



**SANDFIRE RESOURCES NL**

A QUALITY COPPER-GOLD COMPANY ASX Code - SFR

24 January 2017

ASX Limited  
Level 40, Central Park  
152-158 St George's Terrace  
Perth WA 6000

**LODGEMENT OF DECEMBER 2016 QUARTERLY REPORT, QUARTERLY UPDATE PRESENTATION  
AND INVESTOR CONFERENCE CALL AND WEBCAST**

I am pleased to attach the following items for immediate release to the market:

1. December 2016 Quarterly Activities Report
2. December 2016 Quarterly Update Powerpoint Presentation

In addition, a teleconference and live webcast on the December 2016 Quarterly Report will be held for the investment community at 10.00am (AWST) / 1.00pm (AEST) today.

The webcast and synchronised slide presentation is available through the Company's website or through BRR Media.

Live date: Tuesday, 24 January 2017

Access this webcast at: <http://webcasting.boardroom.media/broadcast/587d3d20691f35760202e2ba>  
<http://www.sandfire.com.au>

Yours sincerely,

**Matt Fitzgerald**  
**Chief Financial Officer**  
**and Company Secretary**



## QUARTERLY REPORT

### For the period ended 31 December 2016

#### Highlights

#### Production & Operations

Contained metal production	September 2016 Quarter	December 2016 Quarter	December 2016 Half Year	FY2017 Guidance
<b>Copper (t)</b>	15,610	18,130	33,740	65,000 – 68,000
<b>Gold (oz)</b>	9,731	10,183	19,914	35,000 – 40,000
<b>C1 cost (US\$/lb)</b>	1.06	0.81	0.92	0.95 - 1.05

- Strong mine production and milling rates maintained for the Quarter.
- FY2017 production guidance maintained: 65-68kt Cu and 35-40koz gold at C1 ~US0.95-1.05/lb.
- Development of the mine and primary ventilation system largely complete, with the mining contractor decreasing its development equipment.

#### Development & Exploration

- Feasibility Study continuing on the Monty Copper-Gold Project (Springfield JV), with the study on track for completion in the March 2017 Quarter.
- Multi-pronged exploration programs continuing at both Sandfire's Doolgunna Project and within the Springfield JV.
- First reconnaissance AC drilling commenced at the Ned's Creek Project.
- Data compilation and targeting commenced on the Enterprise Metals farm-in project.

#### Corporate

- Sandfire to be debt-free following the planned repayment of the \$50M balance in its Revolver Facility on 31 January 2017, nearly 12 months ahead of schedule (see separate ASX Announcement today, 24 January 2017).
- Retirement of long-serving Director, Mr John W Evans, from the Sandfire Board after nearly a decade with the Company. Effective from 31 December 2016, highly experienced and strongly-credentialed mining executive, Dr Roric Smith, will join the Board as an independent Non-Executive Director.
- Group cash on hand as at 31 December 2016: \$107 million.

## 1.0 SAFETY PERFORMANCE

The Total Recordable Injury Frequency Rate (TRIFR) for the Sandfire Group at the end of December was 6.3. Recordable injuries include those that result in any days away from work (Lost Time Injuries), of which there was one in the Quarter, and those where an employee or contractor cannot perform all or any part of their normal shift (Restricted Work Day Injuries), as well as any injury that requires services that only a medical practitioner can provide (Medical Treatment Injuries).

Safety systems development continues to focus on prevention of incidents and improving the culture of employees and contractors, with Principal hazard management a key theme.



Figure 1: Diamond drilling, Conductor 5 East (left); Massive sulphides in Conductor 5 stope (centre); Monty diamond drill core (right)

## 2.0 OPERATIONS OVERVIEW

Copper production for the December Quarter was 18,130 tonnes (September Quarter: 15,610 tonnes). C1 cash operating costs for the Quarter were US\$0.81/lb (September Quarter: US\$1.06/lb), driven by higher production, lower costs and higher by-product credits.

Mine production for the Quarter was 389,087 tonnes grading 4.8% Cu. During the Quarter, ore was sourced from all lenses at DeGrussa.

A total of 413,625 tonnes of ore grading 4.8% Cu was milled for the December Quarter, with copper recovery averaging 91.3%.

## 3.0 MINING & PRODUCTION

### 3.1 Overview

December 2016 Quarter – Production Statistics		Tonnes	Grade (% Cu)	Grade (g/t Au)	Contained Copper (t)	Contained Gold (oz)
Concentrator	Mined	389,087	4.8	1.6	18,841	20,513
	Milled	413,625	4.8	1.7	19,849	22,847
<b>Production</b>		<b>73,763</b>	<b>24.6</b>	<b>4.3</b>	<b>18,130</b>	<b>10,183</b>

**Note:** Mining and production statistics are rounded to the nearest 0.1% Cu grade and 0.1 g/t Au grade. Errors may occur due to rounding. Production Statistics are subject to change following reconciliation and finalisation subsequent to the end of the Quarter.

### 3.2 Underground Mining

During the Quarter, production was sourced from all lenses at DeGrussa with the mine remaining in balance between production and back-fill. The majority of stopes performed as planned during the Quarter and there are now sufficient work fronts that allow flexibility in the schedule.

Development of the mine and the primary ventilation system is largely complete with the contractor decreasing its development equipment. The focus will now turn to stoping as the primary source of ore.

Work also commenced on the main underground pump station that is targeted for completion in the June 2017 Quarter.

### 3.3 Processing

Key processing metrics for the December 2016 Quarter included:

- 413,625 tonnes milled at an average feed grade of 4.8% Cu (September Quarter: 393,031 tonnes at 4.4% Cu);
- Overall copper recovery of 91.3% (September Quarter: 89.6%);
- Concentrate production of 73,763 tonnes (September Quarter: 64,285 tonnes); and
- Metal production of 18,130 tonnes of contained copper and 10,183 ounces of contained gold (September Quarter: 15,610 tonnes of contained copper and 9,731 ounces of contained gold).

Mill throughput in the December Quarter was impacted by a 40-hour unplanned outage to conduct a full replacement of a torn conveyor belt and a number of planned shutdowns to complete other scheduled corrective and preventative maintenance works.

Further optimisation of the primary grinding circuit is scheduled for implementation in the January 2017 planned maintenance shut.

Copper recovery for the December Quarter was in line with the predicted recovery based on the resource copper grade and Cu:S ratio.

Sandfire continues to pursue opportunities for further improvements in copper recovery, including the installation of additional rougher flotation capacity.

### 3.4 Guidance – FY2017

Targeted copper production for FY2017 remains unchanged with production expected to be in the range of 65-68,000 tonnes of contained copper metal with gold production within the range of 35-40,000 ounces. Headline C1 cash operating costs are expected to be within the range of US\$0.95-1.05 per lb.

C1 unit costs are expected to report marginally higher in 2HFY2017 (to around ~US\$1.00 per lb) due to the planned and guided reduction in underground development capital work. This will result in increased mining overheads per unit of copper production.

Mine production is forecast at 1.53Mt with the processing of 1.63Mt of ore achieved via the pull-down of ROM stocks in 1HFY2017.

## 4.0 SALES AND MARKETING

### 4.1 Copper Concentrate Shipments

A total of 83,929 dry metric tonnes of concentrate containing 20,456 tonnes of copper (19,613 tonnes payable) and 12,309 ounces of gold (11,374 ounces payable) was sold for the Quarter. 8 shipments were completed from Port Hedland and Geraldton.

## 5.0 FEASIBILITY STUDIES & METALLURGY

### 5.1 Monty Copper-Gold Project

The Springfield Unincorporated Joint Venture comprises participating interests of Sandfire (70%) and Talisman Mining Limited (ASX: TLM; "Talisman") (30%).

The Feasibility Study on the Monty Project continued during the Quarter.

Several work streams are continuing as part of this Feasibility Study, with a number of components now completed including:

- Metallurgical testwork on comminution and flotation;
- Geotechnical and hydrological studies;
- A final mine design and schedule with stoping, ore access and ventilation designs;
- Proposed box-cut and decline locations;
- Design of the surface layout of infrastructure, stockpile locations and other facilities; and
- The design of the haul road route between the DeGrussa operations and the Monty Project.

Following completion of the haul road design, a Miscellaneous Licence was submitted to the DMP.

The scenario to be used as the base case for the Feasibility Study involves the acceleration of mining at Monty given its high grades. The study will investigate mining rates at the DeGrussa underground mine being adjusted to match the overall capacity of the DeGrussa processing plant (currently 1.6Mtpa). This will allow both mines to be scheduled to complete mining around the same time, based on the current DeGrussa Mine Plan, which optimises the use of the existing DeGrussa processing plant.

Given the proximity of Monty to the existing DeGrussa Copper Mine, it is envisaged that a number of mining, administrative and support services will be provided by the existing mining and infrastructure services and facilities at DeGrussa.

In parallel with the Feasibility Study, negotiations are continuing to progress formal agreements between Sandfire and Talisman relating to Monty construction and mining activities, as well as potential ore process routes and terms.

## 5.2 Oxide copper

An alternative process route for the Oxide Copper Project at DeGrussa is the use of glycine. This processing route will be further investigated when the terms of an agreement with the holders of glycine technology are agreed.

## 6.0 DOOLGUNNA EXPLORATION

*The Greater Doolgunna Project, which includes the Talisman Joint Venture and the Ned's Creek Project, provides an aggregate contiguous exploration area of 4,180km<sup>2</sup>. This includes over 65km of strike extent in VMS lithologies. Much of this stratigraphy is obscured beneath transported cover and requires systematic aircore (AC) drilling to test the bedrock geochemistry and identify prospective areas.*

### 6.1 Overview

Sandfire continues to progress a tightly focused, multi-disciplinary exploration campaign to test for extensions to the known cluster of VMS deposits at DeGrussa and Monty, and to unlock the broader potential of the Doolgunna region for additional VMS and structurally-hosted copper deposits.

Key components of the Company's exploration activity at Doolgunna during the December Quarter included:

- Diamond and RC drilling to test for potential extensions to the oxide copper mineralisation at the Monty deposit;
- Completion of structural and regolith modelling at Monty;
- Continuation of down-hole EM (DHEM) surveying across the Doolgunna and Springfield Project areas;
- AC drilling of prospective areas for geological interpretation and identification of geochemical anomalies for targeting purposes;
- Review and collation of data relating to Enterprise Metals' (ASX: ENT) Doolgunna Project, which adjoins Sandfire's Doolgunna tenements to the south, under the Farm-in Agreement signed with Enterprise in October 2016;
- RC drilling to test geochemically anomalous areas in the Doolgunna Project; and
- AC drilling at the Ned's Creek Project targeting shear-hosted epigenetic copper mineralisation.

The aggregate exploration metres drilled on Sandfire's wholly-owned and JV tenements during the December 2016 Quarter are summarised below:

Project	AC/RAB Drilling (m)	RC Drilling (m)	UG Diamond Drilling (m)	Surface Diamond Drilling (m)	Total Drilling (m)
Doolgunna (SFR 100%)	6,034	3,673	-	-	9,707
Ned's Creek (SFR 100%)	14,391	-	-	-	14,391
Springfield JV (SFR 70%)	13,710	1,344	-	525	15,579
Enterprise JV - EARN IN	-	-	-	-	-
<b>TOTAL Q2FY2017</b>	<b>34,135</b>	<b>5,017</b>	<b>-</b>	<b>525</b>	<b>39,677</b>
<b>TOTAL FY2017</b>	<b>76,898</b>	<b>13,230</b>	<b>5,567</b>	<b>7,119</b>	<b>102,814</b>

## 6.2 Springfield Joint Venture

The Springfield JV Project comprise the Springfield, Halloween and Halloween West Projects, which abut Sandfire's DeGrussa-Doolgunna tenements. The projects are being explored under a Joint Venture agreement with Talisman Mining Limited (ASX: TLM) under which Sandfire has earned 70%. All exploration expenditure at the Talisman Projects is now being jointly funded by Sandfire and Talisman on a 70:30 basis.

Exploration programs planned or currently in progress in the Springfield Joint Venture area include:

- Diamond drilling targeting potential depth extensions to the Monty Deposit;
- Ongoing down-hole Electromagnetic (DHEM) surveying of deep RC and DDH holes; and
- Continued systematic AC drilling over the Southern Volcanics.

The discovery of the high-grade Monty deposit bolsters the eastern Bryah Basin as a highly prospective exploration district with excellent potential for additional VMS discoveries.

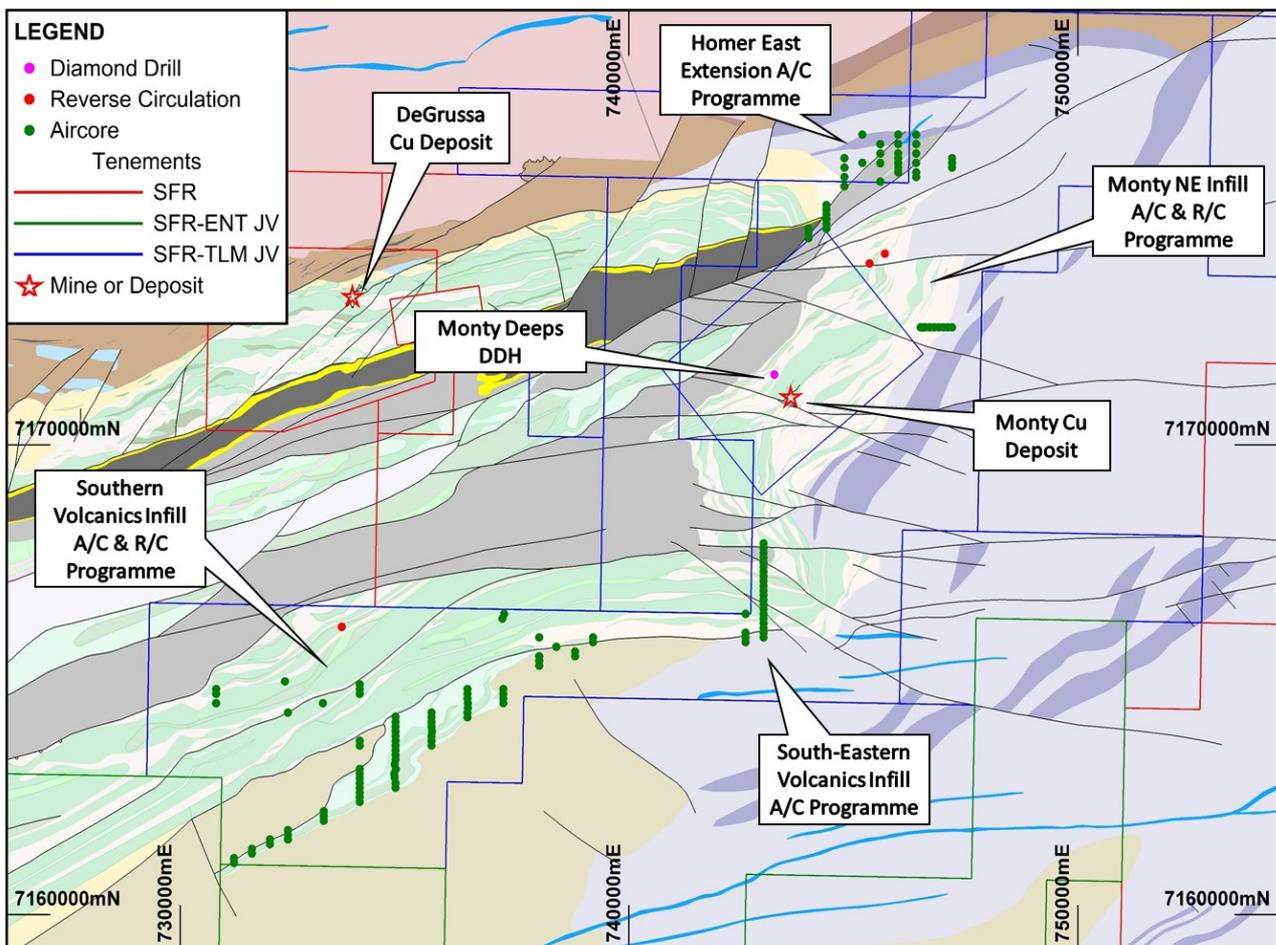


Figure 2: Completed drilling across the SFR-TLM Joint Venture tenements during the Quarter.

### Regional RC and AC Geochemistry Programme

AC drilling continued at the Springfield Project during the Quarter. A total of 147 holes were completed for a total drill advance of 13,710m. Drilling was targeted primarily in the Southern Volcanics Prospect with minor in-fill drilling at the Monty North East, Homer East and the South East Volcanics Prospects.

The locations of the drill holes are shown in Figure 2.

The drilling continues to inform the geological setting in the district. Analytical data from the AC drilling is appraised using a geochemical data evaluation protocol that has been developed by Sandfire for target generation in the Bryah Basin. Target areas will be subject to follow-up drilling and DHEM.

A total of three RC drill holes were drilled for an aggregate advance of 1,344m. Two holes were targeted at Monty North East, where work in the previous quarter had identified an anomalous multi-element signature.

The drilling intersected dolerite, basalt, siltstone, sandstone and quartz pebble conglomerate with minor jasper and chert, which is interpreted as the same host sediment horizon seen at Monty.

One hole was drilled in the Southern Volcanics and intersected dominantly dolerite.

### Monty

A deep diamond hole, TLDD113A, was completed to a depth of 1,213m. The hole intersected a sedimentary package in the projected down-dip position of the Monty host sediment horizon at approximately 988m down-hole. There was no mineralisation or alteration seen in the core and the DHEM completed showed no on-hole or off-hole EM response in the surrounding area.

Additional deep drilling in the Monty area is proposed for the coming quarters.

### 6.3 Doolgunna Project – 100% Sandfire

During the Quarter, drilling focused on the Homestead area and the Red Bore East Prospect, located to the south-west and east of DeGrussa respectively. A total of 11 RC and 330 AC holes were completed for a total advance of 3,673m.

Seven geochemical targets in the Homestead area were targeted using RC drilling. No ore grade mineralisation was intersected although encouraging alteration was noted in several drill-holes. DHEM is planned to identify any conductors in proximity to the drill-holes.

One RC drill-hole was completed at Red Bore East to assess a previously untested portion of the stratigraphic unit that hosts the DeGrussa deposit. No visible mineralisation was observed. DHEM is planned for this drill-hole.

Analytical results from the AC and RC drilling will be used for anomaly identification and target vectoring purposes.

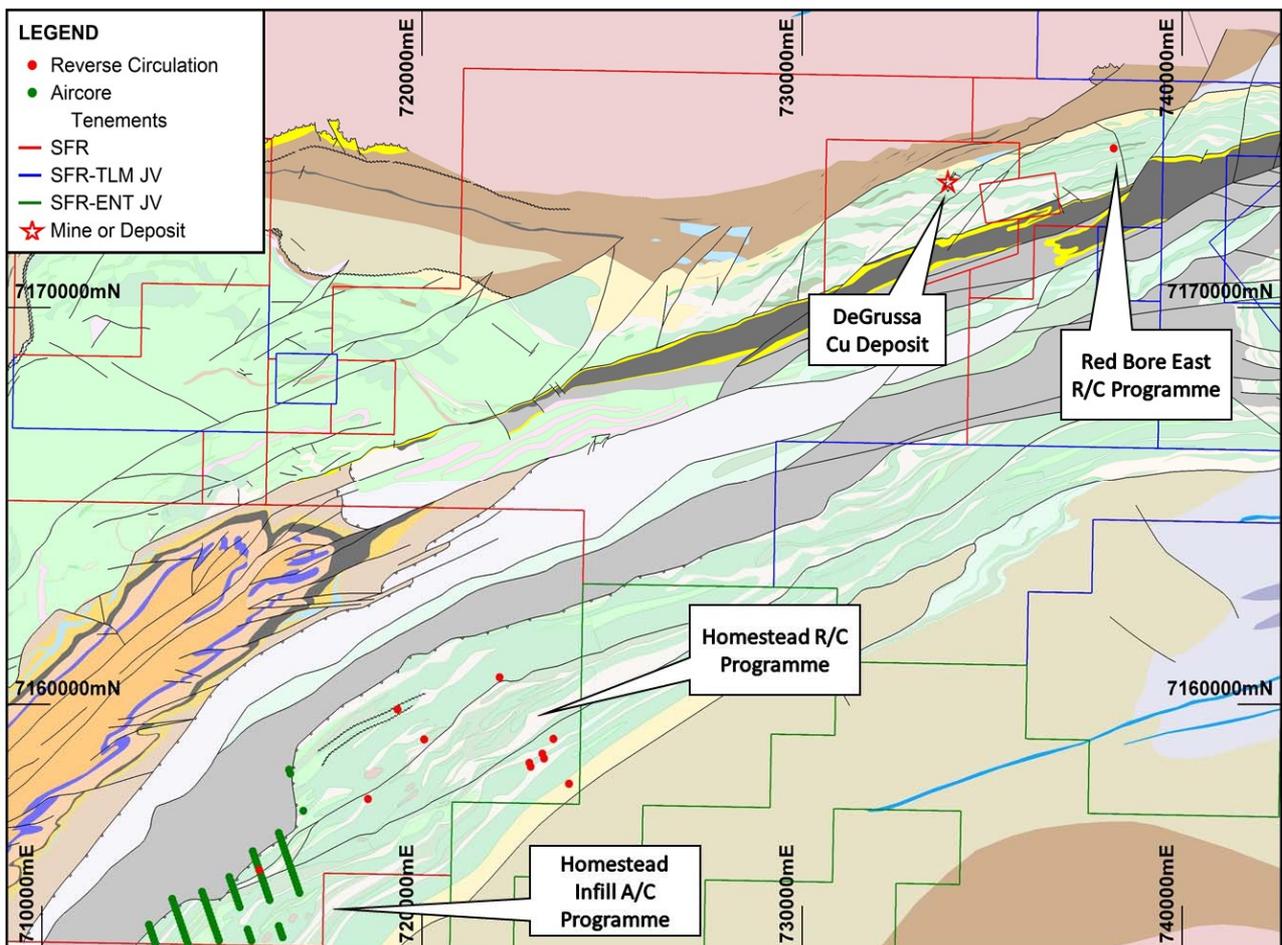


Figure 3: Completed drilling across the SFR Doolgunna tenements during the Quarter.

## 6.4 Ned's Creek Project (including Thaduna)

The Ned's Creek Project comprises over 900km<sup>2</sup> of prospective geology and surrounds the historical Thaduna Project, which is located 40km east of DeGrussa and represents the largest copper resource in the Doolgunna-Bryah Basin Region outside of Sandfire's DeGrussa-Doolgunna Project.

AC drilling commenced at the Ned's Creek Project in the middle of December Quarter. A total of 189 holes were completed for a total advance of 14,391m. The locations of the drill holes are shown in Figure 4.

Drilling targeted fault systems (interpreted from a detailed airborne magnetic survey completed earlier in the year) that exist in close proximity to known epigenetic copper mineralisation. Three preliminary target areas hosting multiple fault systems were identified at East Green Dragon, Ricci Lee's and Rooney's. Drilling is ongoing.

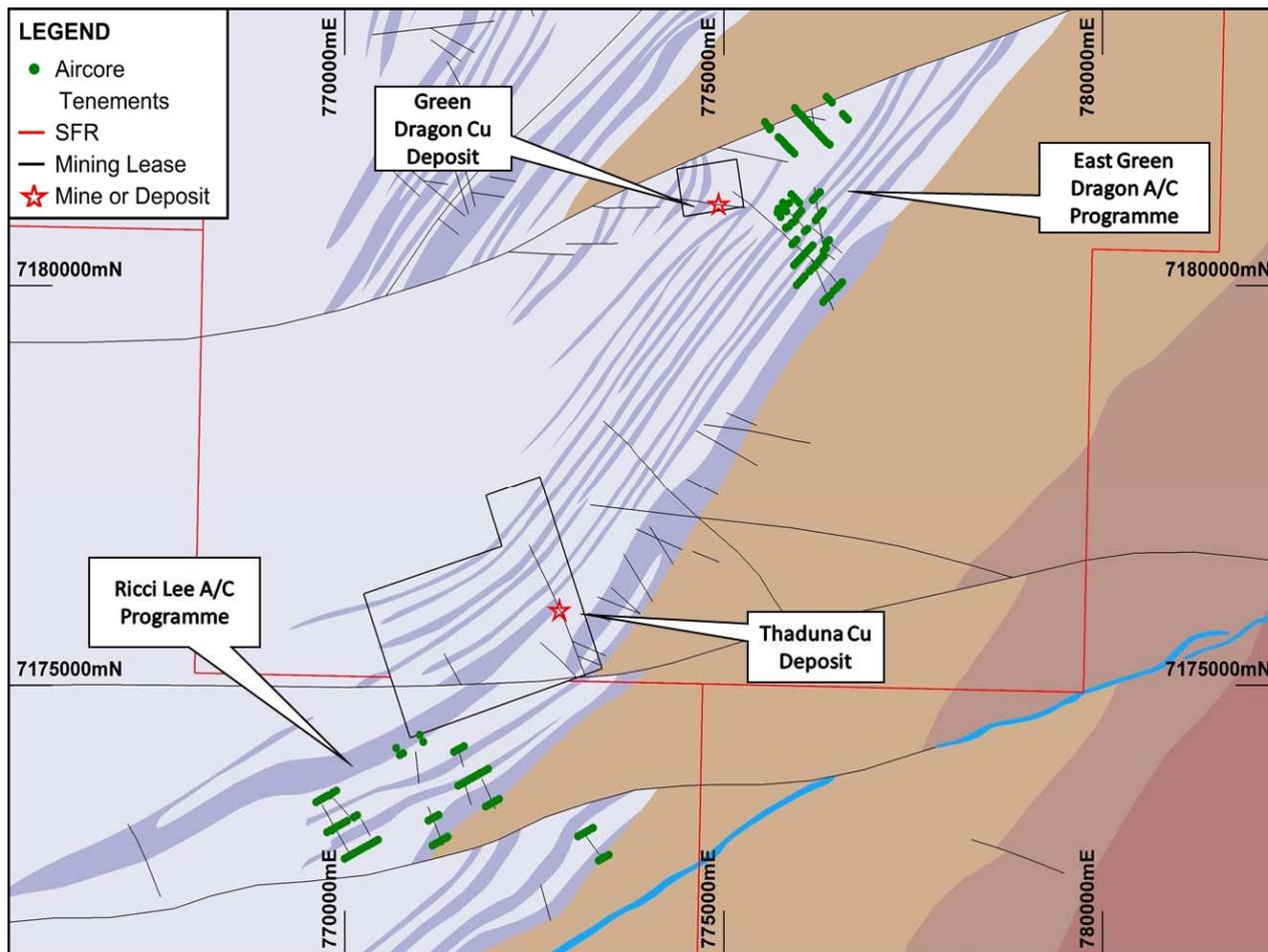


Figure 4: Completed drilling across the SFR Ned's Creek tenements during the Quarter.

## 6.5 Farm-in agreement with Enterprise Metals

As outlined in the Company's September 2016 Quarterly Report, in October Sandfire entered into a Farm-in Agreement with Enterprise Metals Limited (ASX: ENT) to earn up to a 75% interest in Enterprise's Doolgunna Project, which adjoins Sandfire's Doolgunna tenements to the south.

The Company considers that the Enterprise tenements offer the potential for new copper-gold discoveries.

During the December Quarter, the Company commenced data review and collation for the Enterprise tenements.

## 7.0 AUSTRALIAN EXPLORATION

Sandfire has a number of exploration joint ventures around Australia exploring for base and precious metals. The exploration programs are focused on prospective terranes with the potential for discovery of a significant new deposit that can be developed.

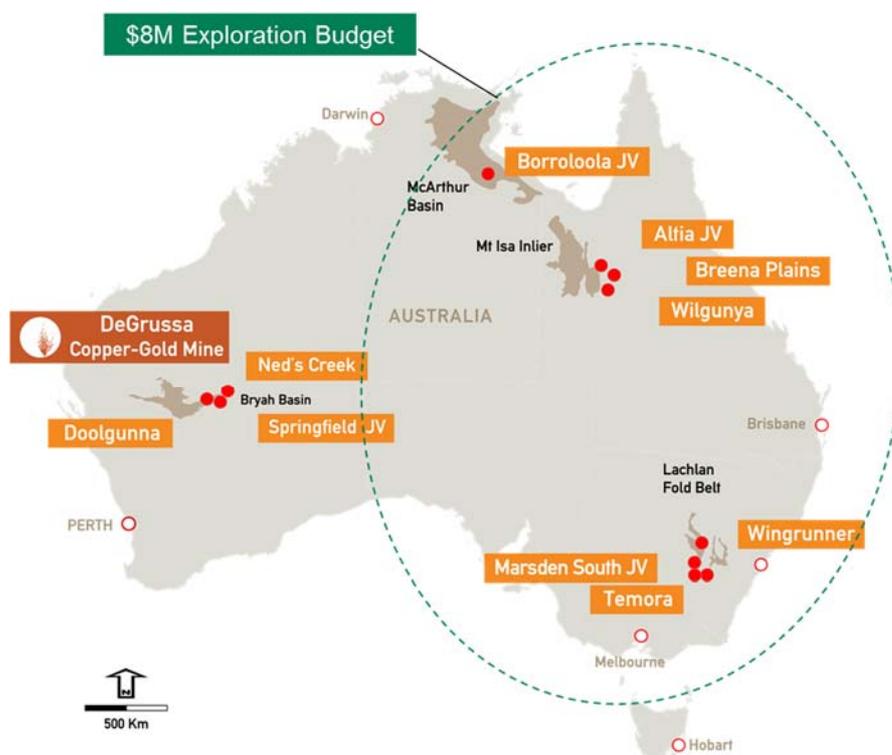


Figure 5: Sandfire's Eastern Australian Projects.

### 7.1 Borroloola Project

The Borroloola Project is located north of the McArthur River Mine (Xstrata), and is prospective for base metals and sedimentary manganese. Sandfire has signed two farm-out agreements to advance the Borroloola Project. The Batten Trough JV covering the eastern portion of the tenements is under an option and joint venture agreement with MMG Exploration Pty Ltd, which can earn up to an 80% interest. The Borroloola West JV covering the western portion is under an agreement with Pacifico Minerals Ltd, which has now earned a 51% interest in the Project and Sandfire is a contributing 49% JV partner.

Pacifico completed a program of 17 RC drill-holes across a number of prospects to test the prospective Barney Creek stratigraphy for base metals. Copper mineralisation was intersected at Copper Mine Creek, while lithologies considered prospective for lead and zinc were identified in other areas. A drilling program is planned to follow up on the best of these results next field season.

At the Batten Trough JV, MMG completed a program of diamond drilling focussed on the Rosie Creek prospect. Drilling intersected consistent zones of the Barney Creek formation, considered prospective for lead and zinc mineralisation. MMG has given notice that they have completed the second phase of the JV earn-in with expenditures of \$8 million within three years for a 60% interest in the project. MMG has elected to continue sole funding to earn a further 20% stake by completing a Pre-Feasibility Study.

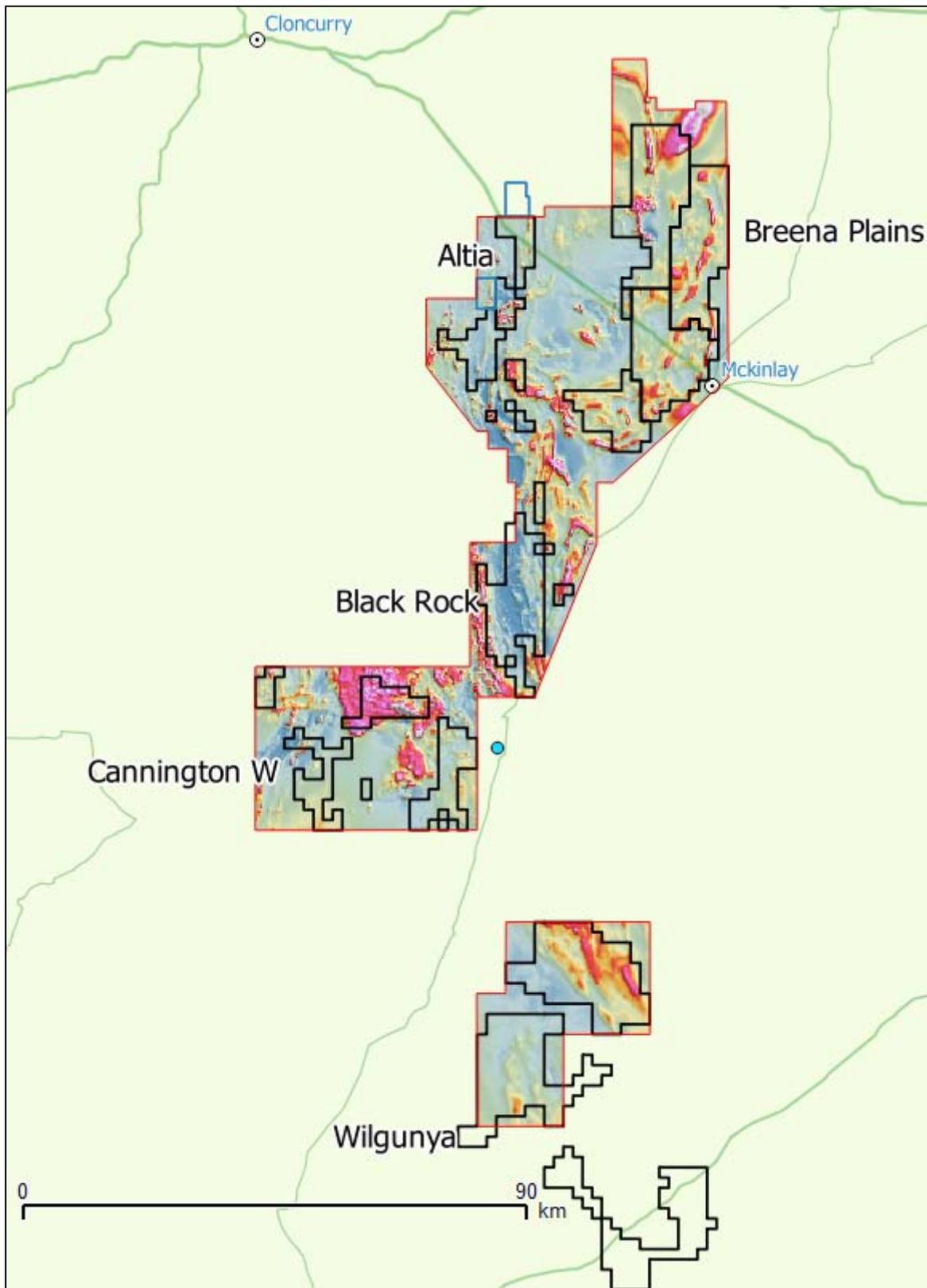
### 7.2 Queensland Projects

A number of projects are held in the eastern succession of the Mount Isa region south and east of Cloncurry in northwest Queensland which are prospective for Broken Hill type (BHT) lead-zinc-silver deposits such as the Cannington deposit (South 32) and the Ernest Henry iron oxide-copper-gold (IOCG) deposits (Xstrata). A Joint Venture is held over the Altia project with Minotaur Exploration Ltd (ASX: MEP) with the right to earn 80%.

The regional aeromagnetic survey has been completed over the majority of Sandfire's holdings in the Eastern succession.

At the Breena Plains Project, one diamond hole was drilled targeting a magnetic anomaly at BRLZ01, and two RC holes tested a combined magnetic and structural anomaly with anomalous geochemistry at BRCG03. In all cases the magnetic anomaly was explained but no significant mineralisation was identified.

A review of all tenure is currently underway and will inform exploration for the coming year.



**Figure 6:** Sandfire's Queensland tenure showing the five main project areas.

### 7.3 New South Wales Projects

A number of project areas are held in the Lachlan Fold Belt of New South Wales which are prospective for porphyry copper-gold mineralisation as found at Northparkes (China Moly), Cadia (Newcrest) and Cowal (Evolution). A farm-in agreement to earn up to 80% is held with Gold Fields Australasia Pty Ltd on the Marsden South Project.

A record amount of rainfall has fallen across the Lachlan this season, culminating in widespread flooding. This delayed the onset of the drilling season until mid-December.

#### 7.3.1 Temora Exploration

Diamond drilling has commenced at the Mag H1 prospect, targeting porphyry copper-gold mineralisation. Drilling is targeting a large geochemical anomaly defined north of the Gidginbung mine associated with intense alteration indicating deeper and hotter fluids leading to deeper porphyry-style mineralisation.

AC drilling as well as gravity and Induced Polarisation electrical (IP) surveys are planned to commence in the next quarter to better delineate the multiple prospective targets outlined on the Temora Project, including Rain Hill and Lawrences.

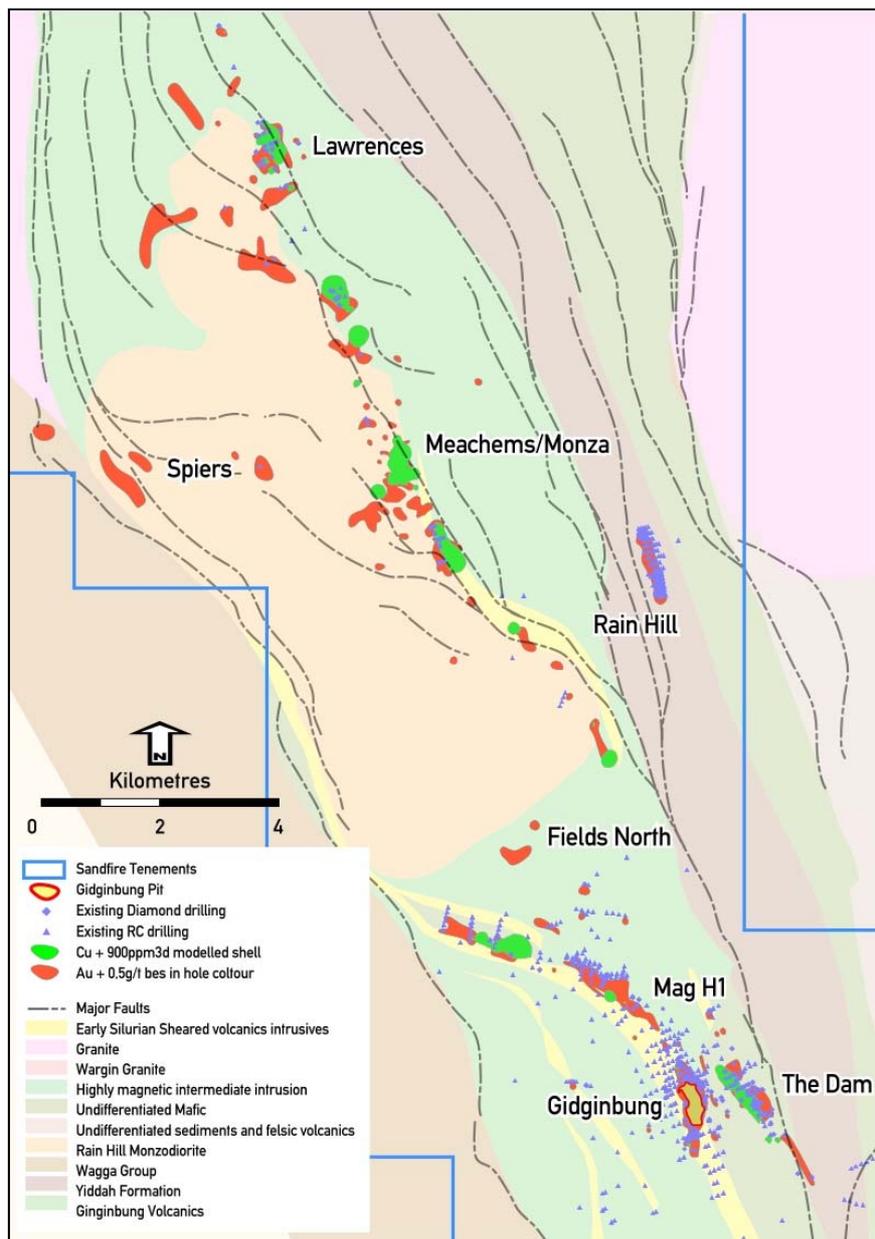


Figure 7: Temora Project in NSW showing highly prospective areas.

### 7.3.2 Wingrunner Exploration

A program of combined RC and diamond drilling has been planned to drill test the large geophysical and geochemical anomaly outlined at the SE Bogan Prospect.

These drilling programs will be completed within the current field season.

## 8.0 INTERNATIONAL PROJECTS

### 8.1 WCB Resources – Misima Copper Project, PNG

*Sandfire holds a 38.38% interest in WCB Resources Ltd (“WCB”; TSX-V: WCB), a Toronto-listed copper-gold explorer, which it acquired by subscribing for shares in a A\$5.9M private share placement. WCB is earning a 70% interest in the Misima Island exploration lease through a joint venture with Pan Pacific Copper (“PPC”), an integrated copper mining and smelting company that is jointly owned by JX Nippon Mining & Metals Corporation and Mitsui Mining & Smelting Company Ltd. The Misima Project is located within a porphyry belt which contains four of the world’s richest primary grade copper and gold porphyries including Grasberg (4.9 billion tonnes @ 0.8% Cu and 0.7g/t Au), Ok Tedi (1.7 billion tonnes @ 0.7% Cu and 0.6g/t Au), Golpu (1 billion tonnes at 0.9% Cu and 0.6g/t Au) and Panguna (1.4 billion tonnes @ 0.5% Cu and 0.6g/t Au) (Production + Resources, Interra 2014).*

Further details can be found in WCB’s News Releases, which are available at the WCB Resources website, [www.wcbresources.com](http://www.wcbresources.com).

### 8.2 Tintina Resources – Black Butte Copper Project, USA

*Sandfire holds a 61% interest in Vancouver-based copper development company, Tintina Resources (TSX.V: TAU). Tintina’s key asset is a 100% interest in the premier, high-grade Black Butte Copper Project, located near Helena in the State of Montana in the United States. The project is located close to existing road, power and rail infrastructure, with the ability to access a residential workforce located nearby and competitive sources of materials and power.*

*Located on private ranch land in central Montana, the Black Butte Project copper resource consists of three flat-lying sedimentary hosted copper deposits which have been extensively drilled by Tintina (over 53,000m of diamond drilling).*

*An Updated Technical Report and Preliminary Economic Assessment (PEA) completed by Tintina in July 2013 was based on reported NI 43-101 Measured and Indicated Resources totalling 15.7 million tonnes grading 3.4% Cu, 0.1% Co and 14g/t Ag for 533,600 tonnes of contained copper and Inferred Resources totalling 2.3 million tonnes grading 2.8% Cu, 0.09% Co and 14g/t Ag for 63,500 tonnes of contained copper (calculated using a 1.6% copper cut-off grade) for the Johnny Lee Upper Zone and Lowry deposits, and a 1.5% Cu cut-off for the Johnny Lee Lower Zone).*

*The PEA confirmed that the deposit has the potential to underpin a robust underground mining operation with forecast life-of-mine production of ~30,000tpa of copper-in-concentrate over a mine life of ~11 years, based on total mill throughput of 11.8 million tonnes at an average head grade of 3.1% Cu.*

During the Quarter, Sandfire increased its stake in North American copper development company Tintina from 57% to 61%, by subscribing in full for its entitlement as part of a rights issue. The proceeds will be used to continue to progress permitting and development plans for Tintina’s flagship Black Butte Copper Project in Montana, USA.

Tintina’s rights offer was undertaken on a 5-for-9 basis to raise up to C\$7.4 million at a subscription price of C\$0.06 per share. Sandfire subscribed for its full entitlement under the rights offer of approximately C\$4.2 million. Electrum Global Holdings L.P., Tintina’s second largest shareholder, also subscribed for its full entitlement of approximately C\$1.2 million.

Sandfire’s support of the rights issue is consistent with its long-term strategy of supporting Tintina’s development strategy for the Black Butte Project, which is one of the world’s premier high-grade undeveloped copper deposits. Sandfire views the Black Butte Project as an excellent and complementary strategic fit with its flagship DeGrussa Copper-Gold Project in Western Australia and a key part of its longer term growth pipeline – and will continue to support Tintina both financially and by contributing its project development and operational expertise to assist with the permitting, financing and development of the project.

## 9.0 CORPORATE

### 9.1 DeGrussa Finance Facility

Sandfire announced separately today that, in light of its strong cash position (Group cash on hand as at 31 December 2016: \$107 million) and the improvement in the Australian Dollar copper price over the past six months, it plans to elect to repay the \$50 million outstanding balance in its Revolver Facility on 31 January 2017, nearly 12 months ahead of the scheduled repayment date.

This marks a significant milestone for the Company, with the original \$380 million DeGrussa Finance Facility which was secured in 2011 to fund the DeGrussa Copper-Gold Project, to be fully repaid.

The Company intends to retain the undrawn \$85 million Revolver and \$25 million working capital facilities with ANZ, to provide additional flexibility to fund future growth initiatives including the proposed development of the Monty deposit.

### 9.2 Board changes

Long-serving Director, Mr John W Evans, has retired from the Sandfire Board, formally stepping down at the end of 2016 after nearly a decade with the Company.

Mr Evans played a pivotal role in Sandfire's development, joining the Board in 2007 as Executive Technical Director and guided the exploration strategy which led to the discovery of the DeGrussa copper-gold deposit in 2009. Mr Evans went on to oversee the rapid resource drill-out of the DeGrussa and Conductor 1 deposits and the subsequent discovery and drill-out of the Conductor 4 and 5 deposits.

In January 2013, Mr Evans retired as an Executive Director and moved to a non-executive board role. As a Non-Executive Director, he continued to play an active and hands-on mentoring role to Sandfire's geo-scientific team, providing invaluable insights and guidance including during the recent high-grade Monty discovery. He has also had considerable input to the Company's regional exploration and business development strategy.

Effective from 31 December 2016, highly experienced and strongly-credentialed mining executive Dr Roric Smith joined the Board as an independent Non-Executive Director.

Dr Smith is a geologist with extensive Australian and international experience and is currently a Consulting Geologist for the successful mid-tier ASX-listed gold producer Evolution Mining (ASX: EVN). Until June 2016, Dr Smith was Vice President, Discovery and Chief Geologist for Evolution, where he played a key role in leading that company's exploration efforts. Prior to joining Evolution, Dr Smith held numerous senior executive positions with the leading global gold producer AngloGold Ashanti, including as Senior Vice President, Global Greenfield Exploration; Country Manager and Chief Representative China, Exploration Manager – North Asia Region; and Chief Geologist Australia. Dr Smith holds a B.Sc (Hons) Geology and Ph.D from the University of Natal in South Africa.

### 9.3 Cash position

Company cash on hand as at 31 December 2016 totalled \$101 million. Group cash on hand as at 31 December 2016 totalled \$107 million.

### 9.4 Investor Call and Webcast

A teleconference on the Quarterly results will be held for the investment community on 24 January 2017 commencing at 10.00am (AWST) / 1.00pm (AEDT). Investors, brokers, analysts and media can join the teleconference by dialling the following numbers:



<b>Within Australia (Toll Free):</b>	<b>1 800 558 698</b>
<b>Alternate Australia Toll Free:</b>	<b>1 800 809 971</b>
<b>International:</b>	<b>+61-2 9007 3187</b>
<b>Conference ID:</b>	<b>681247</b>

The Quarterly Report and an accompanying slide presentation will be available via the ASX Company Announcements Platform (Code: SFR) as well as at Sandfire's website at [www.sandfire.com.au](http://www.sandfire.com.au).

A live webcast of the teleconference and synchronised slide presentation will also be available via the BRR Media service by clicking on the following link:

<http://webcasting.boardroom.media/broadcast/587d3d20691f35760202e2ba>

A recording of the webcast will be available at the same link shortly following the conclusion of the conference call.

**ENDS**

**For further information, please contact:**

Karl Simich – Managing Director/CEO  
Office: +61 8 6430 3800

**Media Inquiries:**

Nicholas Read – Read Corporate:  
Mobile: +61 419 929 046 (Nicholas Read)

**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 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 Bamforth 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 – 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 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 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.

**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.

**Forward-Looking Statements**

Certain statements made during or in connection with this statement contain or comprise certain forward-looking statements regarding Sandfire's Mineral Resources and Reserves, exploration operations, project development operations, production rates, life of mine, projected cash flow, capital expenditure, operating costs and other economic performance and financial condition as well as general market outlook. Although Sandfire believes that the expectations reflected in such forward-looking statements are reasonable, such expectations are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward looking statements and no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, delays or changes in project development, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in metals prices and exchange rates and business and operational risk management. Except for statutory liability which cannot be excluded, each of Sandfire, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in this statement and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this statement or any error or omission. Sandfire undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly you should not place undue reliance on any forward looking statement.

**JORC Compliance Statement**

A summary of the information used in this release is as follows.

The DeGrussa VHMS (volcanic-hosted massive sulphide) copper-gold deposit is located 900 kilometres north of Perth and 150 kilometres north of Meekatharra in the Peak Hill Mineral Field. The system is hosted within a sequence of metasediments and mafic intrusions situated in the Bryah Basin that have been metamorphosed and structurally disrupted.

The sulphide mineralisation consists of massive sulphide and semi-massive sulphide mineralisation. Primary sulphide minerals present are pyrite, chalcopyrite, pyrrhotite and sphalerite, together with magnetite. The sulphide mineralisation is interpreted to be derived from volcanic activity. The deposit shares characteristics with numerous VHMS deposits worldwide.

DeGrussa is located wholly within Mining Lease 52/1046. This tenement is subject to the Yugunga-Nya (WC99/046) and Gingirana Claims (WC06/002). A Land Access Agreement was executed with both claimant groups in November 2010. Sandfire is required to make royalty payments to the State and affected Native Title Claimants on a periodical basis.

Drilling of the DeGrussa massive sulphide lens (of which there are four defined lenses of mineralisation) and surrounding area is by diamond drill holes of NQ2 diameter core and, to a lesser extent, by Reverse Circulation (RC) face sampling hammer drilling. The nominal drill-hole spacing is less than 80m x 40m in the inferred areas of the Mineral Resource and increases in density as the classification increases to Measured where nominal 13m x 20m drill hole spacing is achieved. Drilling has been by conventional diamond drilling with a small number holes aided by the use of navigational drilling tools. RC drilling was completed with a nominal 140mm face sampling hammer and split on a cone or riffle splitter. Drill-hole collar locations were surveyed using RTK GPS, and all holes were down-hole surveyed using high speed gyroscopic survey tools.

Sampling of diamond core was based on geological intervals (standard length 0.5 m to 1.3 m). The core was cut into half or quarter (NQ2) to give sample weights up to 3 kg. RC samples were 1.0m samples down-hole, with sample weights between 3.5kg and 7kg depending on material type. Field quality control procedures involved assay standards, along with blanks and duplicates. These QC samples were inserted at an average rate of 1:15.

The sample preparation of diamond core involved oven drying, coarse crushing of the core sample down to ~10 mm followed by pulverisation of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected for analysis by either four acid digest with an ICP/OES, ICP/MS (multi element) finish or formed into fused beads for XRF determination on base metals and a fire assay for Au.

All reported assays have been length weighted. No top-cuts have been applied. A nominal 0.3% Cu lower cut-off is applied. High grade intervals internal to broader zones of sulphide mineralisation are reported as included intervals.

The attitude of the ore bodies at DeGrussa is variable but there is a dominant southerly dip from ~40 to 90 degrees flat-lying and is drilled to grid west with drill holes inclined between -60 and -90 degrees. As such the dominant hole direction is north and with varying intersection angles all results are clearly defined as either down hole or approximate true width.

Density of the massive sulphide orebody ranges from 2.8g/cm<sup>3</sup> to 4.9g/cm<sup>3</sup>, with an average density reading of 3.7g/cm<sup>3</sup>. Geotechnical and structural readings recorded from diamond drilling include recovery, RQD, structure type, dip, dip direction, alpha and beta angles, and descriptive information. All data is stored in the tables Oriented Structure, Geotechnical RQD, Core Recovery, Interval Structure as appropriate.

A suite of multi-element assays are completed on each mineralised sample and include all economic and typical deleterious elements in copper concentrates. This suite includes Cu, Au, Ag, Zn, Pb, S, Fe, Sb, Bi, Cd and As.

Regional drilling has been completed using a combination of RC and AC drilling. A majority of the drilling is preliminary in nature and starts with 800m x 100m AC drilling where the geology and geochemistry is reevaluated to determine the requirement for follow 400m x 100m drilling. If significant anomalism is identified in the AC drilling then follow up RC drilling will be conducted to determine the opportunity for delineating potentially economic mineralisation. Whilst the main aim of the exploration at Doolgunna is to identify additional VHMS mineralisation in some areas of regional land holding it is currently interpreted that there is shear zones located on the contact between dolerite and sediments hosting auriferous quartz vein stockworks with some coincident copper.

AC and RC regional samples are prepared at Ultra Trace in Perth with the original samples being dried at 80° for up to 24 hours and weighed, and Boyd crushed to -4mm. Samples are then split to less than 2kg through linear splitter and excess retained. Sample splits are weighed at a frequency of 1/20 and entered into the job results file. Pulverising is completed using LM5 mill to 90% passing 75µm. Assaying is completed using a Mixed 4 Acid Digest (MAD) 0.3g charge and MAD Hotbox 0.15g charge methods with ICPOES or ICPMS. The samples are digested and refluxed with a mixture of acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric acids and conducted for multi elements including Cu, Pb, Zn, Ag, As, Fe, S, Sb, Bi, Mo. The MAD Hotbox method is an extended digest method that approaches a total digest for many elements however some refractory minerals are not completely attacked. The elements are then determined by ICPOES or ICPMS finish. Samples are analysed for Au, Pd and Pt by firing a 40g of sample with ICP AES/MS finish.