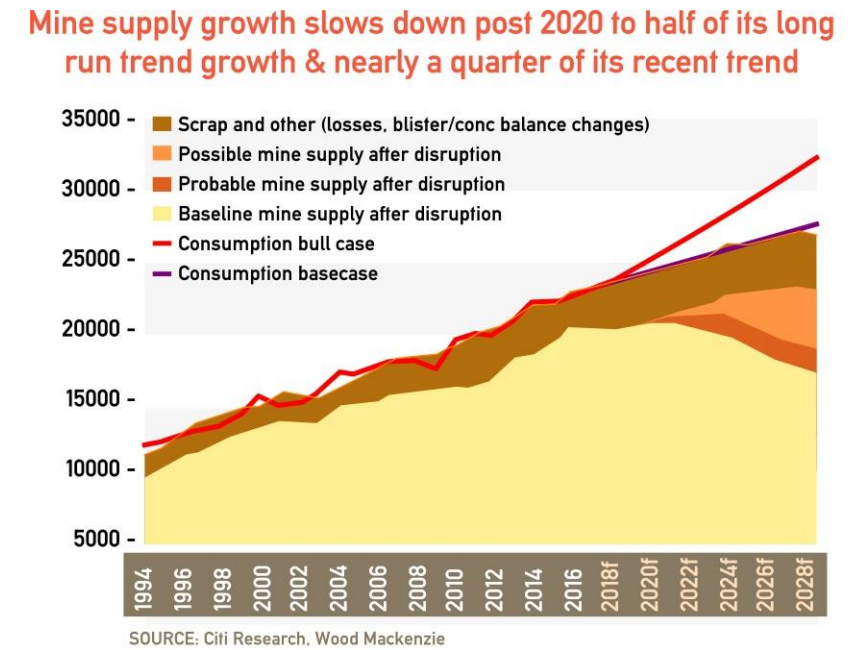
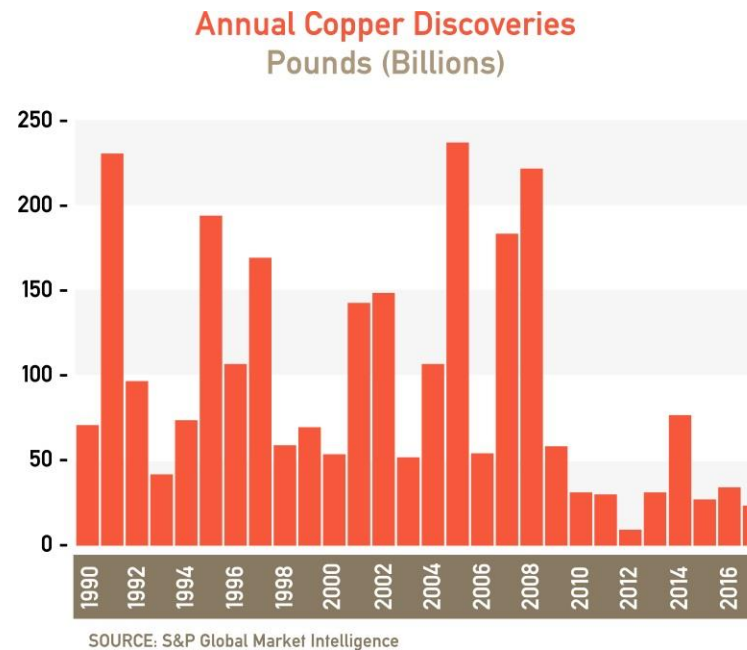
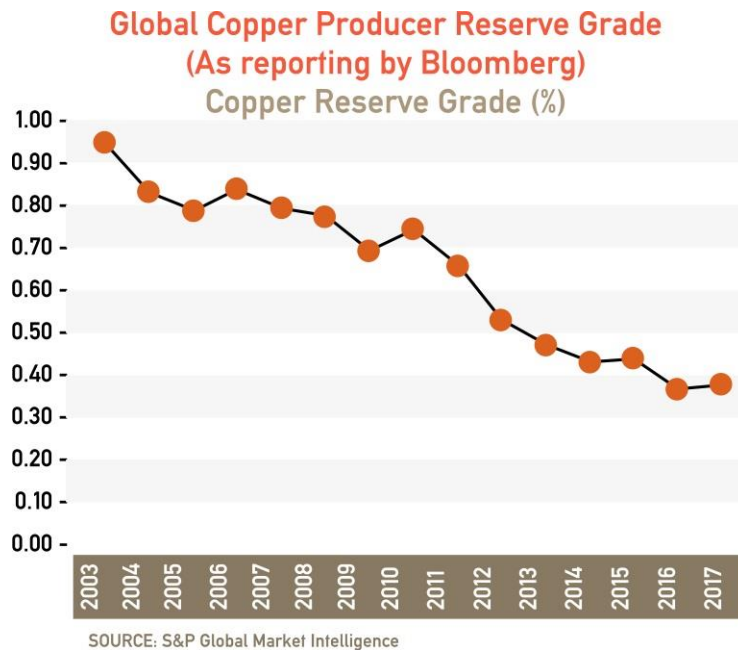
Source: Citi, July 2018 Copper Book



# Copper – Declining Grades, Falling Production....



- ▶ Continued decline in global copper mine reserve grade and steady decline in number of new discoveries
- ▶ Supply not able to meet demand over the long run at current prices
- ▶ Mine supply growth is forecast to slow down after 2020
- ▶ Citi estimates only a small fraction of ~35% of potential projects will/can come online over the next decade
- ▶ New supply is heavily dependent on the DRC and Zambia



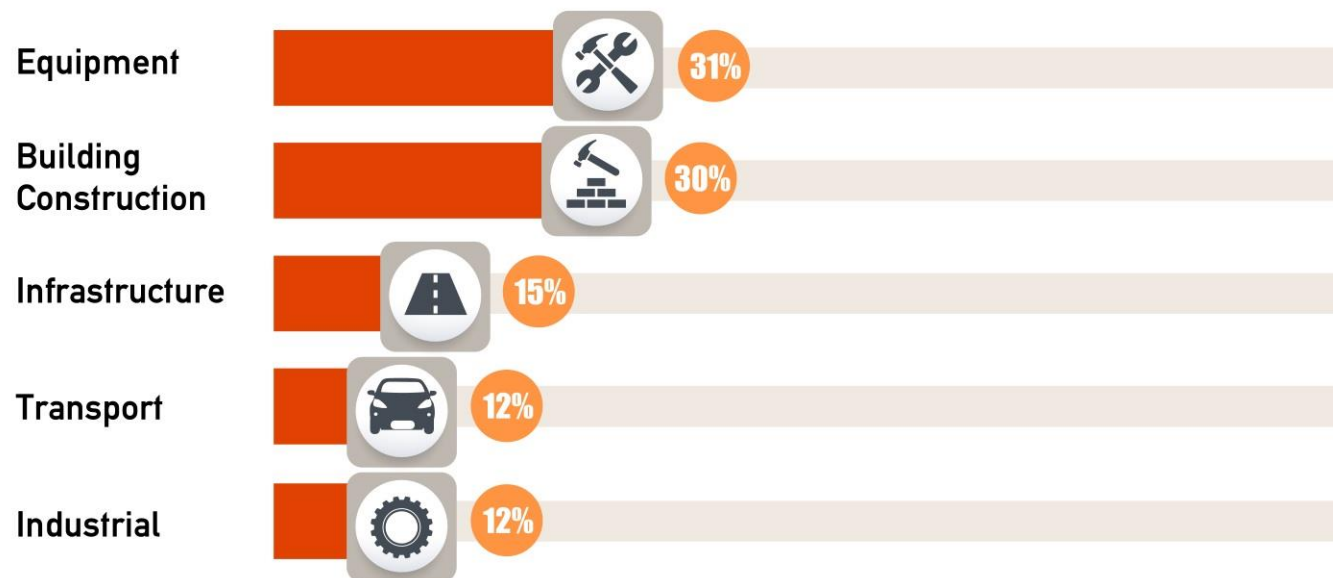
**BHP predicts that a structural deficit in copper will open in the early 2020s.**

# ...As Long-term Copper Demand Gets Super-Charged

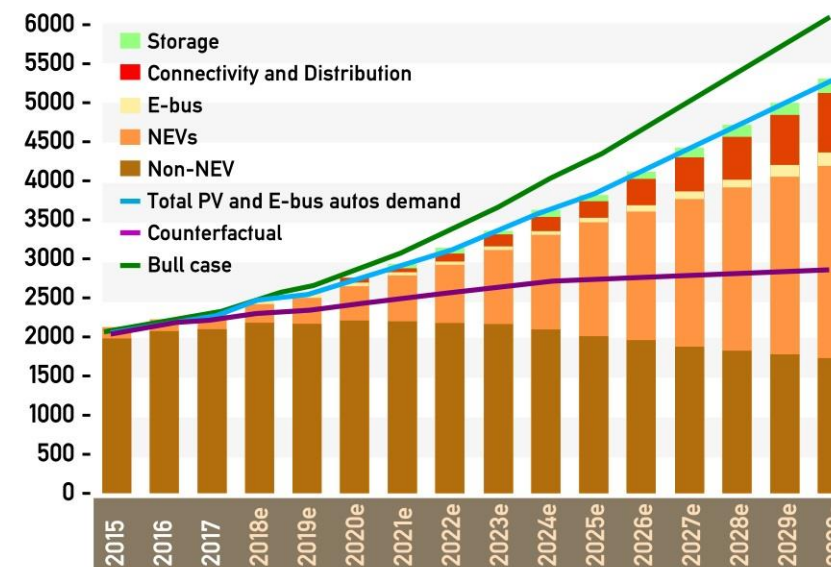


- ▶ The global copper market is set to be transformed by new demand sources
- ▶ EV demand and related infrastructure is set to account for two-thirds of conservative global copper demand between 2018 and 2030
- ▶ This could affect pricing as much as five years in advance

## Global uses of copper ..... today



## Autos and related EV infrastructure to add 2.8Mt to copper demand by 2030 ('000t)

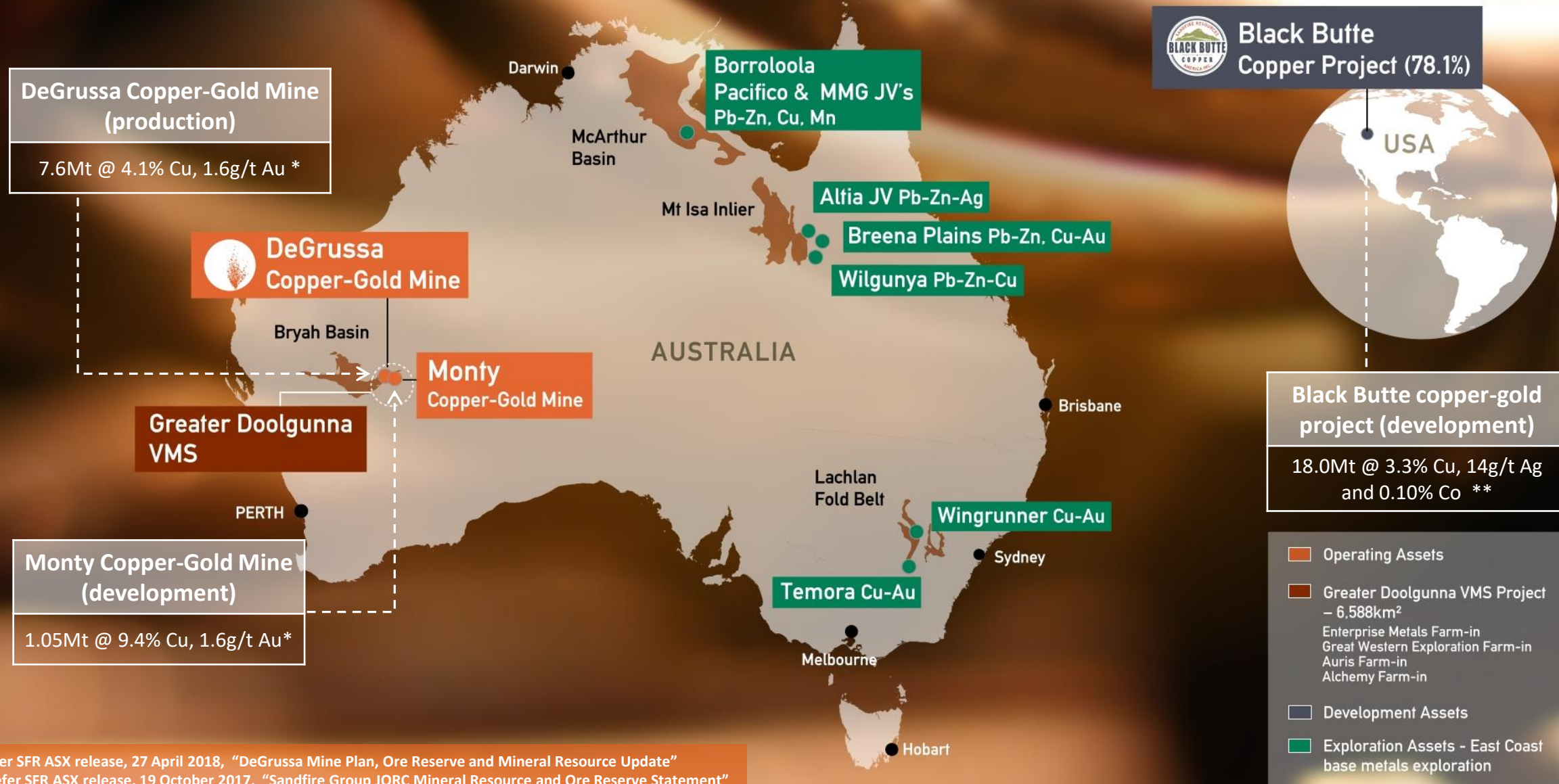


SOURCE: Citi Research, Wood Mackenzie

“Prepare for a decade of Dr. Copper on steroids. Copper’s reputation for acting as a barometer of global growth is set to continue, and indeed improve, given a lack of supply growth...” Citi, Copper Book, 17 July 2018



# Summary of Key Assets – Mineral Resources



# DeGrussa Operations – Consistent, Reliable, Low-Cost



- ✓ Six successive years of consistent, safe and profitable production
- ✓ Milling rates maintained at 1.6Mtpa and recoveries targeted at ~92% (LOM)

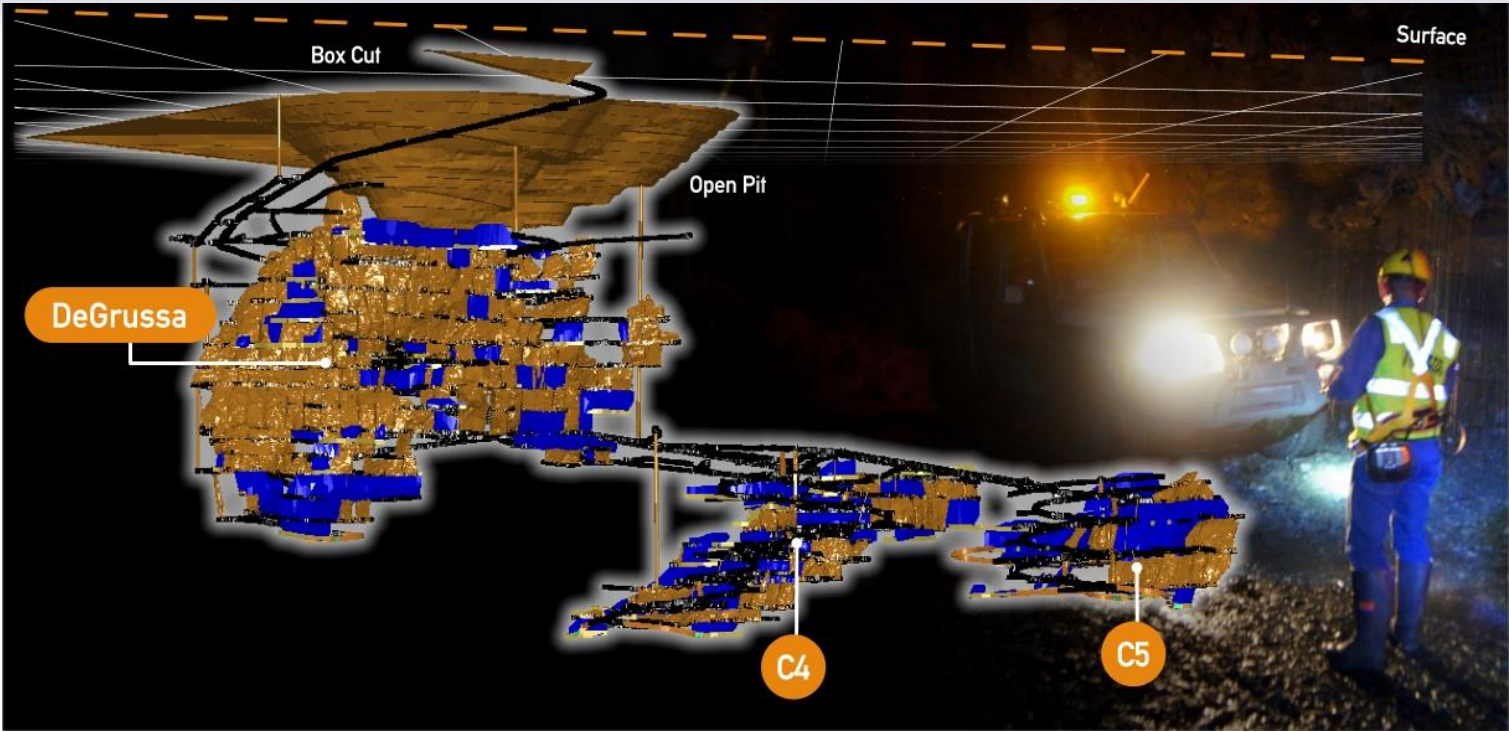


## PRODUCTION OVERVIEW – Key Figures

		FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019 (guidance)
Production	Copper (Cu)	64,017t	67,690t	67,154t	68,202t	67,088t	64,918t	63-67kt
	Gold (Au)	42,679oz	33,893oz	37,386oz	37,612oz	38,623oz	39,273oz	37-40koz
C1 Cash Operating Costs (US\$/lb)		1.24	1.18	1.09	0.95	0.93	0.93	1.00 – 1.05



# Mine Plan, Ore Reserve and Mineral Resource



- ▶ DeGrussa and Monty Mine Plan (Monty at 100%):
  - ▶ 6.6Mt at 5.0% Cu and 1.7g/t Au (332,000t Cu, 354,000oz Au)
- ▶ DeGrussa mine life into CY2022

DeGrussa and Monty	Tonnes (Mt)	Copper (%)	Gold (g/t)	Contained Copper (t)	Contained Gold (oz)
Mine Plan**	6.6	5.0	1.7	332,000	354,000
Ore Reserve**	9.4	3.9	1.3	370,000	402,000
Mineral Resource*	8.7	4.7	1.6	410,000	439,000

**Notes:**  
DeGrussa stated as at 31 December 2017; Monty stated as at 31 March 2017.  
Calculations have been rounded to the nearest: 1,000t; 0.1% Cu grade; and 1,000t Cu metal and 0.1g/t Au grade; and 1,000oz Au metal. Differences may occur due to rounding.  
\* Mineral Resource for DeGrussa is based on a 1.0% Cu cut-off and allows for mining depletion and sterilisation as at 31 December 2017. Mineral Resource for Monty is based on a 1.0% Cu cut-off.  
\*\* Mine Plan and Ore Reserve include mining dilution and mining recovery  
Refer SFR ASX release “DeGrussa Mine Plan, Ore Reserve and Mineral Resource Update” dated 27 April 2018 and “Positive Monty Feasibility Study Paves Way for Development of New High-Grade Copper Mine” dated 6 April 2017 for further information.

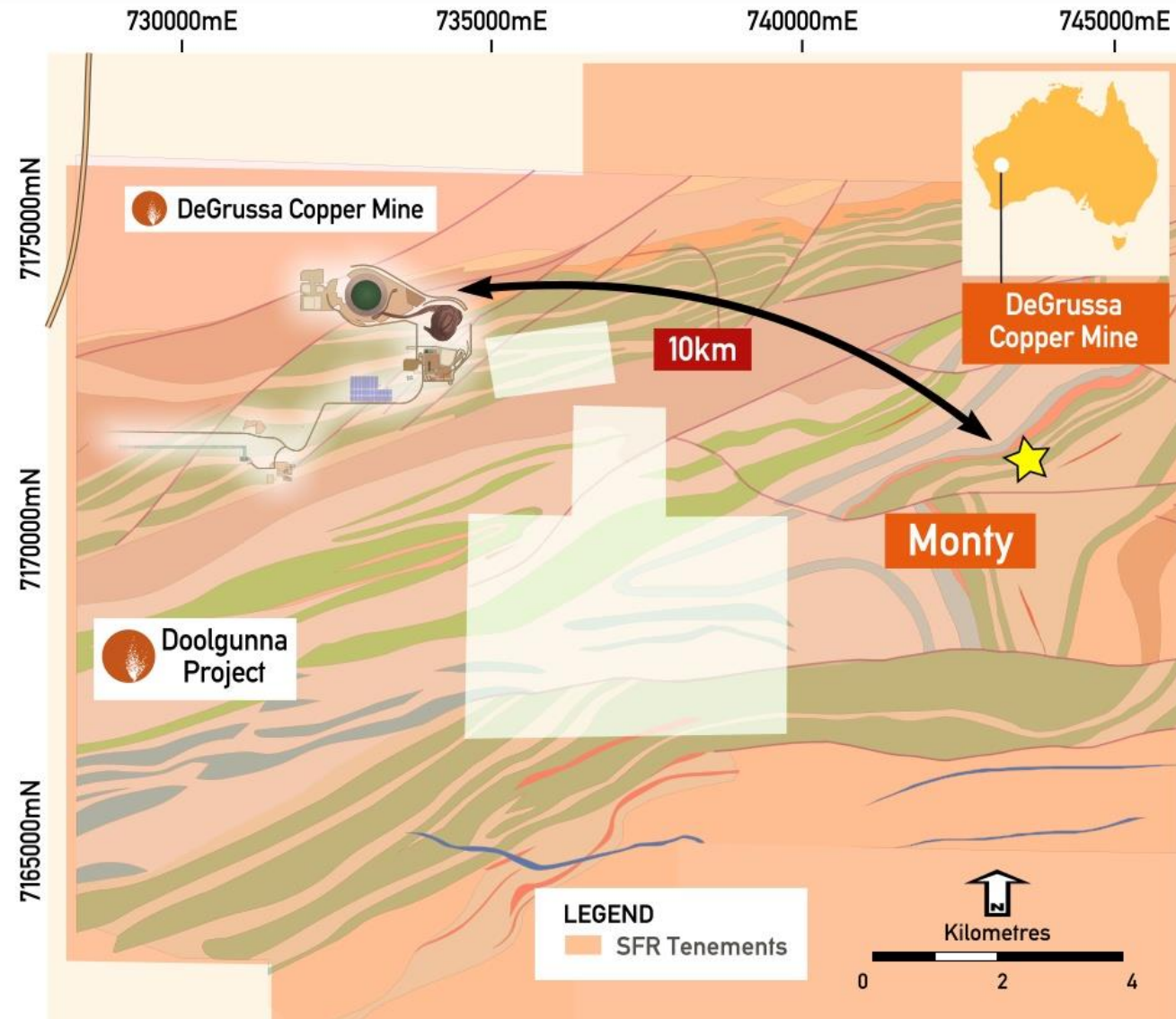


# Monty – Set to Become One of the World's Highest-Grade Copper Mines



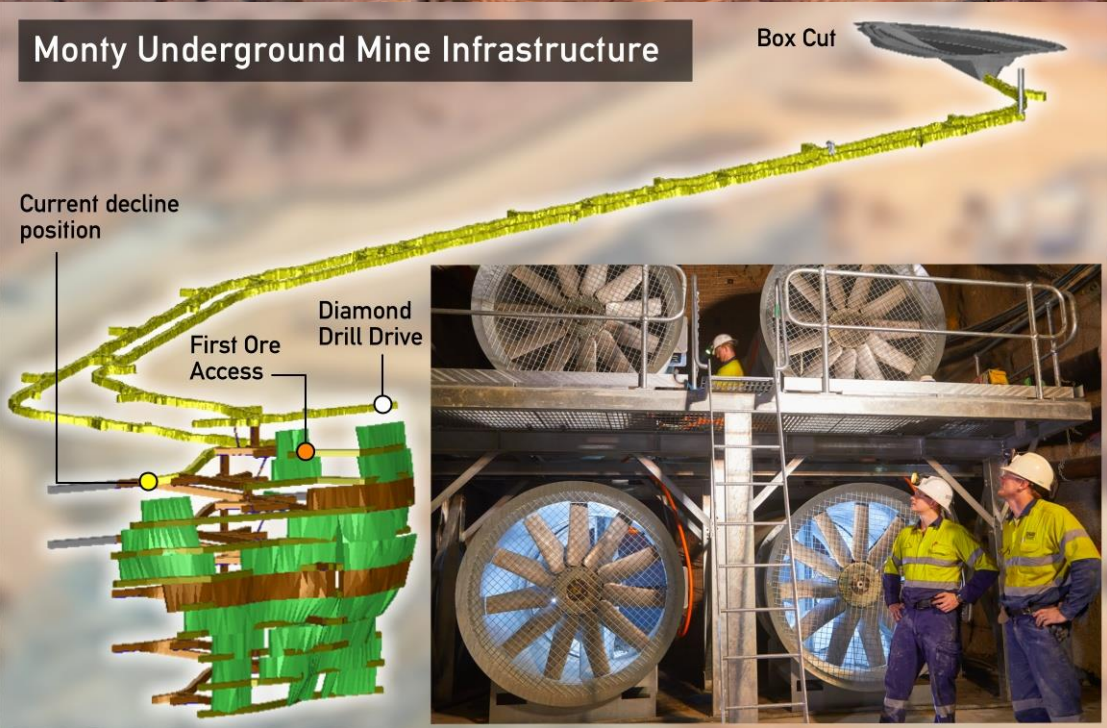
- ▶ New satellite mine located 10km east of DeGrussa
- ▶ Now 100%-owned following acquisition of Talisman's 30% interest
- ▶ Mining by underground method to 400m below surface
- ▶ Mine Plan: 0.8Mt at 9.4% Cu, 1.5 g/t Au for 74,000t Cu and 38,000oz Au \*
- ▶ Underground development advance currently over 3,440m
- ▶ First development ore on schedule for late Q2 FY2019, stope ore from Q3 FY2019
- ▶ Excellent exploration potential – developing geological understanding from underground mining

\* Refer SFR ASX release, 27 April 2018, "DeGrussa Mine Plan, Ore Reserve and Mineral Resource Update"





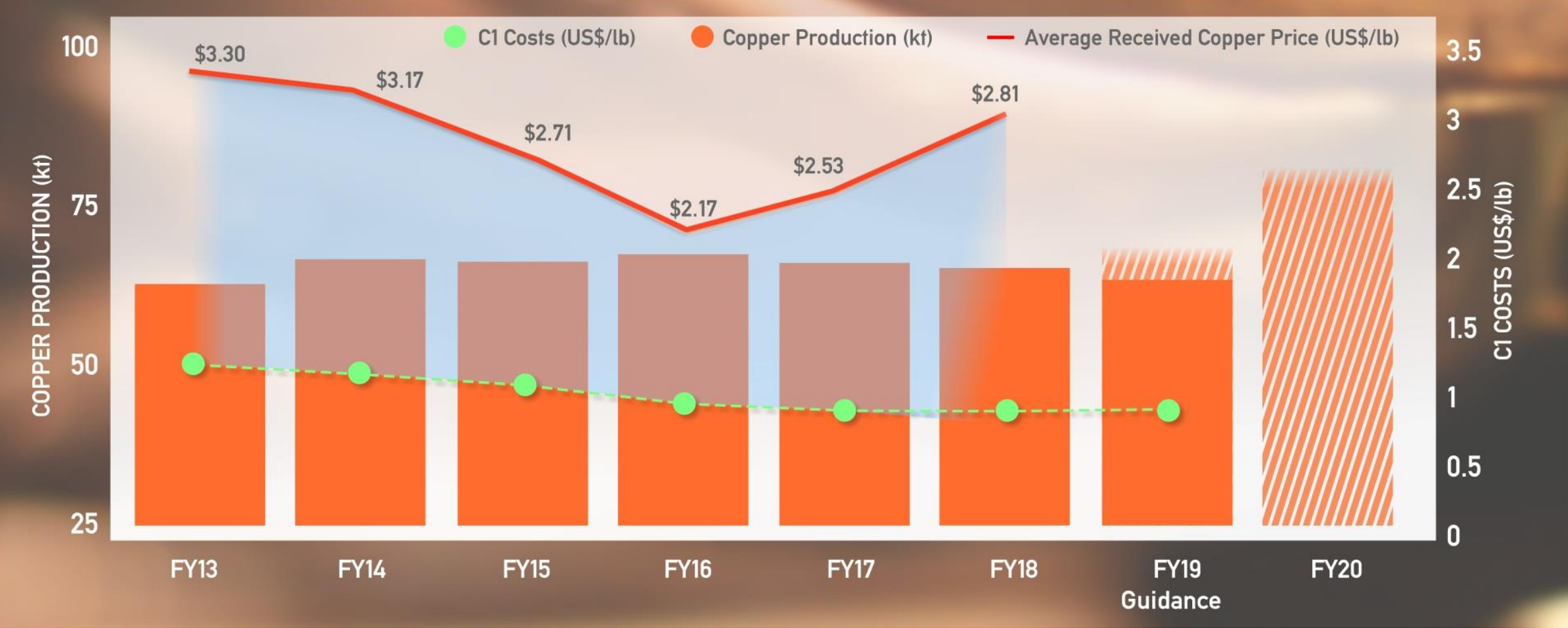
# Development – Monty Site Infrastructure







Debt-free with rising production profile in a rising copper market





# Development Pipeline – Doolgunna Growth Projects



Growth projects currently under evaluation against the backdrop of an improved copper price environment



## Near-Mine Opportunities

- ▶ Continued focus on converting UG Mineral Resource not in Ore Reserve
- ▶ Opportunities to be assessed during future underground operations



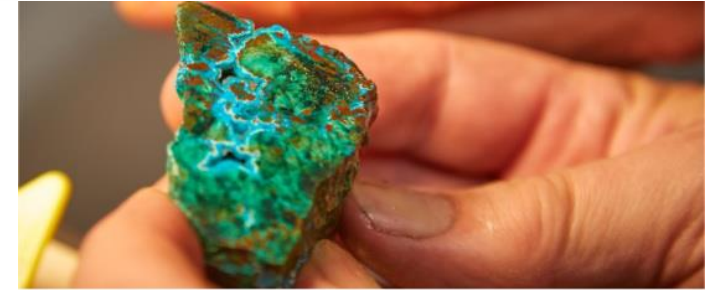
## Oxide Copper Project

- ▶ ~2.7Mt oxide stockpiles at 1.3% Cu and 0.5g/t Au (34,000t Cu, 46,000oz Au) \*
- ▶ New processing concept developed and currently being further evaluated
- ▶ PFS planned following successful testwork



## Thaduna Copper Projects

- ▶ Structurally controlled copper deposits at Thaduna and Green Dragon with resources of 8.2 Mt at 1.8% Cu and 3.7g/t Ag (150,000t Cu and 963,000oz Ag)
- ▶ Significant upside potential
- ▶ Development pathways under evaluation



\* Refer SFR ASX release, 27 April 2018, “DeGrussa and Monty Mine Plan, Ore Reserve and Mineral Resource”  
Refer SFR ASX release, 19 October 2017, “Sandfire Group JORC Mineral Resource and Ore Reserve Statement”

# Development Pipeline – Black Butte Copper Project, USA



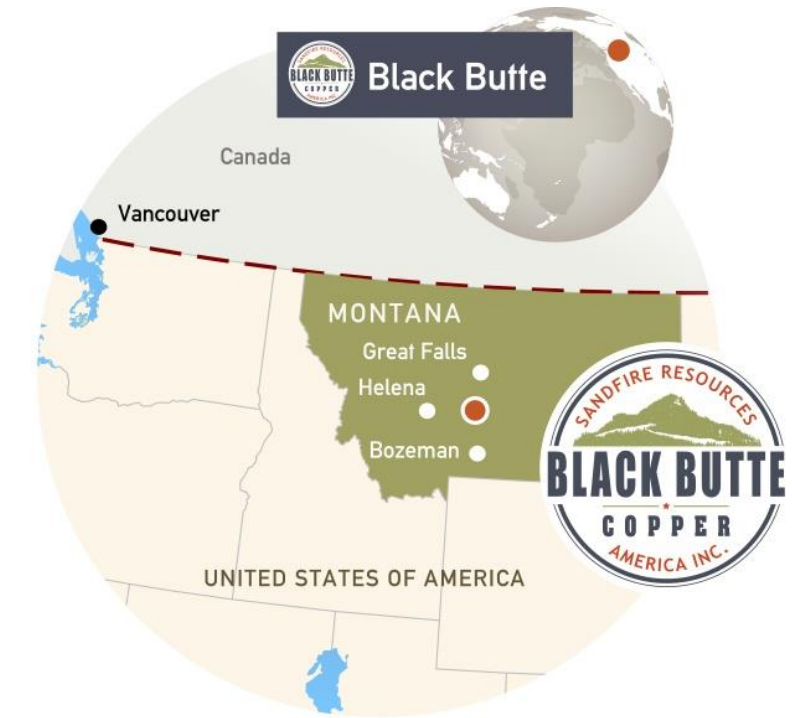
- ▶ 86% stake in copper development subsidiary Sandfire Resources America Inc. (TSX-V: SFR) – ~A\$60M invested to date

Acquisition cost equivalent to ~US\$4c/lb of contained copper in resource

- ▶ Black Butte: an advanced, high quality copper project in a stable jurisdiction:

Mineral Resource: 18Mt at 3.3% Cu, 14g/t Ag, 0.10% Co for 597,000t of copper, 7,980,000oz of silver and 18,000t of cobalt (JORC)\*

- ▶ One of the top-10 undeveloped copper projects worldwide by grade
- ▶ Outstanding near-mine and district-wide exploration potential
- ▶ **Mine Operating Permit (MOP) for Johnny Lee copper deposit found to be “Complete and Compliant” by Montana Department of Environmental Quality (DEQ)**
- ▶ **Draft Environmental Impact Statement (EIS) expected early Q3 FY2019**
- ▶ **Metallurgical testwork underway and preparations for FS advanced**
- ▶ **Potential to commence development mid CY2019**



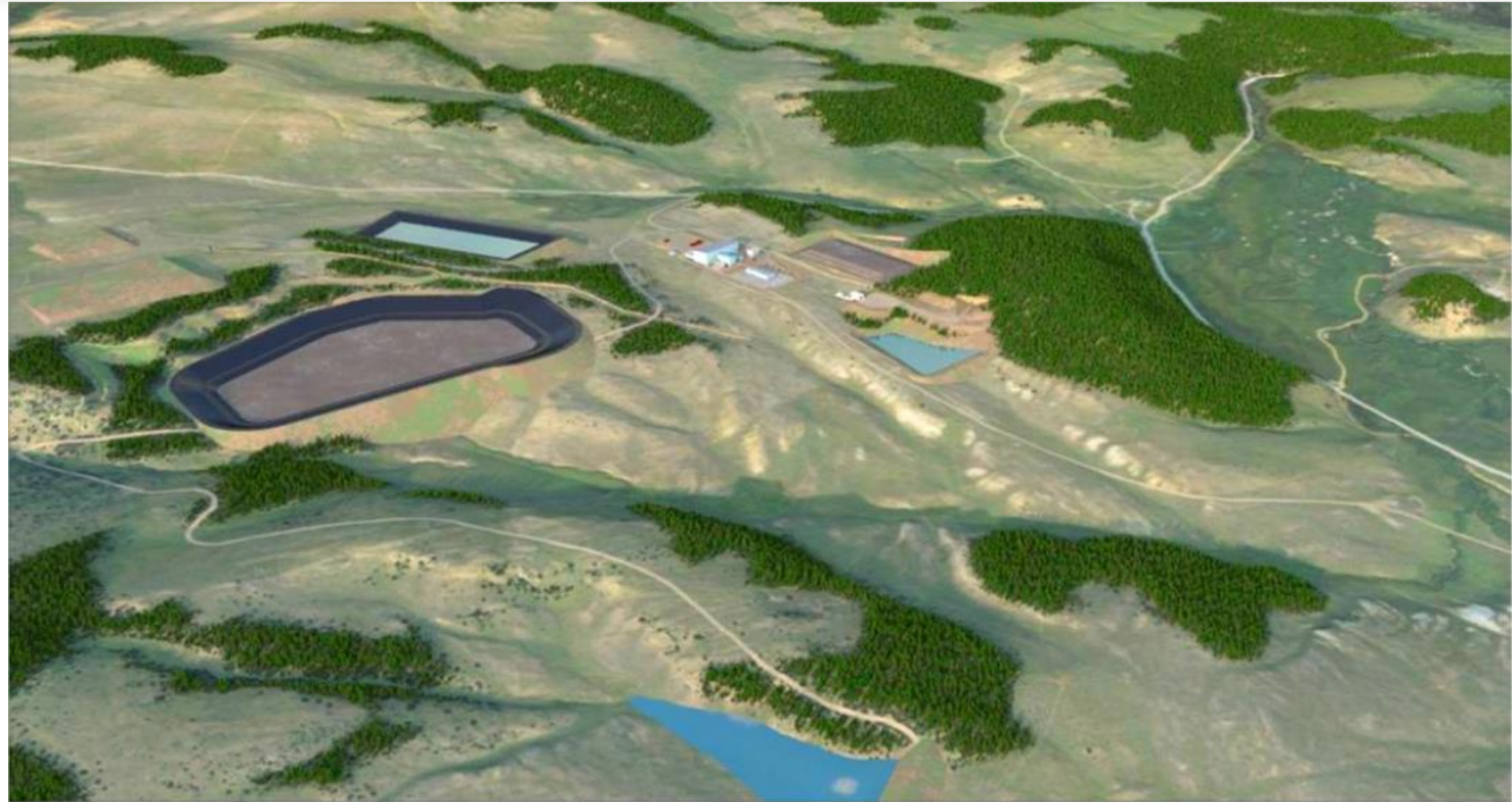
\* Refer SFR September Quarterly release, 19 October 2017 “Sandfire Group JORC Mineral Resource and Ore Reserve Statement” and associated disclosures.



# Development Pipeline – Black Butte Copper Project, USA



- ▶ Upfront capital expenditure of ~US\$220M \*
- ▶ 2 year construction period with operations over 11-14 years \*
- ▶ Very small surface footprint – will be 100% reclaimed
- ▶ Highly engineered, state-of-the-art underground mine
- ▶ Mine design, layout and geology ensures that water quality and quantity will be protected
- ▶ Stringent monitoring and approval process
- ▶ Reclamation bond to be posted with the State of Montana before construction commences – remains in place until reclamation is complete



Modern mining restores the site to original land uses and water flows, fully protecting our water and landscapes long term.

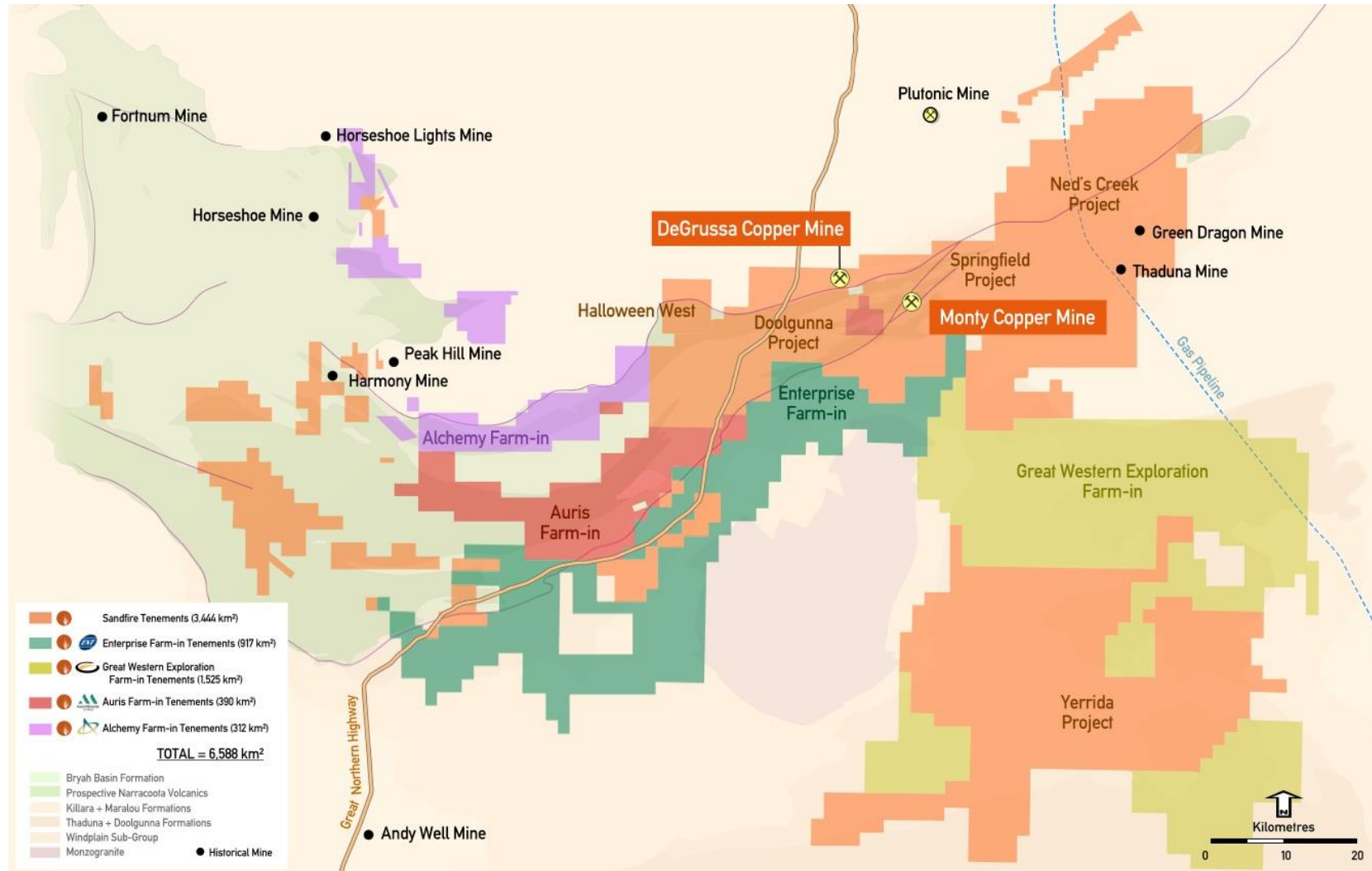
\* Refer TSXV Announcement “Preliminary Economic Assessment Black Butte Project”, 12 July 2013”  
[http://www.sandfireamerica.com/assets/docs/ppt/TAU-UpdatedPEA\\_07-12-2013.pdf](http://www.sandfireamerica.com/assets/docs/ppt/TAU-UpdatedPEA_07-12-2013.pdf)



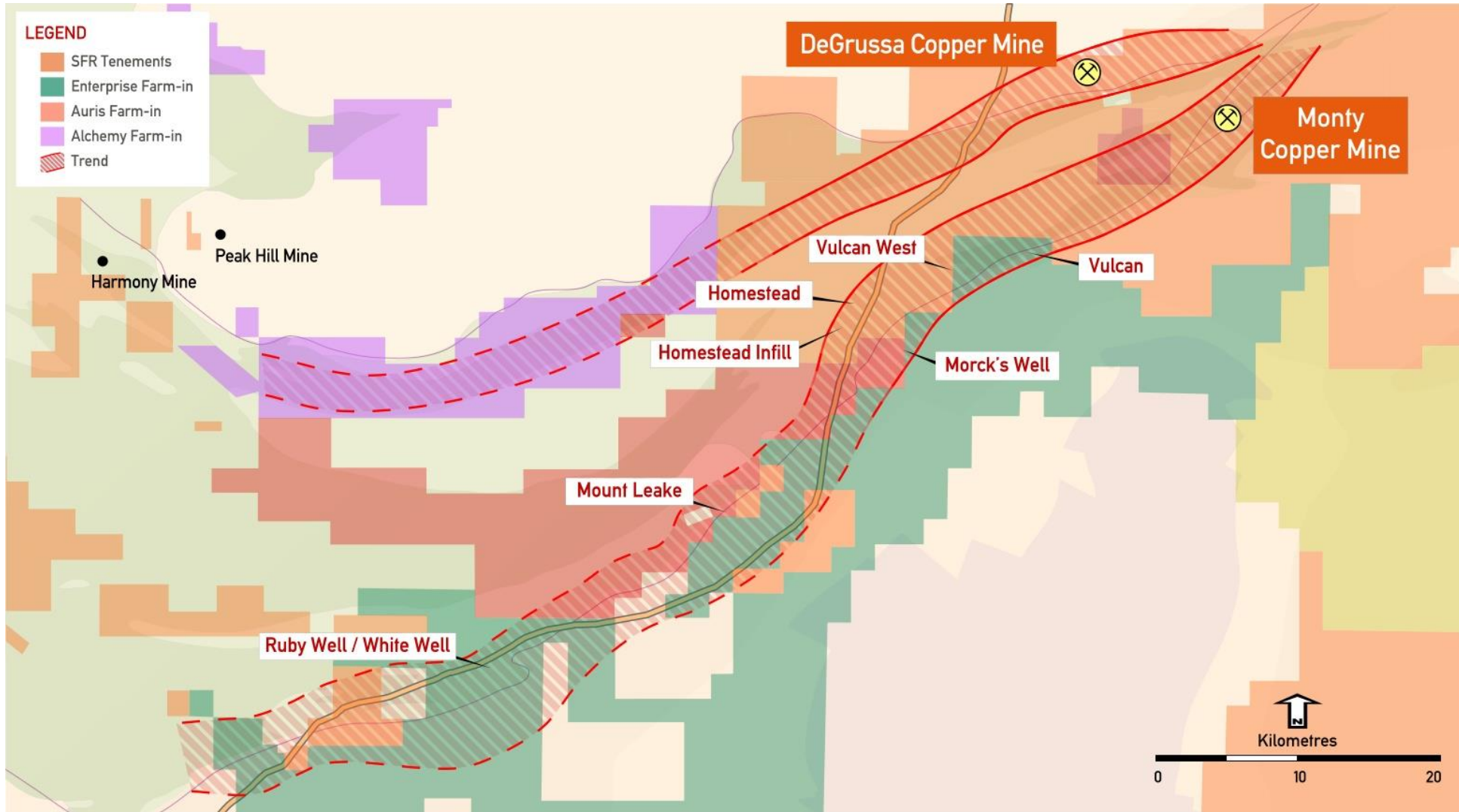
# Doolgunna – Dominant Position in a World-Class VMS Province



- ▶ Sandfire has more than tripled its ground position in the past two years
- ▶ Greater Doolgunna region: 6,588km<sup>2</sup> including 65km strike length of prospective VMS lithologies
- ▶ Recent farm-in deals:
  - ▶ Enterprise Metals (ASX: ENT) to earn up to 75% interest in tenements to the south
  - ▶ Great Western Exploration (ASX: GTE) at North Yerrida
  - ▶ Auris (ASX: AUR)
  - ▶ Alchemy Resources (ASX: ALY) to earn up to 80% interest in ALY Bryah Basin tenements



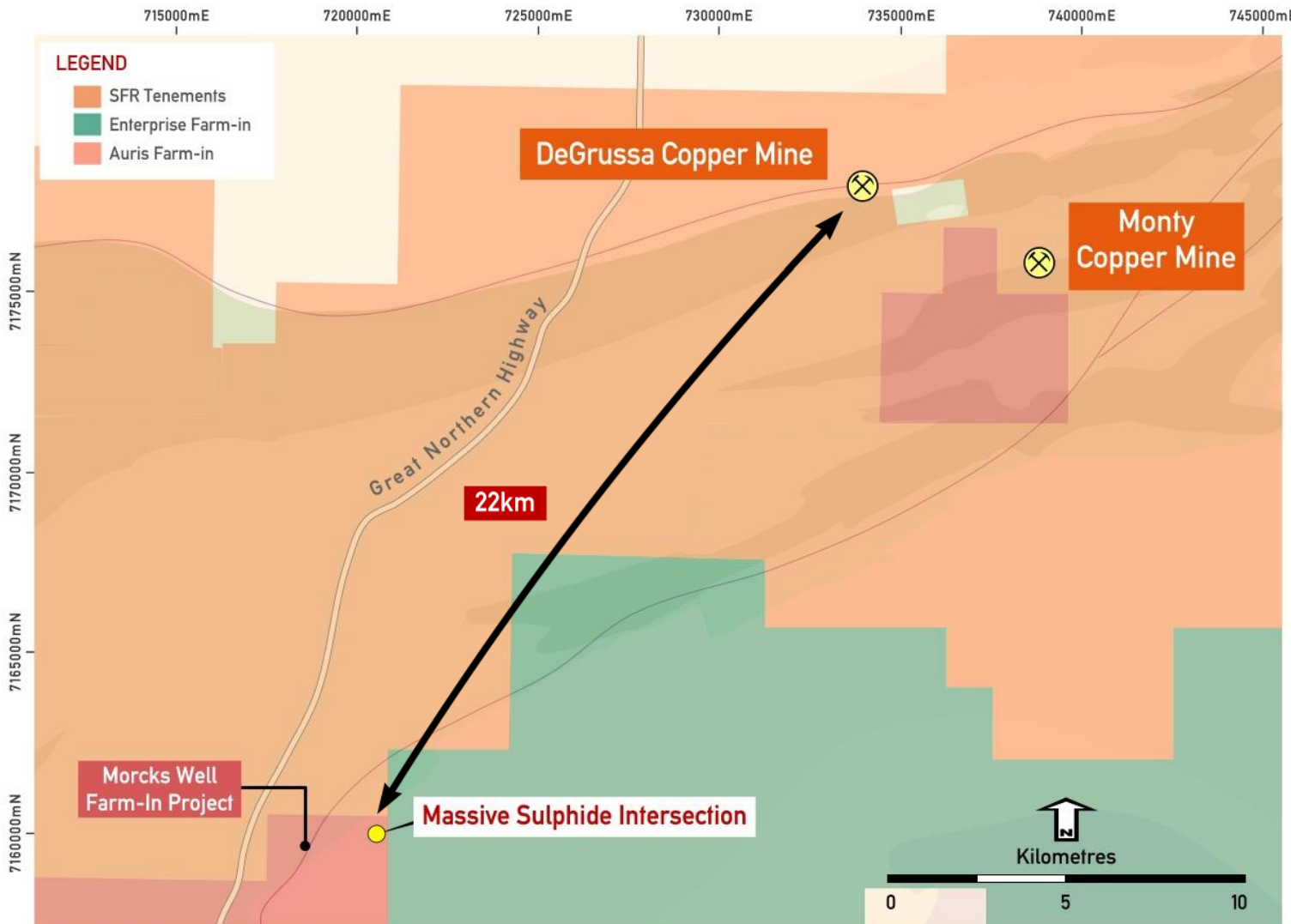
# Doolgunna Exploration – Multi-Pronged and Systematic Approach



- ▶ 90km of prospective stratigraphy in the southern limb of Bryah Basin
- ▶ Exploration continuing as priority along prospective VMS corridor hosting DeGrussa and Monty
- ▶ Systematic aircore drilling commenced in May at the Morck's Well Project (Auris Farm-in)
- ▶ Sulphides intersected in Aircore holes in initial program
- ▶ Alchemy farm-in completed and exploration to commence Q418



# Morck's Well – Opening Up a New VMS Corridor



- ▶ Recent drilling intersected narrow zones of sulphide and supergene copper mineralisation outside of DeGrussa and Monty \*
- ▶ First sulphides to be intersected outside of DeGrussa and Monty
- ▶ Deep RC drilling and DHEM surveying underway
- Refer ASX releases:
  - "Doolgunna Project – Exploration Update" dated 15 May 2018
  - "Doolgunna Project – Exploration Update" dated 21 May 2018
  - "Doolgunna Project – Exploration Update" dated 25 May 2018

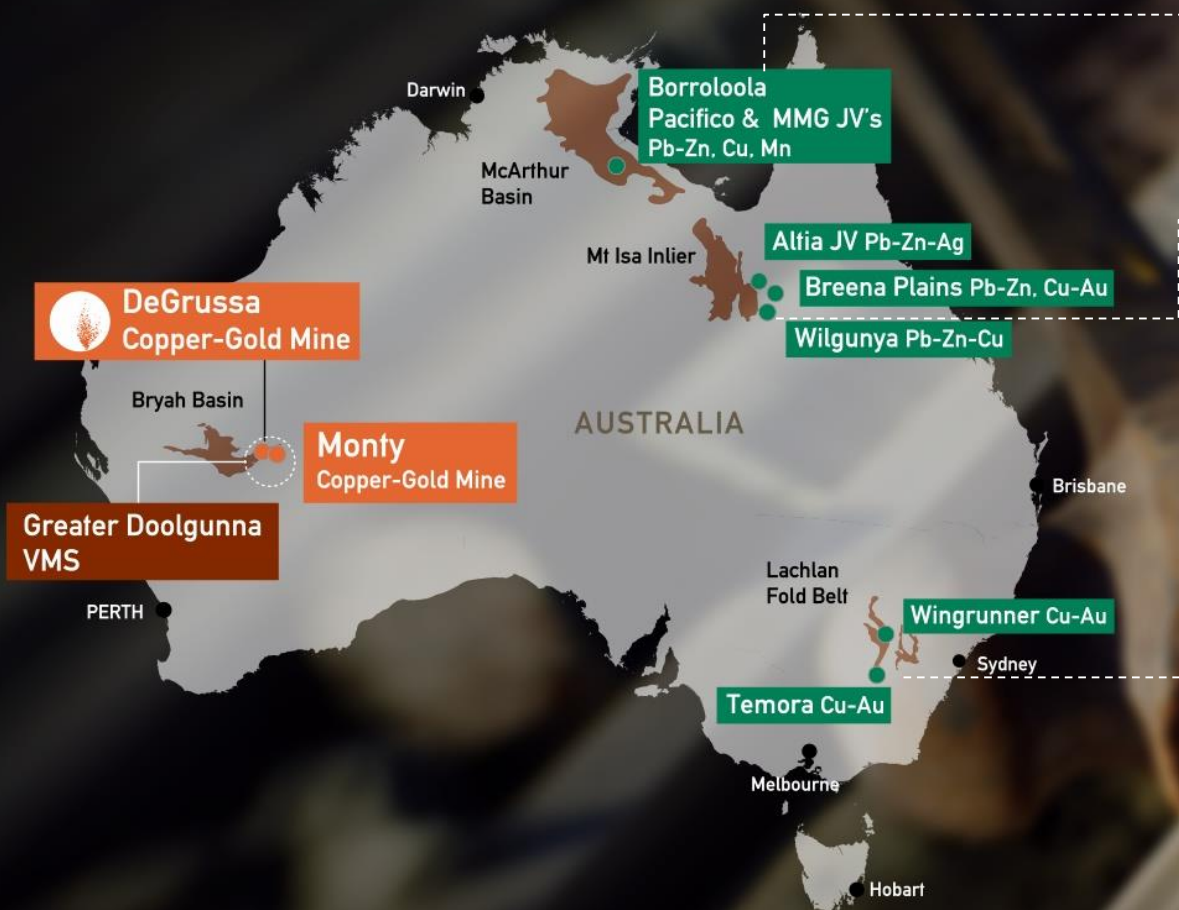




# Australian Regional Exploration Projects



Targeting world-class discoveries in Australia's premier exploration provinces



## Northern Territory

- ▶ Active drilling by JV partners in Borroloola tenements

## Queensland Base Metals

- ▶ 2,400km<sup>2</sup> in Mt Isa-Cloncurry province including 100km strike length with potential for Broken Hill/Cannington-style and IOCG mineralisation
- ▶ Key targets include 100%-owned, Strathfield, Breena Plains and Cannington West projects

## NSW Base Metals

- ▶ 2,100km<sup>2</sup> in Lachlan Fold Belt with outstanding potential for porphyry mineralisation
- ▶ Porphyry centre identified at 100%-owned Temora Project – evaluation of recent drilling at Donnington, Mandamah
- ▶ Number of priority gold and base metal targets

Strategy: acquire the best ground with potential for a significant discovery that can be quickly developed. Increased focus on gold



Developing a strong growth pipeline of quality base metal opportunities

## Adriatic Metals PLC



### Adriatic Metals PLC (ASX: ADT)

- ▶ Cornerstone 7.7% investment in recent \$10m IPO
- ▶ Strategic partnership allowing Adriatic to access Sandfire's technical expertise
- ▶ Exploring the Veovaca and Rupice polymetallic projects in Bosnia-Herzegovina
- ▶ Outstanding recent results from drilling
  - ▶ Rupice Hole BR-5-18: - had 66m @ 12.8% Zn, 8.6% Pb, 158 g/t Ag, 2.1g/t Au, 2.3% Cu and 37% Barite from 210m downhole <sup>1</sup>

<sup>1</sup> Refer ASX ADT release, 17 July 2018, "Thick High-Grade Intercept Extends Rupice to North"

## White Rock Minerals



### White Rock Minerals (ASX: WRM)

- ▶ Cornerstone 12.7% investment
- ▶ Strategic relationship for White Rock's Red Mountain VMS Zinc Project in Alaska
- ▶ Placement, Technical Collaboration Agreement and right and exclusive option to enter into earn-in joint venture
  - ▶ JORC Mineral Resource reported at 16.7Mt at 8.9% Zinc equivalent including the West Tundra Flats project which is 6.7Mt at 14.4% Zinc Equivalent<sup>2</sup>

<sup>2</sup> Refer ASX WRM release, 26 April 2017, "Maiden JORC Mineral Resource at White Rock's Red Mountain zinc – silver Project, Alaska"

Strategy: to secure cornerstone positions and strategic partnerships with companies and projects in high-quality jurisdictions.



# Strong commitment to sustainability and local communities



- ▶ +\$600,000 in community sponsorships and donations in FY2018
- ▶ Committed to local procurement:
  - 96% of total spend on contractors and suppliers was within Australia
  - 81% was within Western Australia
  - 38% of total spend for the Monty project was within the Midwest region of WA
- ▶ DeGrussa is home to the largest integrated off-grid solar and battery storage facility in Australia and, reportedly, the world





# Summary – Positioned for Growth and Success



✓ EXPLORATION - delivering new discoveries



✓ PRODUCTION - consistent & profitable



✓ GROWTH - & success



✓ RETURNS - for shareholders



- ▶ **Consistent** low-cost production
- ▶ **Strong** balance sheet – net cash position
- ▶ **Growing** free cash-flows
- ▶ **Committed** to organic growth via exploration
- ▶ **Unlocking** the potential at Doolgunna
- ▶ **Developing** a growth pipeline for the future
- ▶ **Strongly** positioned with capacity to grow

Sandfire is a high-margin, low-cost Australian copper-gold producer, ideally positioned for its next chapter of growth



**SANDFIRE RESOURCES NL**

A QUALITY COPPER-GOLD COMPANY ASX Code- SFR



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**Australasia Conference 2018**

Monday, 12 - Tuesday, 13 November 2018

**A quality Australian copper-gold miner**

with consistent low-cost production, strong margins and global growth pipeline

13 November 2018 – Karl Simich, Managing Director and CEO





## **DeGrussa and Monty Mineral Resource**

The information in this report that relates to the DeGrussa Mineral Resource is based on information compiled by Mr Callum Browne who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Browne is a permanent employee of Sandfire Resources NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserve. Mr Browne 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 the Monty Mineral Resource is based on information compiled by Mr Ekow Taylor who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Taylor was a permanent employee of Sandfire Resources NL at the time of Mineral Resource compilation and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserve. Mr Taylor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **DeGrussa and Monty Ore Reserve**

The information in this report that relates to the DeGrussa and Monty Ore Reserve is based on information compiled by Mr Neil Hastings who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Hastings is a permanent employee of Sandfire Resources NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hastings consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **Black Butte Mineral Resource**

The information in this report that relates to Black Butte Mineral Resource is based on information compiled by Mr Michael J. Lechner who is a Registered Member of SME, a CPG with AIPG, a RPG in Arizona, and a P. Geo. In British Columbia. Mr Lechner is an independent consultant and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Lechner consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



## **Thaduna and Green Dragon Mineral Resource**

The information in this report that relates to the Thaduna and Green Dragon Mineral Resource is based on information compiled by Mr Ekow Taylor who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Taylor was a permanent employee of Sandfire Resources NL at the time of Mineral Resource compilation and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Taylor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **Exploration Results Doolgunna**

The information in this report that relates to Exploration Results is based on information compiled by Mr. Shannan Bamforth who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Bamforth is a permanent employee of Sandfire Resources and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bamforth consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **Exploration Results Temora**

The information in this report that relates to Exploration Results at Temora is based on information compiled by Mr Bruce Hooper who is a Registered Professional Geoscientist (RPGeo) of The Australian Institute of Geoscientists. Mr Hooper is a permanent employee of Sandfire Resources and has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hooper consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **Exploration and Resource Targets**

Any discussion in relation to the potential quantity and grade of Exploration Targets is only conceptual in nature. While Sandfire is confident that it will report additional JORC compliant resources for the DeGrussa Project, there has been insufficient exploration to define mineral resources in addition to the current JORC compliant Mineral Resource inventory and it is uncertain if further exploration will result in the determination of additional JORC compliant Mineral Resources.