



**SANDFIRE**  
RESOURCES NL

A QUALITY COPPER-GOLD COMPANY  
ASX Code: SFR

DeGrussa Copper Mine  
Discovery to Production in  
three years, what next ?

3<sup>rd</sup> May 2016

. Bruce Hooper

. Montana Mine Design, Operations & Closure  
Conference



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## Forward-Looking Statements and Competent Person's Statement

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### Competent Person's Statement – Mineral Resources

The information in this report that relates to Mineral Resources is based on information compiled by Mr Ekow Taylor who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Taylor 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 Taylor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### Competent Person's Statement – Ore Reserves

The information in this report that relates to Ore Reserves 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.

### Competent Person's Statement – Exploration Results

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 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.

## Overview

- Australian copper-gold producer owns 100% of DeGrussa Deposit in West Australia produces ~70,000 tonnes of contained copper per annum
- Discovery history
- Development history
- Operation
- New high grade discovery at Monty, 10 km from mine
- Organic growth focus through committed exploration
- Strong balance sheet to fund growth and shareholder returns
- Emerging international growth pipeline



# Company Snapshot

## Sandfire Resources NL (ASX: SFR)



FINANCIAL OVERVIEW:	FY 2013	FY 2014	FY 2015
Revenue	\$507.3M	\$525.7M	\$548.6M
Operating Cash-flow*	\$272.4M	\$249.5M	\$250.1M
Net Profit After Tax	\$88.0M	\$78.2M	\$69.0M
Earnings Per Share (basic)	57.48c	50.22c	44.18c
Cash	\$77M	\$58M	\$107M
Debt:	\$285M	\$160M	\$120M
Dividends	N/A	10c (final, unfranked)	13c (10c franked)

\*Prior to exploration expenditure

### Share Price

52-Week

Low A\$3.74

High A\$6.80

Market Cap ~A\$1 billion

Shares on issue – 156.9m

### Board

Derek La Ferla	Non-exec Chairman
Karl Simich	Managing Director
W. John Evans	Non-exec Director
Robert Scott	Non-exec Director
Paul Hallam	Non-exec Director
Matt Fitzgerald	Chief Financial Officer
Mike Spreadborough	Chief Operating Officer
Rob Klug	Chief Commercial Officer
Bruce Hooper	Exploration and Bus Dev. Manager

# Sandfire and DeGrussa Exploration History

- Christmas 2008 the 'GFC'
  - SFR trading at \$0.065 c/share, Market Capitalisation \$6 Mill, cash \$4 Mill, staff 'rationalised'
- March Quarterly 2008, follow up of RAB anomalies with RC drilling, focus on gold , multi-element signature

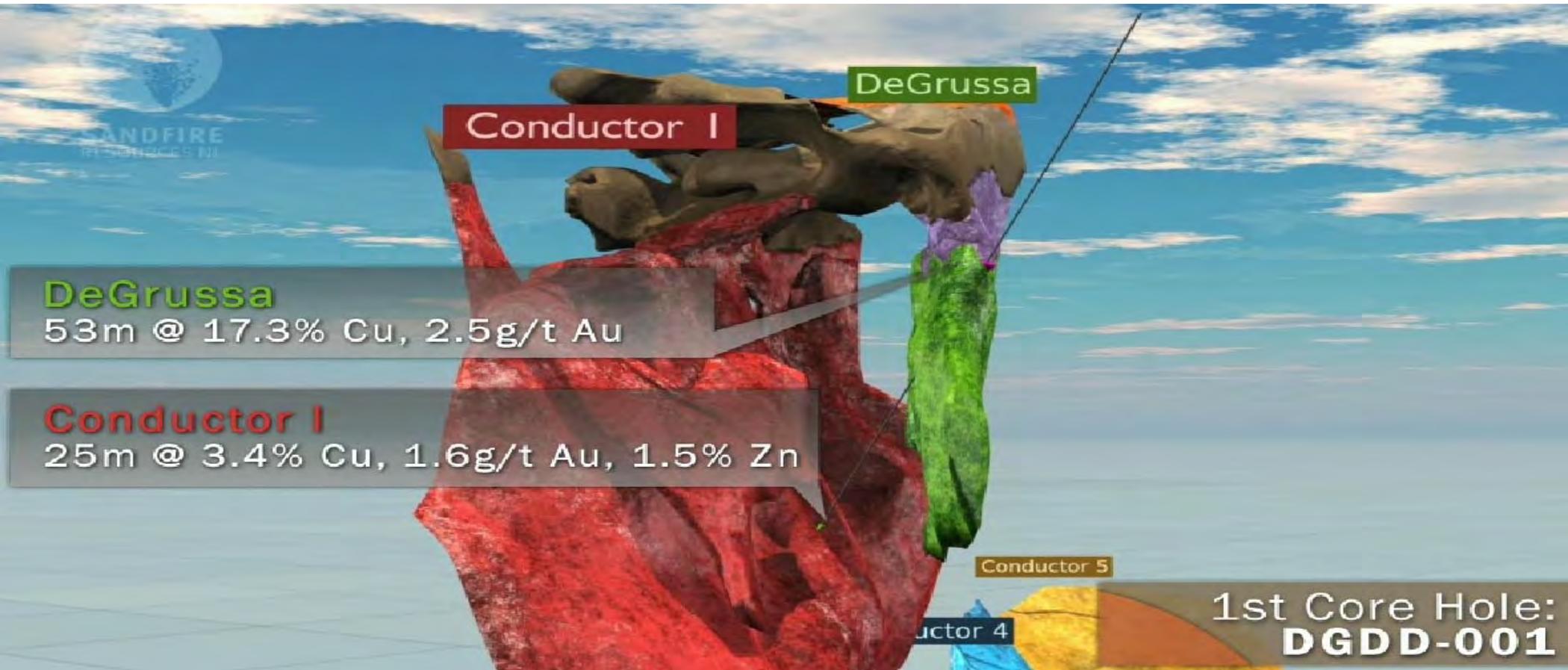
• Exploration targeting potentially open pittable, near-surface oxide gold deposit grading +3g/t Au and testing for primary sulphide mineralization at depth.

- 30<sup>th</sup> April 2009 announcement

During the current RC drilling program, Sandfire initially drilled a series of inclined holes testing for the steeply dipping mineralisation at depth. Subsequently Sandfire has drilled close spaced deep vertical drill holes that have intersected lengthy (up to 70 meters) intervals, to depths of 230 metres, of metal sulphide-rich mineralisation, with geological evidence of copper being present.

- Results reported :
  - 47m @ 5.3 % Cu, 20 g/t Ag and 1 % Zn from 93m (DGRC105)
  - 22m @ 3.6 % Cu, 3.8 g/t Au and 13 g/t Ag from 96m (DGRC101)
  - 18m @ 2.9 % Cu, 13 g/t Ag, 2 % Zn, 1 g/t Pd from 126m (DGRC101)

## First Diamond Hole June 2009



# The DeGrussa Story



## Discovery:

- May 2009
- 'Knew it was a mine' early
- Commenced Permitting
- Early resource drill out
- Hired Development Team

## Feasibility Study:

- July 2011
- Forecast \$2.4 billion operating cash flow, \$4.2 billion revenue
- 77kt (170Mlb) payable copper metal per annum in first three years
- Early financing
- Critical items ordered early

## Production:

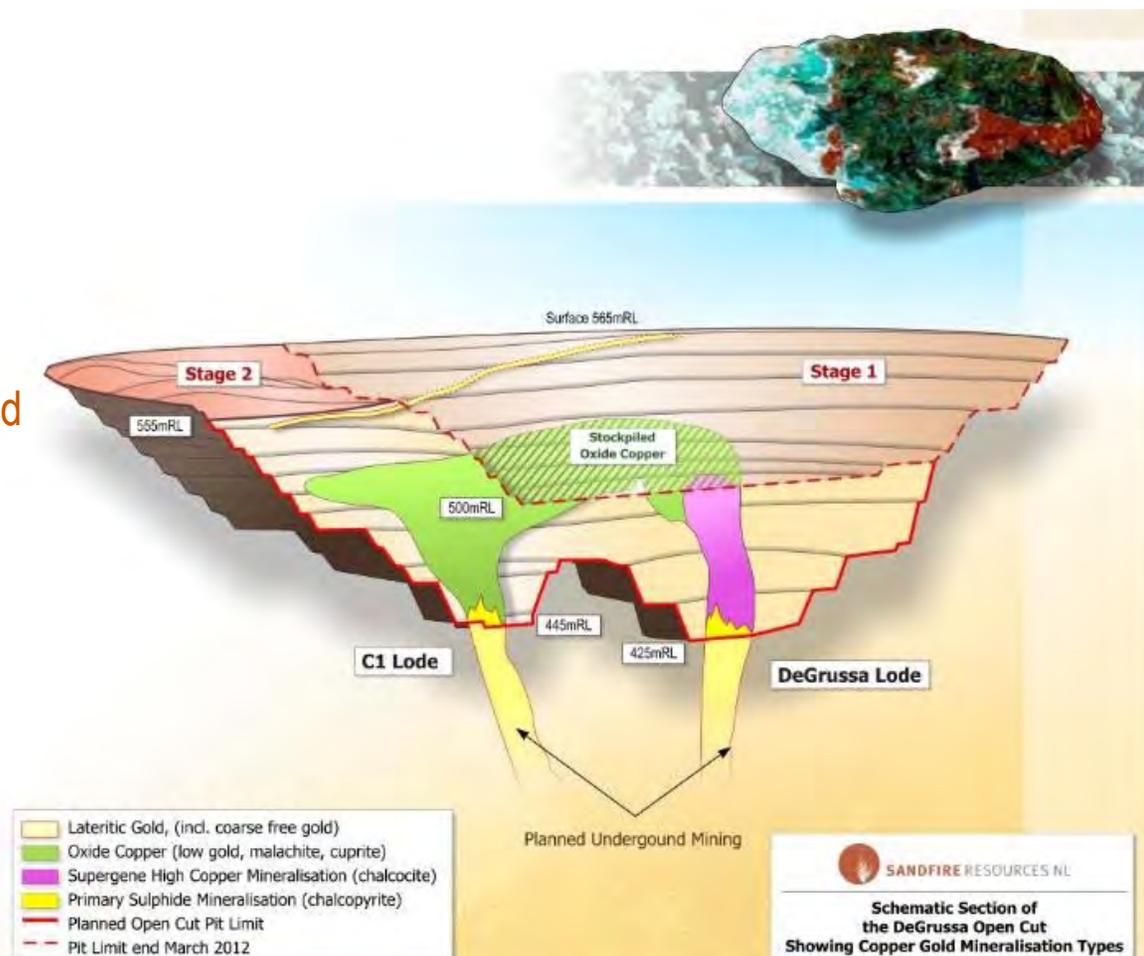
- February 2012 - First DSO and underground ore mined
- First DSO shipment – April 2012
- Plant commissioning – Q3 2012
- Ramp-up to 70-80ktpa Cu, 36kozpa Au - mid year 2013

# DeGrussa – development timetable for 2011

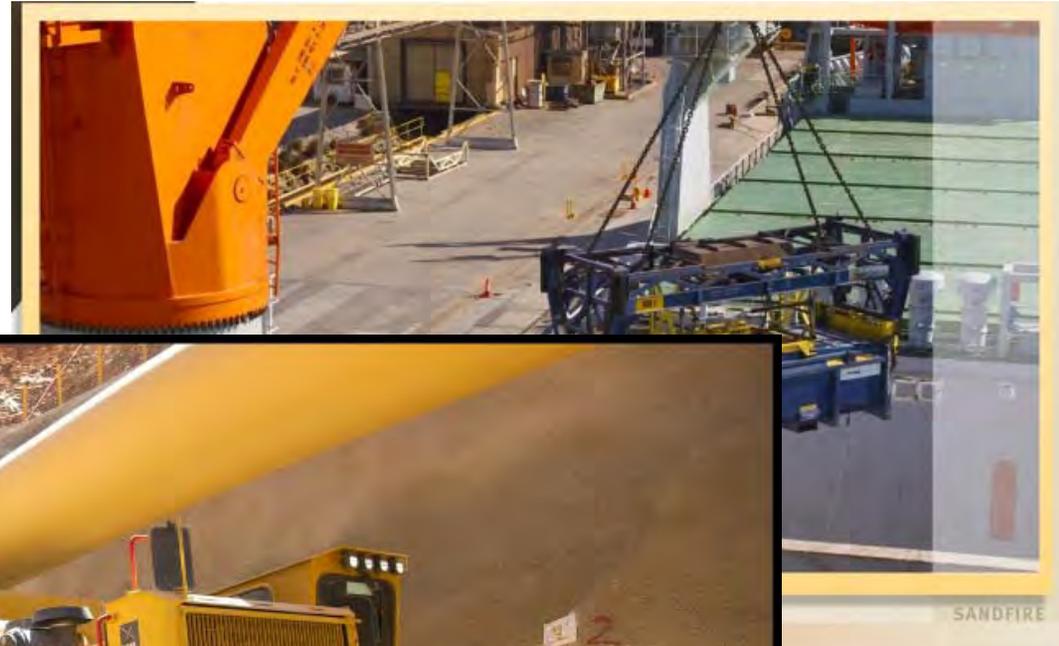


# DeGrussa Orebody

- Direct Ship Ore  
DSO 143kt @ 25.6 % Cu, 2.5 g/t Au
- Oxide Copper Project  
1.04Mt @ 2.3% Cu (23kt contained copper)
- Total open pit Ore Reserve  
1.63Mt @ 4.9% Cu, 1.2g/t Au (79kt contained copper, 64koz contained gold)



# Shipping of Concentrate January 2013



# DeGrussa – the Cornerstone Asset

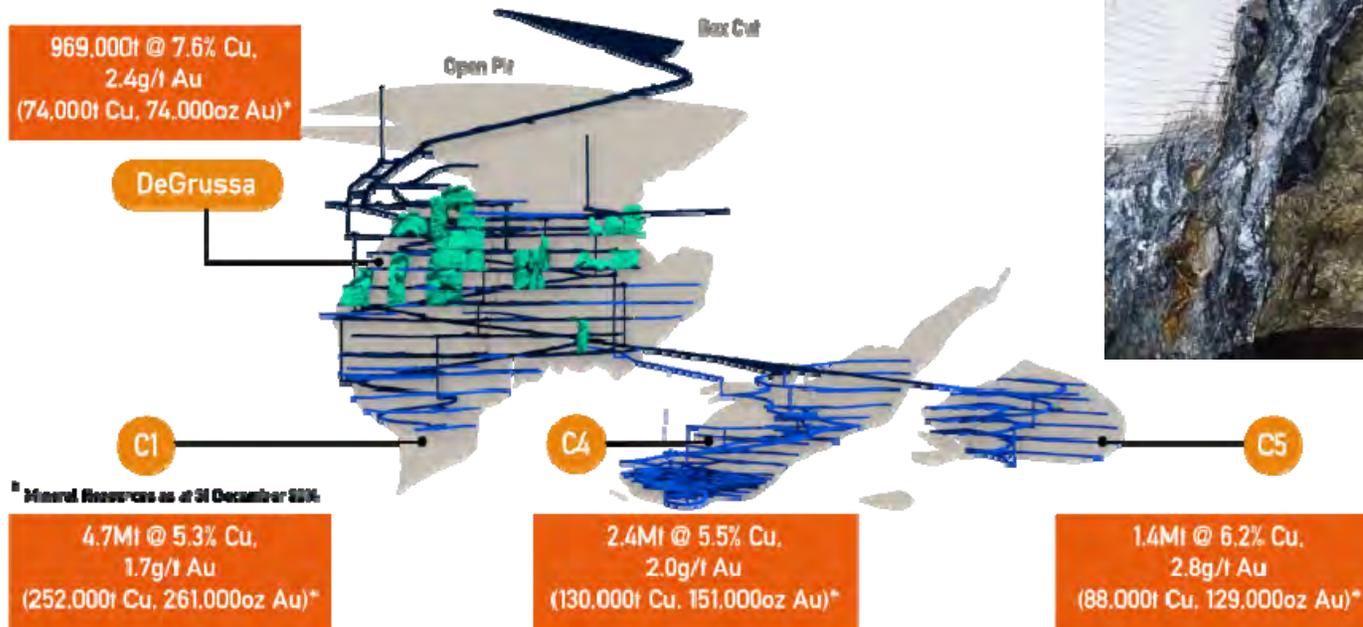
## DeGrussa Project – Key Facts

Production	+200,000t of copper, +100,000oz of gold to date
Revenues	+\$1.6 billion to date
Mining	+1.5Mtpa via long-hole open stoping 29km of underground development completed to date
Underground Mine Plan	9.6Mt @ 4.4% Cu and 1.6g/t Au for 424,000t Cu, 484,000oz gold (December 2014)
Underground Mining	ByrneCut Australia Pty Ltd
Mine Life	Mid-2021
Processing	1.5Mtpa concentrator (nameplate)
Product	~270Ktpa high quality concentrate grading 24-25% Cu, 4-4.5g/t Au

DeGrussa  
Copper-Gold Mine

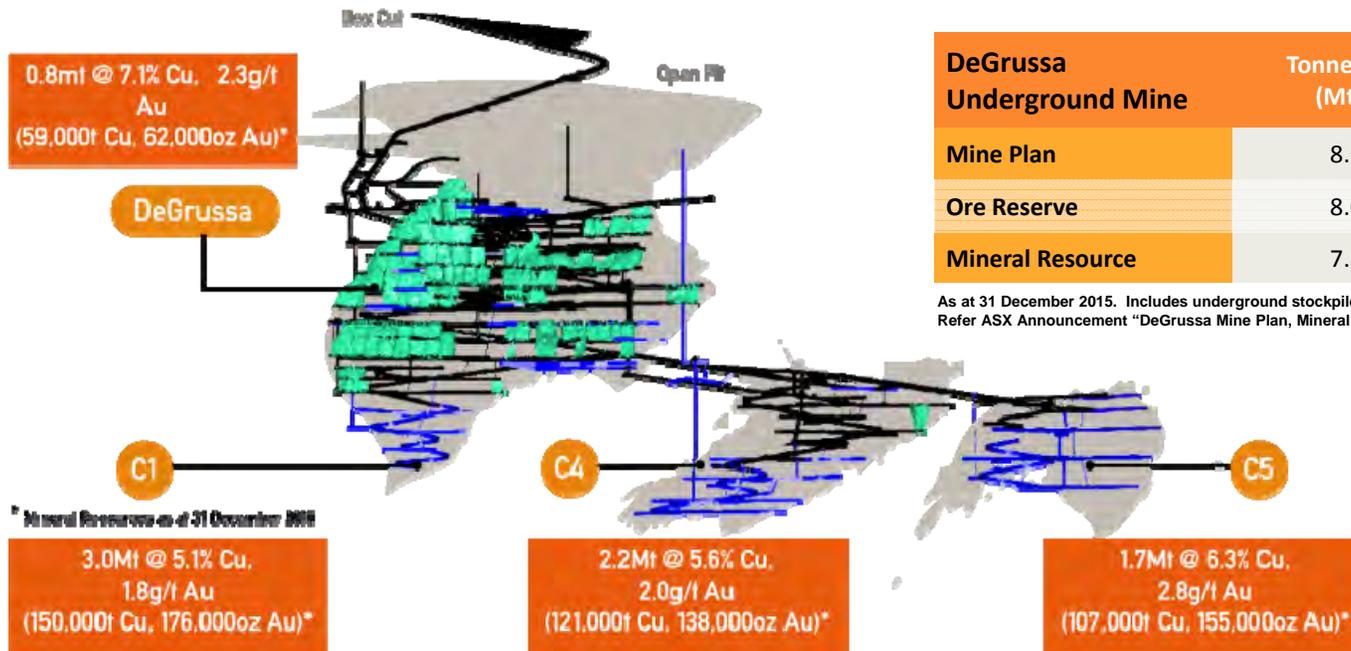


# Robust Underground Mine Performance



- Mining rate lifted to 1.6Mtpa
- Current production from DeGrussa and C1 deposits
- C4 commenced in FY2016 and from C5 in FY2017
- 31km of underground development completed to date

# Robust Underground Mine Performance



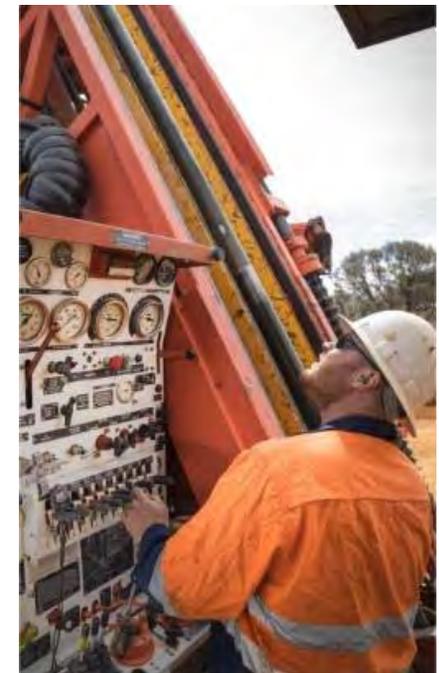
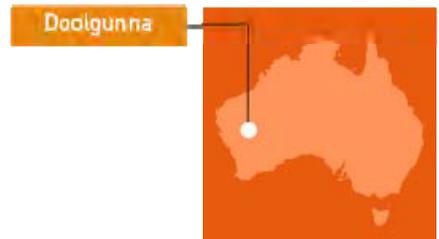
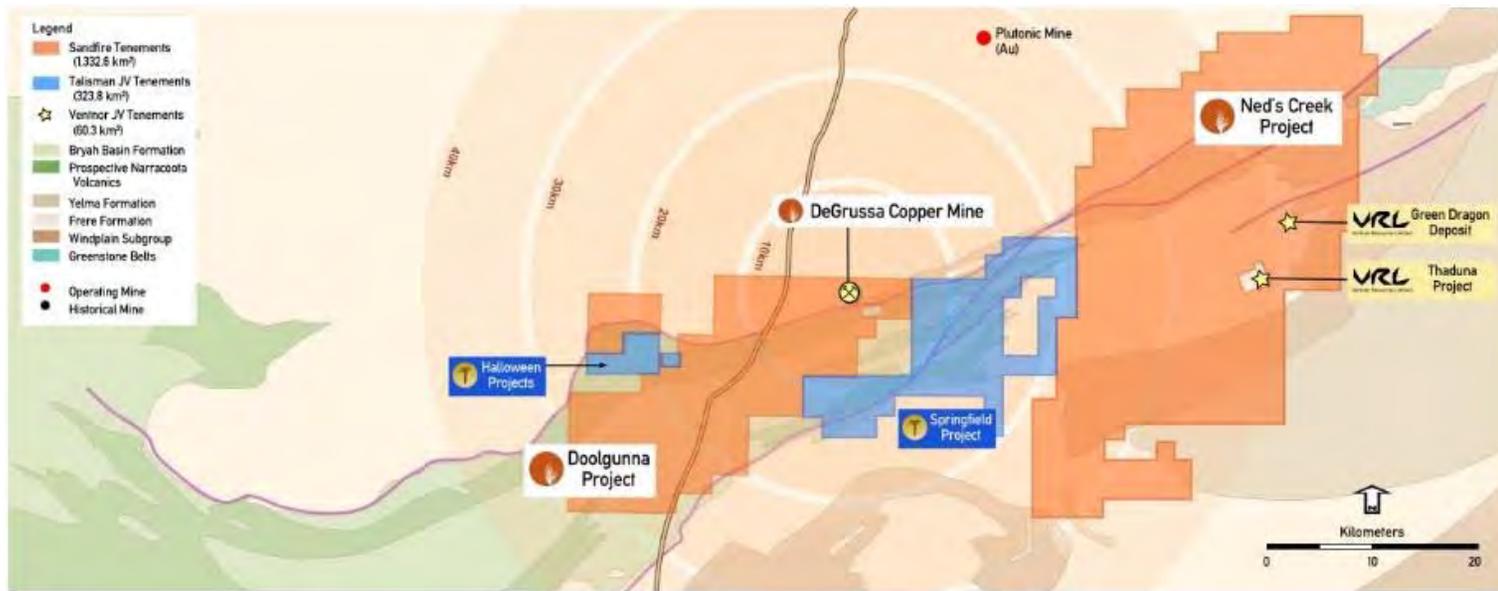
DeGrussa Underground Mine	Tonnes (Mt)	Copper (%)	Gold (g/t)	Contained Copper (t)	Contained Gold (oz)
Mine Plan	8.1	4.4	1.7	357,000	443,000
Ore Reserve	8.0	4.4	1.7	353,000	441,000
Mineral Resource	7.8	5.7	2.1	443,000	536,000

As at 31 December 2015. Includes underground stockpiles.  
Refer ASX Announcement "DeGrussa Mine Plan, Mineral Resource and Ore Reserve Update", 14 April 2016

- ▶ Mining rate ~1.6Mtpa with current production from DeGrussa, C1 and C4 deposits
- ▶ ~35km of mine development completed to date
- ▶ First production from C5 brought forward to June 2016



# Doolgunna – world-class exploration upside



- ▶ Dominant 1,600km<sup>2</sup> ground position in WA's premier emerging copper belt
- ▶ Only operating processing facility in the District
- ▶ Outstanding potential: 65km strike length of prospective VMS horizons
- ▶ Significant new high-grade discovery within Springfield Project (Talisman Farm-In) upgrades district-wide VMS potential – multiple emerging target areas

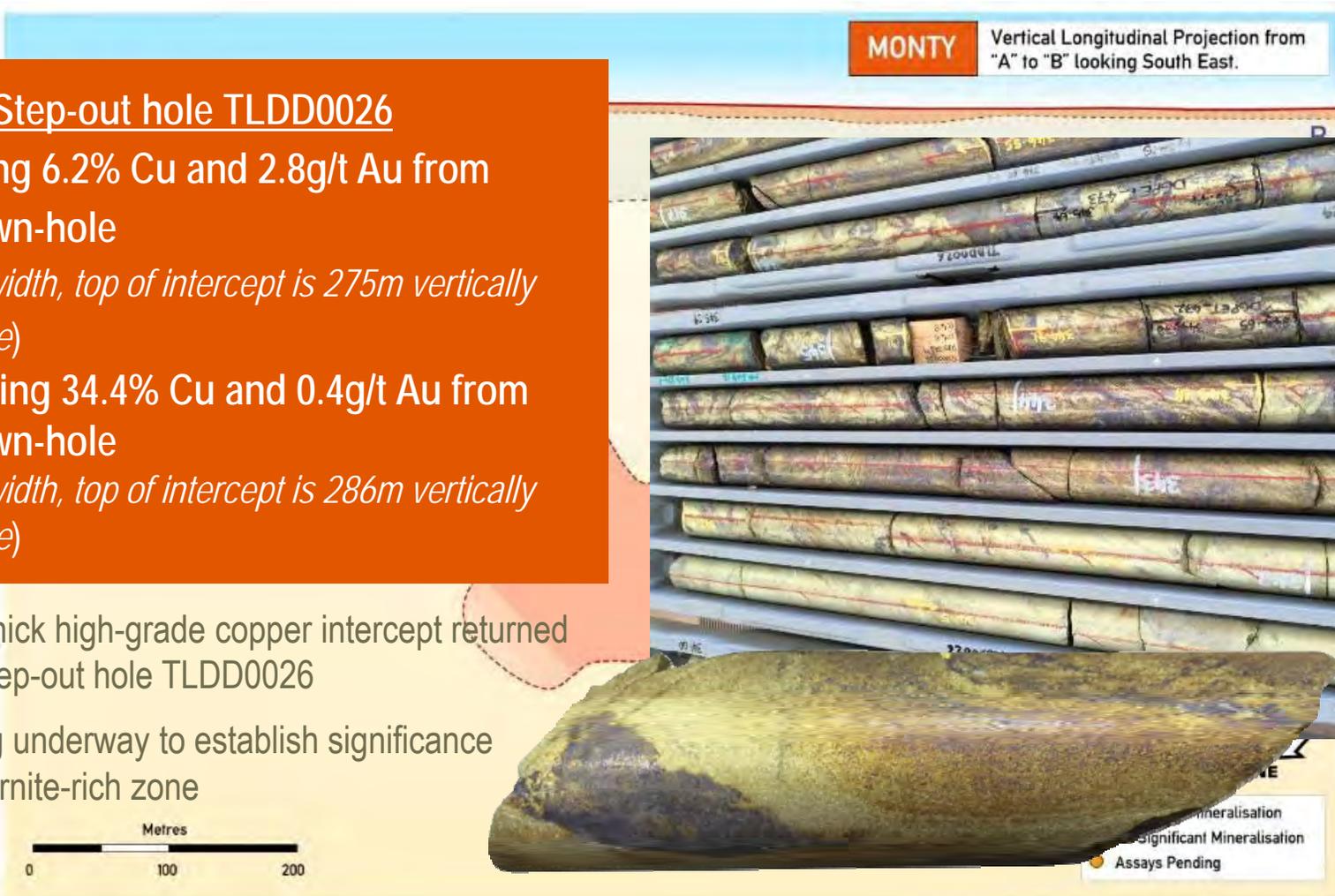


# Monty – latest developments

## Step-out hole TLDD0026

- 7.3m grading 6.2% Cu and 2.8g/t Au from 325.6m down-hole  
*(down-hole width, top of intercept is 275m vertically below surface)*
- 21.6m grading 34.4% Cu and 0.4g/t Au from 339.4m down-hole  
*(down-hole width, top of intercept is 286m vertically below surface)*

- Outstanding thick high-grade copper intercept returned from recent step-out hole TLDD0026
- Further drilling underway to establish significance and size of bornite-rich zone



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# Monty – High-grade VMS Copper-Gold Discovery

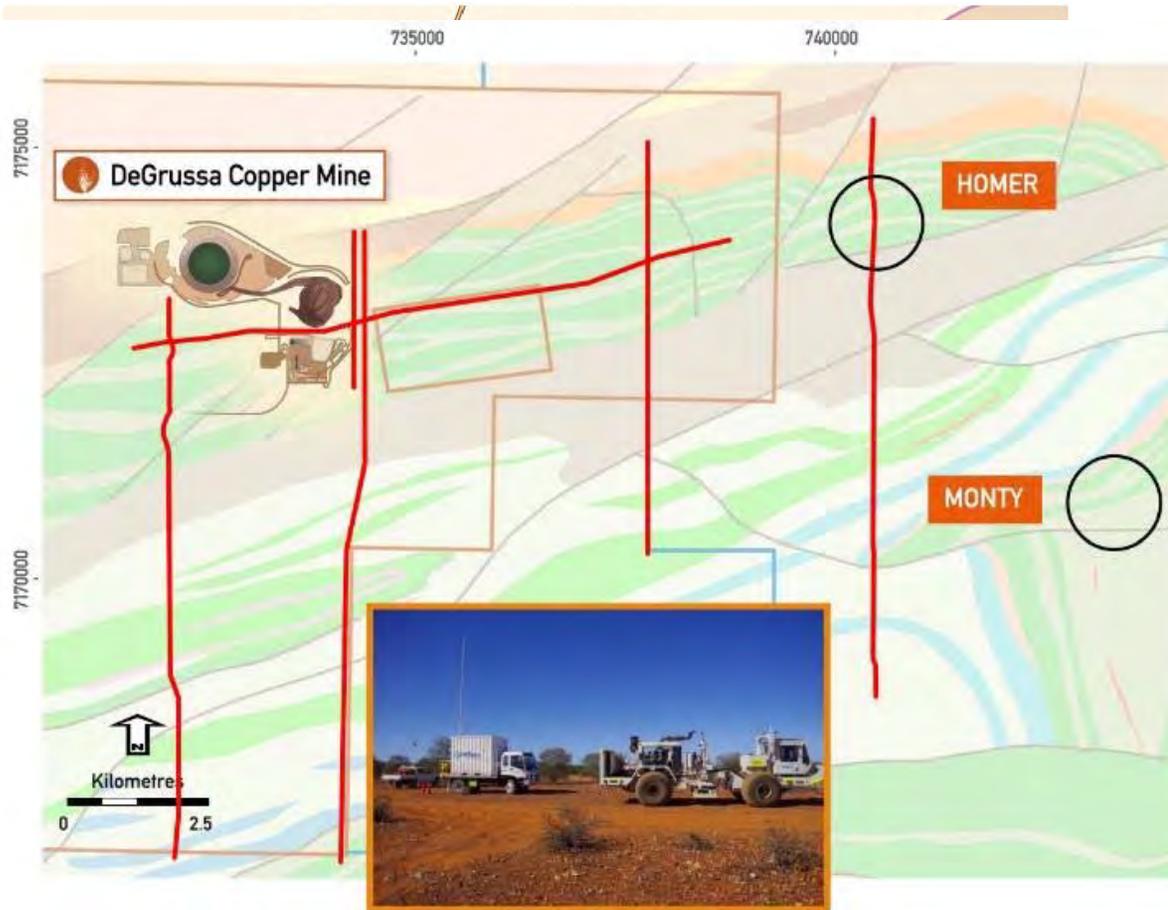


- ▶ Monty resource drill-out finalised with 82 diamond drill-holes completed since discovery in June 2015
- ▶ Maiden JORC 2012 Mineral Resource estimate:
  - Total Indicated and Inferred Mineral Resource of 1.05Mt grading 9.4% Cu and 1.6g/t Au for 99,000t of contained copper, 55,000oz of contained gold
  - Includes a high-grade massive sulphide resource of 763,000t grading 12.1% Cu and 2.1g/t Au for 92,000t of contained copper and 52,000oz of contained gold
  - 99% of the Mineral Resource is reported in the Indicated Resource category, available for later conversion to Ore Reserves
- ▶ Confirms the potential for the overall Doolgunna VMS field to host multiple centres of mineralisation
- ▶ High level studies underway to investigate optimal pathway to production, including assessment of the utilisation of the DeGrussa plant and infrastructure



Refer ASX Announcement "Maiden High-Grade Mineral Resource for Monty VMS Deposit", 13 April 2016

## Other Opportunities – Seismic, Geophysics and Litho-geochemistry



- 34km HiSeis seismic data acquisition program completed over DeGrussa Mine Corridor
- Processing of data completed with results to be used to help define basin architecture:
  - *location and depth of prospective stratigraphy*
  - *location of faults*
- Other ongoing techniques include high-powered down-hole EM surveys of all completed RC and DD holes
- Litho-geochemistry processing continuing to refine mineralisation signatures and aid drill targeting

# Australian Regional Exploration Projects



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



## EXPLORATION:

### Queensland Base Metals

- ▶ 2,400km<sup>2</sup> in Mt Isa-Cloncurry province
- ▶ 100km strike length with outstanding potential for Broken Hill/Cannington-style and IOCG mineralisation
- ▶ Key targets include Breena Plains, Altia and Black Rock – exploration ongoing

## EXPLORATION:

### NSW Base Metals

- ▶ 2,100km<sup>2</sup> in Lachlan Fold Belt
- ▶ Outstanding potential for porphyry mineralisation
- ▶ Multiple targets at Wingrunner, Marsden South, Bland Creek
- ▶ Initial round of drilling completed in 2015, follow-up being planned
- ▶ Portfolio recently expanded with Temora and Currumburrama acquisitions

## EXPLORATION:

### South Australian IOCG Project

- ▶ 640km<sup>2</sup> in Gawler Craton
- ▶ Potential for IOCG copper-gold discoveries

# Investment in Tintina Resources / Black Butte Copper Project



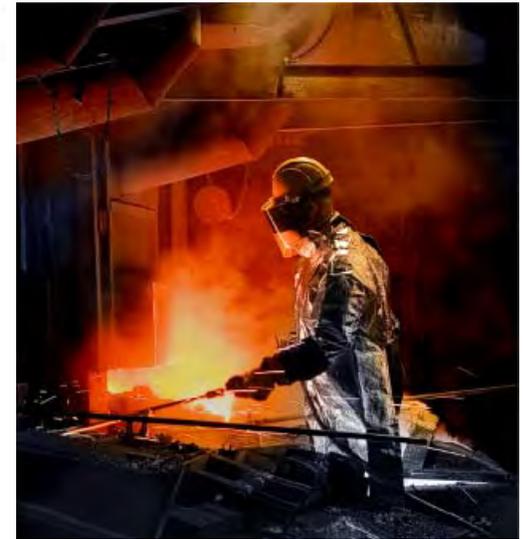
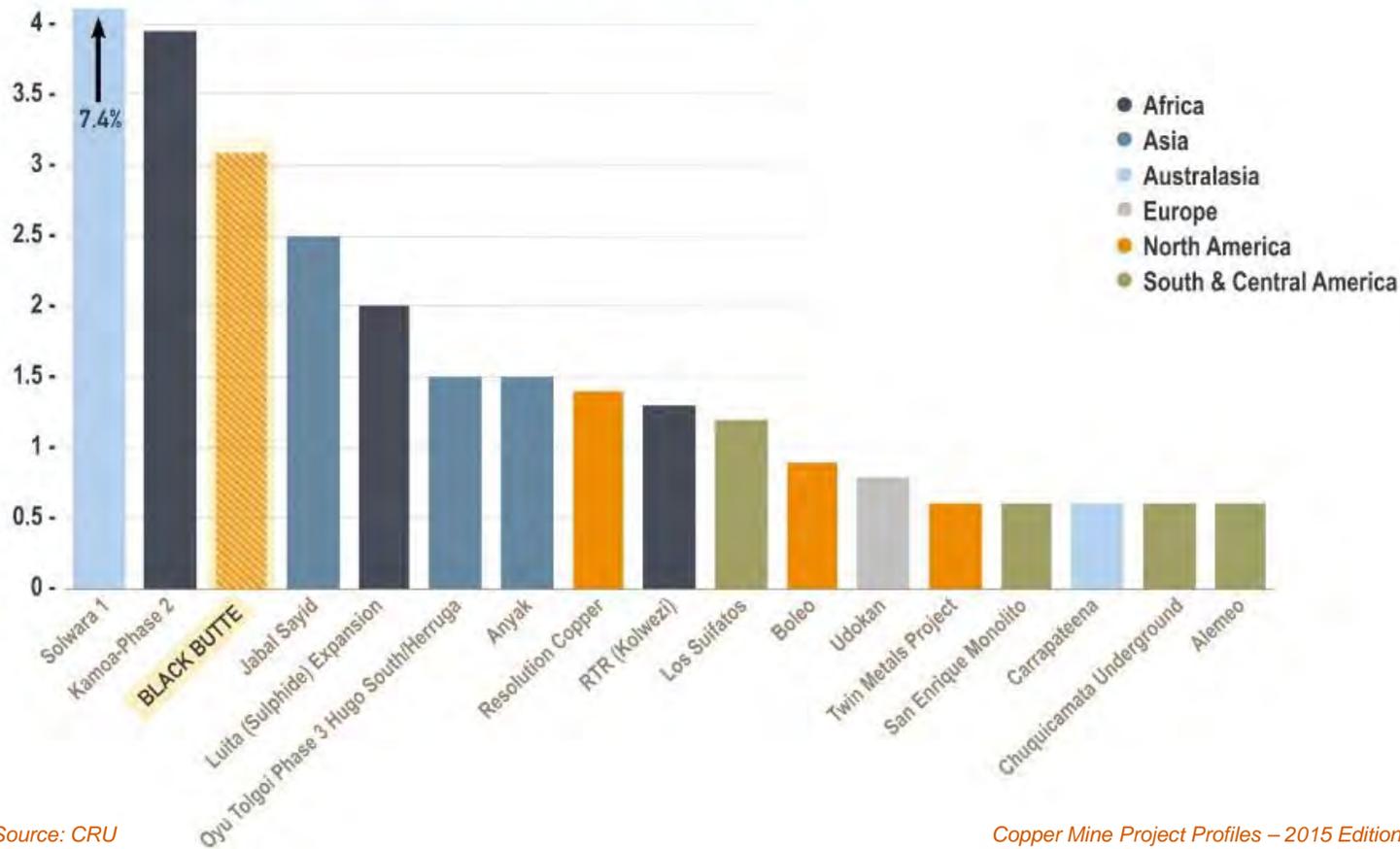
- ▶ 57% stake in copper development company Tintina Resources (TSX-V: TAU)
- ▶ Developing the Black Butte Copper Project, central Montana, USA
- ▶ Advanced, high quality copper project in stable jurisdiction:
  - NI 43-101 Measured and Indicated Resources of 15.7Mt grading 3.4% Cu for 533,600t of contained copper
  - NI 43-101 Inferred Resources of 2.3Mt grading 2.8% Cu for 63,500t of contained copper
- ▶ Outstanding near-mine and district-wide exploration potential
- ▶ Development studies underway
- ▶ Application for Mine Operating Permit (MOP) for Johnny Lee copper deposit lodged with Montana Department of Environmental Quality (DEQ)



# Tintina Resources – A Top-10 Global Copper Opportunity



Top copper projects (undeveloped) by grade, % Cu



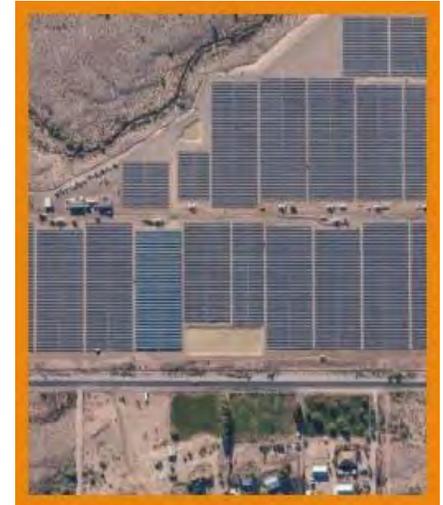
Source: CRU

Copper Mine Project Profiles – 2015 Edition

# Sustainability – DeGrussa Solar Power Project

First-mover renewable energy project with potential to reduce costs and CO<sub>2</sub> emissions

- 10.6MW solar power station being constructed at DeGrussa
- To be fully integrated with existing 19MW diesel-fired power station
- \$40M project being financed, developed and operated by international consortium
- Establishes DeGrussa as potential world-leading reference site for use of renewables
- Expected to be one of the largest integrated off-grid solar power systems in the global mining industry
- Expected reduction in CO<sub>2</sub> emissions by 12,000 tonnes per year
- Completion targeted by early 2016



# Summary and Outlook

Continued strong outlook for FY2016 and beyond

- Discovery of a high grade province
- Development of a high class mining operation in record time
- New chapter of organic discovery success and growth at DeGrussa
- Strong cash flow funding growth and shareholder returns
  - Continued dividend stream for shareholders
  - Committed exploration to further extend mine life
  - Cornerstone position acquired in high-grade USA copper project
- Working with all stakeholders, sustainable developments
- 'Doing it right from the beginning'
- Emerging international and domestic growth pipeline

A premier Australian copper-gold company





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# DeGrussa Mine Plan, Mineral Resource and Ore Reserve



## Maiden C5 Ore Reserve delivered

DeGrussa Underground Mine	Tonnes (Mt)	Copper (%)	Gold (g/t)	Contained Copper (t)	Contained Gold (oz)
Mine Plan	8.1	4.4	1.7	357,000	443,000
Ore Reserve	8.0	4.4	1.7	353,000	440,000
Mineral Resource	7.8	5.7	2.1	443,000	536,000

DeGrussa Underground Mine by Orebody	Tonnes (Mt)	Stockpiles (Mt)	DG (Mt)	C1 (Mt)	C4 (Mt)	C5 (Mt)
Mine Plan	8.1	0.1	0.9	3.1	2.2	1.8
Ore Reserve	8.0	0.1	0.9	3.0	2.2	1.8
Mineral Resource	7.8	0.1	0.9	3.0	2.1	1.7

