



## QUARTERLY REPORT

### For the period ended 31 December 2017

#### Highlights

#### Production & Operations

Contained metal production	September 2017 Quarter	December 2017 Quarter	December 2018 Half Year	FY2018 Guidance
<b>Copper (t)</b>	15,258	16,263	31,521	63,000 – 66,000
<b>Gold (oz)</b>	10,669	8,130	18,799	35,000 – 38,000
<b>C1 cost (US\$/lb)</b>	0.95	1.02	1.00	1.00 – 1.05

- Strong mine production and milling rates maintained for the Quarter.
- Extended plant maintenance shutdown completed successfully in November 2017. Positive trends in copper recovery following commissioning of additional rougher column cell. Commissioning of additional concentrate thickener and filter to commence next quarter.
- FY2018 production guidance maintained: 63-66kt Cu and 35-38koz gold at C1 US\$1.00-1.05/lb.

#### Development Projects

- Bulk earthworks and civils substantially completed at the new Monty development with surface infrastructure progressing on schedule and the Monty decline advanced to 346m at quarter-end, well ahead of the budget of 286m. First ore from Monty on track to be delivered in Q2 FY2019.
- Environmental Impact Statement (“EIS”) for the 78%-owned Black Butte Copper Project in central Montana, USA, commenced in September 2017. The EIS Scoping Period was completed in November 2017 and a Final Scoping Report was published in December 2017. The Final EIS and Record of Decision are currently scheduled to be issued before the end of 2018.

#### Exploration

- Multi-pronged exploration programs continuing across Sandfire’s Greater Doolgunna Project, which including Joint Venture and Farm-in Agreements, now covers a total area of 5,846km<sup>2</sup>.
- Extensive programs of Aircore drilling completed to test prospective mafic-sedimentary horizons within the Enterprise Metals farm-in project, with RC and diamond drilling completed at the Vulcan and Vulcan West Prospects and a deep diamond hole completed at Monty East.
- Collection of down-hole EM (DHEM) data commenced with 14 holes surveyed and the DHEM program set to resume in early 2018. Data processing and analysis is in progress to identify potential new drill targets.
- Preparation commenced for a major regional airborne electromagnetic survey which is expected to commence over the Yerrida and Bryah Basin tenements in Q1 CY2018.
- Drilling is underway at the 100% owned Temora project in New South Wales targeting high priority targets and follow up at the Donnington prospect.

#### Corporate

- Sandfire fully exercised its subscription rights as part of rights offering completed by Tintina Resources (TSX-V: TAU) during the quarter, maintaining its stake at 78%. The rights issue raised gross proceeds of C\$10.8M to underpin the next phase of permitting and pre-development of the high-grade Black Butte Copper Project in central Montana, USA.
- Group cash on hand as at 31 December 2017: \$164.4 million.

## 1.0 SAFETY PERFORMANCE

The Total Recordable Injury Frequency Rate (TRIFR) for the Sandfire Group at the end of December was 4.6 (September 2017 Quarter: 6.4). Recordable injuries include those that result in any days away from work (Lost Time Injuries), those where an employee or contractor cannot perform all or any part of their normal shift (Restricted Duty Injuries), as well as any injury that requires services that only a medical practitioner can provide (Medical Treatment Injuries).

Safety system developments continue to focus on the prevention of incidents and principal hazard management, with the implementation of new software to assist in managing and improving the safety culture of both employees and contractors.

## 2.0 OPERATIONS OVERVIEW

Copper production for the December Quarter was 16,263 tonnes (September Quarter: 15,258 tonnes). C1 cash operating costs for the Quarter were US\$1.02/lb (September Quarter: US\$0.95/lb).

Mine production for the Quarter was 407,151 tonnes grading 4.3% Cu. During the Quarter, production was sourced from all lenses at DeGrussa.

A total of 436,516 tonnes of ore grading 4.1% Cu was milled for the December Quarter, with copper recovery averaging 91.7%.

## 3.0 MINING & PRODUCTION

### 3.1 Overview

December 2017 Quarter – Production Statistics		Tonnes	Grade (% Cu)	Grade (g/t Au)	Contained Copper (t)	Contained Gold (oz)
Concentrator	Mined	407,151	4.3	1.5	17,515	19,077
	Milled	436,516	4.1	1.4	17,735	20,217
	<b>Production</b>	<b>67,358</b>	<b>24.0</b>	<b>3.8</b>	<b>16,263</b>	<b>8,130</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.

Stopes mined during the Quarter from the C1 deposit continued to exhibit high talc levels, as foreshadowed in the September Quarterly Report. These are expected to return to average levels over the full financial year.

### 3.3 Processing

Mill throughput in the December Quarter was as planned with an extended planned maintenance shutdown completed in November and minor maintenance carried out in October.

As foreshadowed last quarter, copper recovery continued to be impacted by elevated talc in the ore feed from the C1 deposit. The treatment methodology for the higher talc stopes was concluded in early December.

### 3.4 Projects

Solar production from the solar farm peaked in October producing 2108 MWh reducing slightly to 2061 MWh in December due to less direct sunlight hours. The solar inverter control system software was updated to prevent outages, and these have been effective so far to date.

### 3.5 Guidance – FY2018

Targeted copper production for FY2018 remains unchanged with production expected to be within the range of 63-66,000 tonnes of contained copper metal with gold production within the range of 35-38,000 ounces. Headline C1 cash operating costs are expected to be within the range of US\$1.00-1.05/lb.

## 4.0 SALES AND MARKETING

### 4.1 Copper Concentrate Shipments

A total of 73,098 dry metric tonnes of concentrate containing 17,558 tonnes of copper (16,804 tonnes payable) and 10,258 ounces of gold (9,470 ounces payable) was sold for the Quarter. 7 shipments were completed from Port Hedland and Geraldton.

A total of 125,586 dry metric tonnes of concentrate containing 30,222 tonnes of copper (28,938 tonnes payable) and 18,504 ounces of gold (17,120 ounces payable) was sold for the six months to 31 December 2017, with 12 shipments completed.

## 5.0 DEVELOPMENT PROJECTS

### 5.1 Monty Copper-Gold Project

Further strong progress was achieved with the development of the new satellite Monty Copper-Gold Project during the Quarter, with site infrastructure works significantly advanced and underground development advancing ahead of schedule.

By Quarter-end, completed infrastructure items included the Monty box-cut, the haul road between Monty and DeGrussa, the water pipeline from DeGrussa and mine site infrastructure including central facilities, raw water storage tanks and electrical reticulation (see Figure 1).



Figure 1: Aerial view of the Monty Project development showing completed infrastructure

Other development and construction projects were on schedule at Quarter-end, including site office buildings, power station installation and reticulation, fuel storage facility, site communications installation (fibre optic cable connection to DeGrussa), ore haulage contracts and installation of permanent underground ventilation.

The underground development also made excellent progress after the underground mining contractor, Byrnegut Australia Pty Ltd, took the first cut into the portal last quarter.

By Quarter-end, underground development had advanced to 346 metres, which was ahead of the schedule in the Feasibility Study budget of 286 metres. Total development advance (including the decline) was 560 metres, compared to the Feasibility Study budget of 440 metres. This includes development of the ventilation shaft, which has been sunk to a depth of approximately 40 metres.

Recent images showing the Monty underground development and vent shaft development are provided in Figure 2 below.

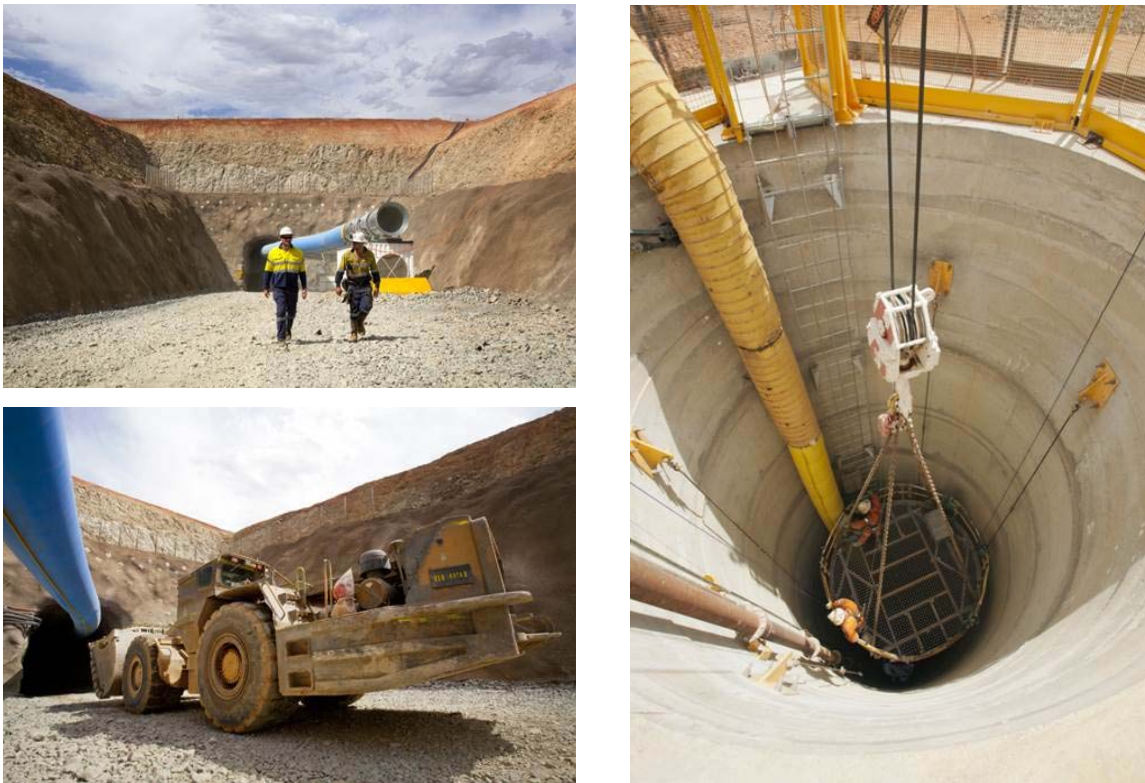


Figure 2: Monty development (left) – Monty portal and (right) ventilation shaft development in progress

## 5.2 DeGrussa Oxide Copper Project

Column test work continued during the Quarter focused on the use of glycine in the processing route with and without cement addition. These tests have been devised to reproduce a heap leach environment.

The test work will continue through until February 2018, with further work planned including additional drilling of the oxide stockpiles for variability purposes, preparation of process design criteria for both a heap leach pilot and commercial operation, ore sorting test work and collection of samples from the Thaduna, Green Dragon and Enigma deposits to establish their suitability for processing using the glycine technology.

## 5.3 Black Butte Copper Project, USA (Sandfire: 78%)

Sandfire holds a 78% interest, via North American-listed company Tintina Resources (TSX.V: TAU), in the premier, high-grade Black Butte Copper Project, located in central 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, 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 15.7Mt grading 3.4% Cu, 0.1% Co and 14g/t Ag for 533,600t of contained copper and Inferred Resources totalling 2.3Mt grading 2.8% Cu, 0.09% Co and 14g/t Ag for 63,500t 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. This makes Black Butte one of the top-10 undeveloped copper projects worldwide by grade.

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.



**Figure 3: The community of White Sulphur Springs, near the Black Butte Copper Project (left); exploration drilling at the main Johnny Lee deposit at Black Butte**

Following receipt of the Draft Operating Permit for the Black Butte Project last September, the Scoping Period for the Environmental Impact Statement (“EIS”) concluded on 16 November 2017, clearing the way for the EIS to proceed.

A tentative schedule has been established moving forward which includes receipt of a draft EIS from the Montana Department of Environmental Quality (“MT DEQ”) in mid-2018, followed by a public comment period, and a Final EIS and Record of Decision before the end of CY2018. This will allow construction and development of the underground mine to commence on private ranch land in Meagher County.

In addition to the EIS, Tintina is required to obtain a number of ancillary permits which will be incorporated in to the Final EIS and Record of Decision. To date, the Company has received a 301 Permit from the Meagher County Conservation District, 318 and 401 Permits from the MT DEQ, and a 404 Permit from the United States Army Corp of Engineers.

Other permits required from the MT DEQ which are currently in process are a Montana Pollutant Discharge Elimination System (MPDES) and an Air Quality Permit. These permits are expected to be in place prior to a Final EIS being issued. The proposed underground mine at Black Butte is designed to provide economic opportunity to Central Montana while fully protecting the Smith River Watershed.

## **6.0 EXPLORATION**

### **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 during the December Quarter included:

- Continuation of the major AC drilling program through the Ruby Well-White Well areas of the Enterprise Metals farm-in project to aid geological interpretation and provide quality geochemical coverage of the interpreted Karalundi Formation, which hosts the DeGrussa and Monty copper-gold deposits.
- RC and Diamond drilling within the Homestead, Vulcan and Vulcan West Prospect areas to test the potentially prospective sediment horizons in the stratigraphy interpreted in these areas and geochemical anomalism identified in AC drilling.
- Completion of the first of three deep diamond drill holes within the Monty East and Northeast Prospects, along strike from the Monty deposit, to test down-dip of anomalous geochemistry and minor sulphide intersections in previous RC drilling.
- Collection of down-hole electro-magnetic (DHEM) data from 14 drill holes, with further surveys to be conducted early in 2018. Data processing and analysis by Newexco Consultants for the completed surveys is in progress.
- Preparations for a regional airborne electromagnetic survey, to be conducted by Spectrem Air, over the Yerrida and Bryah Basin tenements. This survey is expected to commence in Q1 CY2018.

The aggregate exploration metres drilled on Sandfire's wholly-owned and JV tenements during the December 2017 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%)	-	2,772*	-	809	3,581
Ned's Creek (SFR 100%)	-	-	-	-	-
Springfield JV (SFR 70%)	-	1,047	-	636	1,683
Enterprise JV (Earn-in)	56,574	1,919	-	589	59,082
<b>TOTAL Q2FY2018</b>	<b>56,574</b>	<b>5,738</b>	<b>5,243</b>	<b>2,034</b>	<b>69,589</b>
<b>TOTAL 1HFY2018</b>	<b>120,802</b>	<b>10,679</b>	<b>5,243</b>	<b>2,034</b>	<b>138,758</b>

\* Includes 1,034m of Environmental and Metallurgical Drilling.

## 6.2 Greater Doolgunna

*The Greater Doolgunna Project, which includes the Talisman Joint Venture, the Ned's Creek Project, the Enterprise Metals Farm-in and the Great Western Exploration Farm-in, provides an aggregate contiguous exploration area of 5,846km<sup>2</sup>. This includes over 90km of strike extent in host 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.*

### 6.2.1 Enterprise Project

*Sandfire entered into a Farm-in Agreement with Enterprise Metals Limited (ASX: ENT) in October 2016 to earn up to a 75% interest in Enterprise's Doolgunna Project, which adjoins Sandfire's Doolgunna tenements to the south. The Enterprise tenements cover over 60km of strike of the southern boundary of the Bryah Basin and the northern part of the Yerrida Basin. The southern Bryah Basin contains the Narracoota/Karalundi Formations which host the DeGrussa and Monty copper-gold deposits. The Company considers that the Enterprise tenements offer the potential for new copper-gold discoveries.*

Diamond, RC and AC drilling continued at the Enterprise Project throughout the December Quarter.

Within the Vulcan and Vulcan West Prospects, RC drilling targeted prospective sediment horizons at various levels in the stratigraphy, as well as anomalous geochemistry identified in initial AC drilling completed by Sandfire, and historical RAB drilling and soil sampling conducted by Enterprise Metals.

Two diamond drill holes were also completed within the Vulcan West Prospect. Both of these were designed to target the prospective horizon. Both holes intersected encouraging geology indicative of being proximal to an exhalative environment, including zones of chlorite and haematite-altered siltstone with jasper and magnetite. However, assays returned and DHEM surveys completed identified no significant anomalies.

Ongoing drilling has further highlighted the complexity and prospectivity of the area. The prospective horizon within these prospects likely contains multiple horizons with VMS potential at differing stratigraphic levels. Exploration in this area is planned to continue in the next quarter.

Regional AC drilling also continued within the Enterprise Project during the December Quarter, focused on the White Well, Ruby Well and Mount Leake Prospects. A total of 903 holes were completed for a total advance of 56,574m.

### 6.2.2 Doolgunna Project – 100% Sandfire

RC and Diamond drilling continued at the Doolgunna Project during the December Quarter.

Within the Homestead Prospect (along-strike from Vulcan West), RC drilling targeted prospective sediment horizons, as well as a geophysical anomaly derived from the integration of multiple newly acquired and historic datasets.

Two diamond drill holes were also completed within the Homestead Prospect. Both of these were designed to test prospective sediment horizons. These are part of a program of diamond holes to be drilled initially at an 800m spacing to inform geological interpretation and to provide a platform for DHEM surveying. Subject to results, in-fill drilling may occur on 400m centres.

As with the holes at Vulcan West, drilling intersected intervals of magnetite and haematite-rich sediments with disseminated pyrite and jasper. A DHEM survey was completed on one of the two diamond holes with no significant anomalies identified. Geological interpretation through the area is currently ongoing.

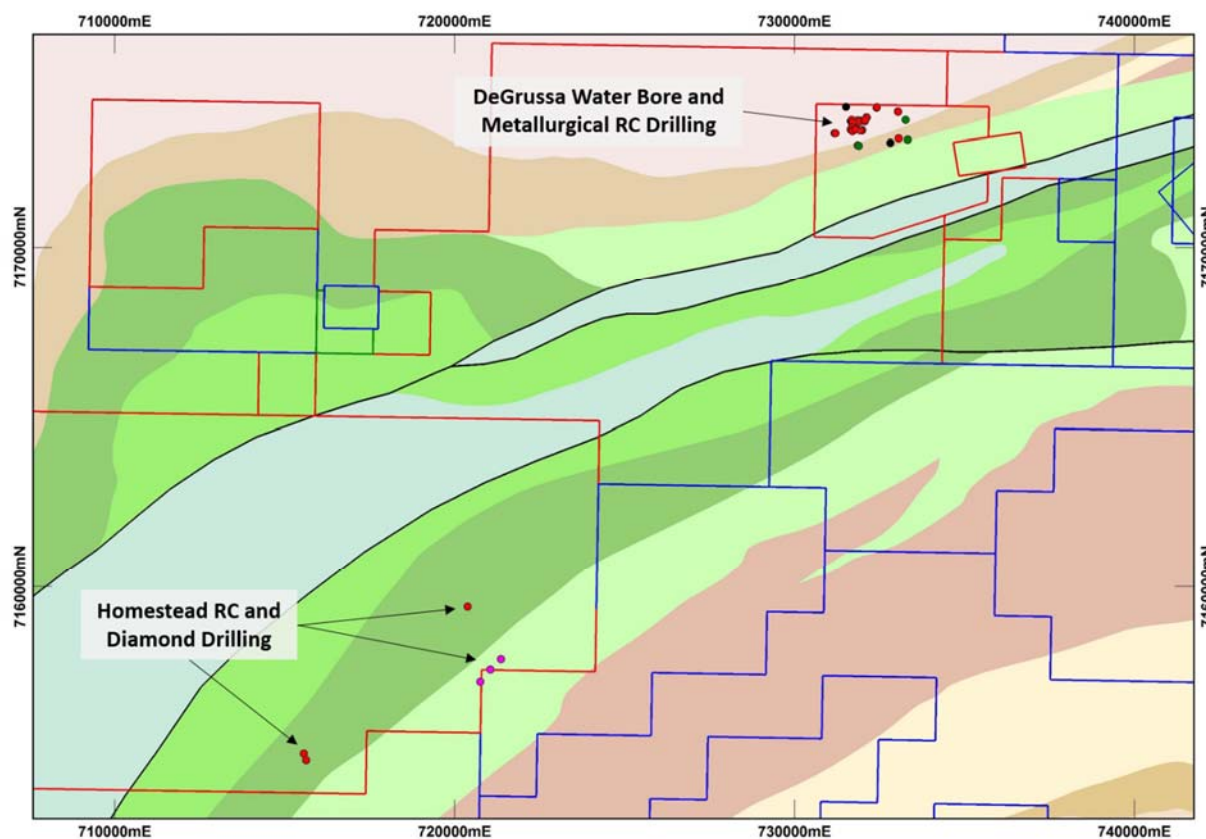


Figure 4: Completed drilling across the SFR Doolgunna tenements during the Quarter.

### 6.2.3 Springfield Joint Venture – 70% Sandfire

The Springfield Joint Venture Project comprise the Springfield, Halloween and Halloween West Projects, which about 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:

- Deep diamond drilling along-strike from the Monty deposit targeting potential mineralisation within the same host sediment sequence;
- RC drilling targeting narrow prospective sediment horizons in the Southern Volcanics Prospect area;
- Ongoing down-hole Electromagnetic (DHEM) surveying of deep RC and DDH holes; and
- Infill AC drilling within the Homer Prospect area.

RC and Diamond drilling continued within the Springfield Project, primarily focused on the Monty East and Monty Northeast Prospects.

One diamond drill hole was completed within the Monty East Prospect. This was the first of a three hole diamond program targeting down-dip of anomalous geochemistry and minor sulphide intersections in previous RC drilling along-strike of Monty. The RC pre-collars for the remaining two holes were also completed and drilling will continue early in 2018. All three will act as deep DHEM platforms to identify potential off-hole conductors in the surrounding area.

One RC drill hole was completed within the Southern Volcanics Prospect. This hole was designed to test a litho-geochemical anomaly in close proximity to an untested sediment horizon identified in previous AC drilling. No significant assays were returned. Additional AC and potential follow-up RC will be planned later in 2018.

DHEM surveys for both of the finished holes (diamond and RC) was completed and no significant anomalies were identified.

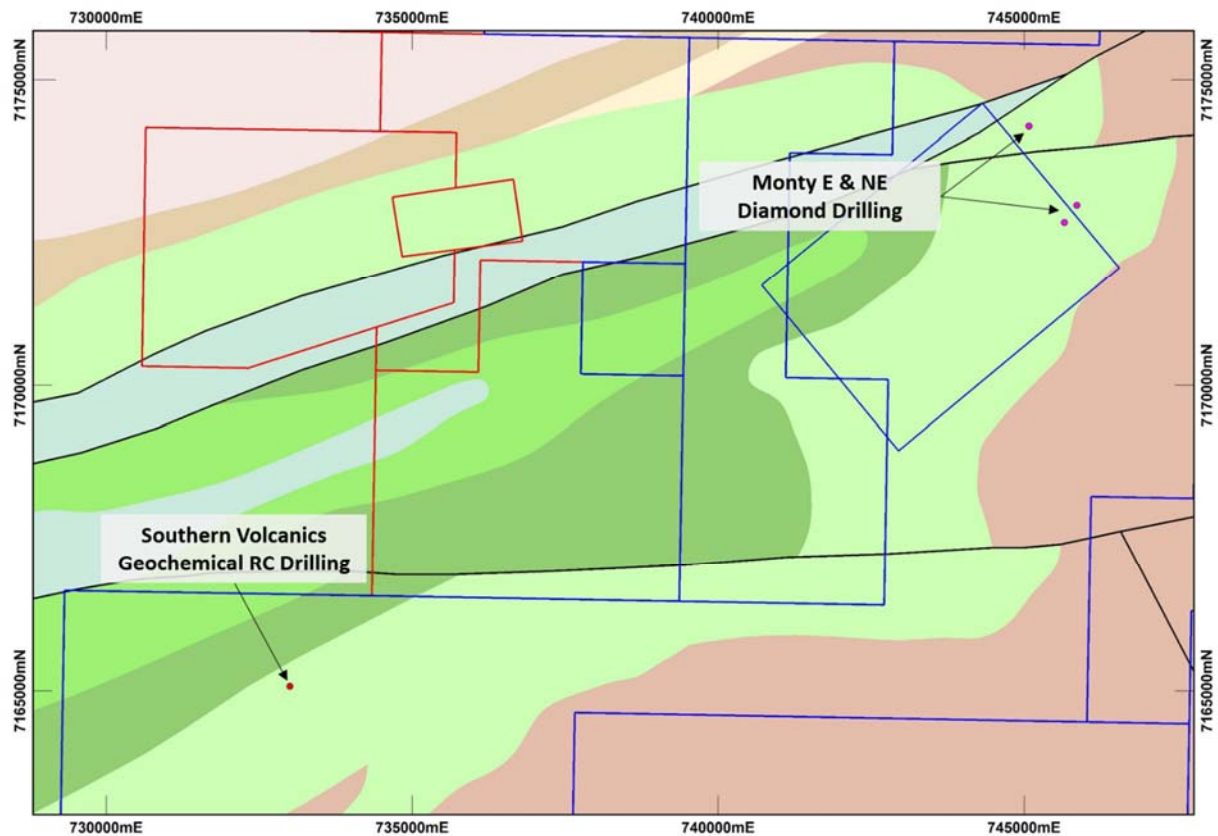


Figure 5: Completed drilling across the SFR-TLM Joint Venture tenements during the Quarter

#### 6.2.4 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.*

No work was undertaken at Ned's Creek during the December Quarter.



## 7.0 AUSTRALIAN EXPLORATION

Sandfire has a number of exploration interests and 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.

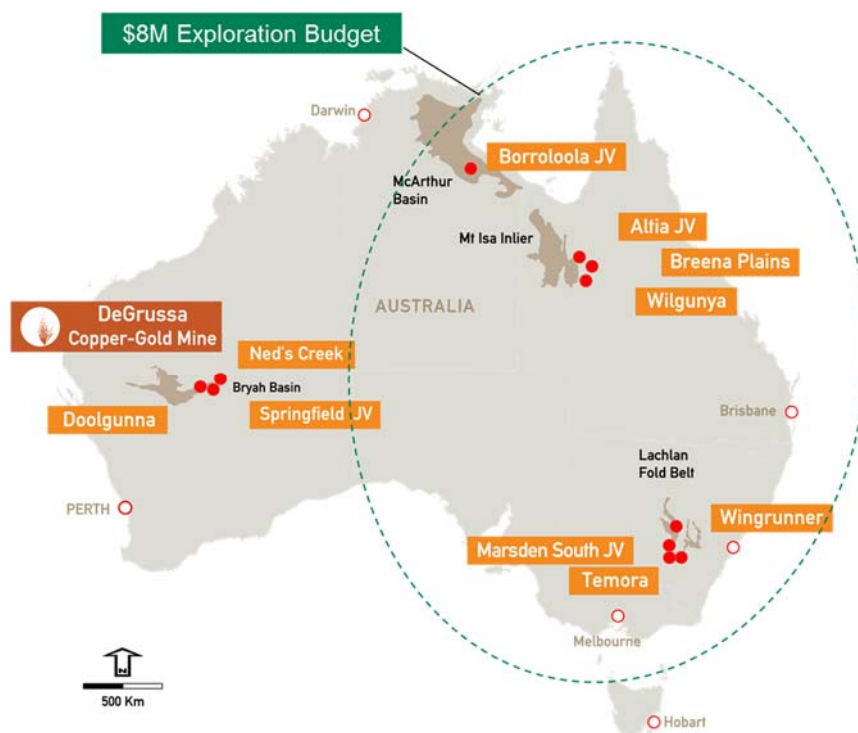


Figure 6: Sandfire's Eastern Australian Projects.

### 7.1 New South Wales Projects

A number of 100%-owned 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.

#### 7.1.1 Temora Exploration (100% Sandfire)

The field season has commenced with drilling initially targeting the 100% owned Temora program with diamond drilling.

Interpretation of the Donnington prospect has highlighted a number of targets for high grade zones and shallower extensions. Targets include a magnetic low directly to the south of known mineralisation and drilling from the east to target above the current intersections and at depth to the west.

Exploration in the March quarter will target the Temora and Bland projects with a program of diamond drilling at advanced geochemical and geophysical prospects, and aircore drilling and geophysics at prospective regions to advance to deeper drill targeting.

### 7.2 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.

Results from the Borroloola West JV at the Mariner and Coppermine Creek were reported by Pacifico during the quarter. The program of aircore drilling at Lorella was delayed until after the wet season.

A program of 21 holes for 9,256m was completed at the Batten Trough JV by the operators MMG Exploration during the field season. Drilling intersected anomalous stratigraphy in the prospective Barney Creek sub-basin at depth. Planning is underway for the 2018 program.

### 7.3 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%.*

Interpretation of results from the 2017 field season continued with a number of high priority targets being highlighted after follow up at the Ionised, Cannington West and the Wilgunya EM targets.

Detailed planning for the 2018 field season is underway with work planned at Cannington West and in the Ionised region.

## 8.0 CORPORATE

### 8.1 Tintina Resources Rights Issue

During the Quarter, North American-listed Tintina Resources Inc completed its rights offering, issuing 179,743,523 common shares for gross proceeds of C\$10.8 million.

Sandfire subscribed to its full allocation as Tintina's largest shareholder, subscribing for 140,315,465 shares and an issue price of C\$0.06 per share for a total of C\$8.4 million. As a result, Sandfire has maintained its ownership of Tintina at 78.06%.

The Black Butte Copper Project is a key part of Sandfire's longer term strategic growth pipeline, with its support of the rights offering continuing its strong corporate, financial and strategic support of Tintina since its original acquisition of a 36% stake by way of a share placement in 2014.

The proceeds of the rights issue will be used to advance permitting and pre-development activities at the Black Butte Copper Project.

### 8.2 Cash position

Company cash on hand as at 31 December 2017 totalled \$150.3 million (unaudited). Group cash on hand as at 31 December 2017 totalled \$164.4 million (unaudited).

### 8.3 Finance Facility

Sandfire's financing arrangements continue to be provided under a secured loan facility with ANZ and are secured by a fixed and floating charge over the company's assets. Aside from minor borrowings under a bonding facility there is no debt drawn under these facilities and the available amount to be drawn remains nil. The facilities expire on 9 March 2018 unless extended by mutual agreement.

### 8.4 Investor Call and Webcast

A teleconference on the Quarterly results will be held for the investment community on Tuesday 30<sup>th</sup> January commencing at 10.00am (AWST) / 1.00pm (AEDT). Investors, brokers, analysts and media can join the teleconference by dialling the following numbers:



**Within Australia (Toll Free):** 1 800 558 698  
**Alternate Australia Toll Free:** 1 800 809 971  
**International:** +61-2 9007 3187

*Please refer to attached for a full list of international dial-in numbers.*

**Conference ID:** 508466

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 website at <http://webcasting.boardroom.media/broadcast/5a542ca2dcb03733b3f8b3cc>.

## 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 Doolgunna

The information in this report that relates to Exploration Results at Doolgunna 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 – 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.

### 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 of 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 revaluated 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.