



SANDFIRE RESOURCES NL

A QUALITY COPPER-GOLD COMPANY ASX Code - SFR

23 October 2015

Mr Sebastian Bednarczyk
Adviser, Issuers (Perth)
ASX Limited
Level 8, Exchange Plaza
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Perth WA 6000

Dear Sebastian,

**LODGEMENT OF SEPTEMBER 2015 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. September 2015 Quarterly Activities Report
2. September 2015 Quarterly Update Powerpoint Presentation

In addition, Sandfire's Managing Director and CEO, Karl Simich, is hosting an investor teleconference and live webcast on the September 2015 Quarterly Report at 11.00am (AWST) / 2.00pm (AEST) today.

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

Live date: Friday, 23 October 2015

Access this webcast at: <http://webcasting.brrmedia.com/broadcast/preview/140464>
<http://www.sandfire.com.au>

Yours sincerely,

Matt Fitzgerald
Chief Financial Officer
and Company Secretary

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QUARTERLY REPORT
For the period ended 30 September 2015

Highlights

Production & Operations

Contained metal production	September 2015 Quarter	FY2016 Guidance
Copper (t)	16,638	65,000 - 68,000
Gold (oz)	7,885	35,000 - 40,000
C1 cost (US\$/lb)	0.97	0.95 - 1.05

- Strong mine production at approximately 1.6Mtpa.
- Milling rates exceeded 1.6Mtpa for the Quarter excluding a planned 8-day shutdown.
- Process plant enhancements continuing to drive copper recoveries; averaging 91.2% for the Quarter.

Exploration

- Growing understanding of the structure and controls of mineralisation at the high-grade Monty VMS copper-gold discovery, located ~10km east of DeGrussa, part of the farm-in with Talisman Mining with two key host zones identified to date. Significant intersections include (not true width):
 - 16.5m @ 18.9% Cu, 2.1g/t Au from 409.5m (TLDD0004A) – Lower Zone
 - 9.2m @ 11.8% Cu, 2.9g/t Au from 417.0m (TLDD0005) – Lower Zone
 - 7.9m @ 8.3% Cu, 2.4g/t Au from 363.1m and 4.8m @ 4.9% Cu and 1.1g/t Au from 385.8m (TLDD0009) – Lower Zone
 - 10.5m @ 18.9% Cu, 3.1g/t Au from 359.7m and 4.7m @ 12.8% Cu, 2.5g/t Au from 373.6m (TLDD0010) – Lower Zone
 - 18.0m at 5.7% Cu, 2.4g/t Au from 107m and 4.0m grading 4.2% Cu, 0.7g/t Au from 158.0m (TLRC0004) – Upper Zone
- Targeting underway to test host horizons along strike from Monty. Drill sites prepared to commence initial phase of drilling at the priority Homer prospect during the December 2015 Quarter.

Corporate

- Final fully franked dividend of 10 cents per share paid for FY 2015; total dividend distribution for the year 13 cents (10 cents franked).
- Inaugural Sustainability Report released for the year ended 30 June 2015, which complies with the G4 Global Reporting Initiative (GRI), the leading international framework for sustainability reporting.

1.0 SAFETY PERFORMANCE

The Total Recordable Injury Frequency Rate (TRIFR) for the Sandfire Group for the September Quarter was 8.9 compared to a TRIFR for the June Quarter of 9.7. Recordable injuries include those that result in any days away from work (Lost Time Injuries) 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).

Work continues on initiatives to further improve safety performance including development of safety systems, improved safety leadership, improvement of safety culture and risk and assurance management.



Figure 1: Drilling at Monty (left); high-grade massive sulphides from the Monty copper-gold discovery (centre); and the DeGrussa Concentrator (right)

2.0 OPERATIONS OVERVIEW

Copper production for the September Quarter was ahead of guidance at 16,638 tonnes (June Quarter: 18,637 tonnes) at an average ore grade of 4.7% Cu (June Quarter: 5.05% Cu). C1 cash operating costs for the Quarter were US\$0.97/lb (June Quarter: US\$0.98/lb).

Mill throughput for the September Quarter was around 1.6Mtpa, with a total of 387,864 tonnes of ore milled. As noted in the June 2015 Quarterly Report, an 8-day shutdown was completed during the September Quarter to reline the mills and refurbish thickener tanks and the concentrate filter. Mill throughput operating rates continue to demonstrate that the capacity of the process plant is close to 1.7Mtpa.

Copper recovery averaged 91.2% in the September Quarter, reflecting stable plant operation throughout the Quarter together with the impact of the column cell, which has delivered improvement in copper recoveries since its installation in February 2015.

A total of 730.9 metres of ore drive development was completed during the Quarter resulting in the production of 85,326 tonnes of development ore. In addition, 306,943 tonnes of stope ore was produced, resulting in total ore production for the Quarter of 392,269 tonnes grading 4.6% Cu. This reflects an annualised production rate from the mine of approximately 1.6Mtpa. The mine remains in balance between production and back-fill.

Total underground development had reached 30.9km at Quarter-end. The development program remains on target to deliver the first stope ore from C4 in the December 2015 Quarter. C5 ore development is on target to start in the March 2016 Quarter with stoping planned to commence early in the 2017 financial year.

3.0 MINING & PRODUCTION

3.1 Overview

September 2015 Quarter – Production Statistics		Tonnes	Grade (% Cu)	Grade (g/t Au)	Contained Copper (t)	Contained Gold (oz)
Concentrator	Mined	392,269	4.6	1.6	18,104	19,985
	Milled	387,864	4.7	1.6	18,234	19,418
Production		67,024	24.8	3.7	16,638	7,885

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

A total of 730.9 metres of ore drive development was completed during the Quarter, resulting in the production of 85,326 tonnes of development ore. In addition, 306,943 tonnes of stope ore was produced, resulting in total ore production for the Quarter of 392,296 tonnes grading 4.6% Cu.

This reflects an annualised production rate from the mine of approximately 1.6Mtpa. This strong performance confirms the new mine production target of 1.6Mtpa and reflects a continued focus on reliable stope design and excavation, as well as mining fleet productivity.

The mined copper grade was higher than planned as a result of positive reconciliations from a number of stopes mined during the Quarter, improved drill and blast practices and minor adjustments to the mine schedule. On a total mine basis, project copper ore reconciliations remain slightly positive against the resource model.

The increased mine production performance reflects an overall 7% increase in future annualised mine production with the same mine personnel and mining fleet. Opportunities to further enhance mine production will continue to be explored.

The mine remains in balance between production and back-fill. Given the maturity of production in the C1 and DeGrussa lenses, opportunities to replace paste back-fill in some stopes have been identified for FY 2016, therefore reducing overall paste requirements and waste haulage to the surface.

The Conductor 1 decline was not advanced during the Quarter with the focus on development of the Conductor 4 and 5 declines. The development of this decline will recommence as required for the extraction of the lower Conductor 1 ore. Conductor 4 decline development advanced 171 metres in good ground conditions and intersected the first development ore early in the Quarter which will allow stoping to commence in the December 2015 Quarter.

The Conductor 5 decline development advanced 61 metres during the Quarter, with all development advance occurring in good ground conditions. C5 ore development is on target to commence in the March 2016 Quarter, with stoping planned to commence early in the 2017 financial year.

3.3 Processing

Key processing metrics for the September Quarter included:

- 387,864 tonnes milled at an average head feed grade of 4.7% Cu (June Quarter: 399,525 tonnes at 5.05% Cu);
- Overall copper recovery of 91.2% (June Quarter: 92.4%);
- Concentrate production of 67,024 tonnes (June Quarter: 75,082 tonnes); and
- Metal production of 16,638 tonnes of contained copper and 7,885 ounces of contained gold (June Quarter: 18,637 tonnes of contained copper and 9,499 ounces of contained gold).

Mill throughput was maintained at an annualised rate of approximately 1.55Mtpa inclusive of an 8-day shutdown completed during the quarter to re-line the mill, refurbish the thickener and service the concentrate filter. Mill throughput operating rates continue to demonstrate that the capacity of the process plant is close to 1.7Mtpa.

Copper recovery for the period averaged 91.2%, reflecting the positive impact of the processing plant enhancement projects implemented earlier in the year, which were aimed at delivering copper recoveries of 92% for grades of around 4.5% Cu.

However, copper recovery was below targeted levels due to elevated levels of MgO compared to previous quarters and the geo-metallurgical characteristics of the ore treated during the Quarter. Testing has confirmed that the recovery achieved was in line with the recovery model given the geo-metallurgical characteristics of the ore treated.

Following the successful commissioning of the major enhancement projects completed during FY 2015, Sandfire is continuing to investigate opportunities for further improvements in copper recovery. These include examining additional flotation capacity, further improvement in grind optimisation and operating tactic optimisation.

3.4 Guidance – FY2016

Targeted copper production for FY 2016 remains unchanged with production expected to be in the range of 65,000-68,000 tonnes of contained copper metal and gold production in the range of 35,000-40,000 ounces. Headline C1 cash operating costs are expected to be in the range of US\$0.95-1.05/lb. As previously advised, third quarter production will be impacted by 8-day planned shuts to re-line the mill and refurbish the thickener tanks and concentrate filter.

Refer to Sandfire's September 2015 Quarterly Presentation (released today) for further detail and guidance on operating parameters and unit costs.

4.0 SALES AND MARKETING

4.1 Copper Concentrate Shipments

A total of 62,141 dry metric tonnes of plant concentrate containing 15,311 tonnes of copper and 7,320 ounces of gold was sold for the Quarter. Shipments were completed from Port Hedland and Geraldton.

5.0 INFRASTRUCTURE

5.1 Solar Power Project

During the Quarter, Sandfire signed the final agreements allowing construction to commence on the proposed 10.6MW solar power station at DeGrussa. Formal approval for the project, which will be the largest integrated off-grid solar and battery storage facility in Australia, follows the establishment of an extensive international consortium to finance, develop, operate and own the facility. The DeGrussa Solar Power Project has also attracted significant funding support from the Australian Federal Government.

The DeGrussa Solar Photovoltaic (PV) System is expected to set new benchmarks for the use of renewable power for mining and processing operations, establishing DeGrussa as a potential world-leading reference site for the use of renewables to reduce operating costs and improve environmental performance.

Sandfire has executed a final Power Purchase Agreement (PPA) with Neoen, the leading French renewable energy company. Neoen has contracted juwi Renewable Energy Pty Ltd ("juwi") to develop and operate the project. Diversified infrastructure and survey solutions company OTOC Limited (ASX: OTC) secured the procurement and installation contract for the project via a joint venture with juwi.

The Clean Energy Finance Corporation (CEFC) is committing up to \$15 million in finance towards the project, while the Australian Renewable Energy Agency (ARENA) is providing \$20.9 million of funding with Neoen contributing most of the balance. Sandfire's cash contribution to the project will be less than \$1 million. Construction activities at the DeGrussa mine site commenced in July 2015 with the facility expected to be fully operational in 2016.



Figure 2: Site preparations underway for the construction of the DeGrussa solar power station

The \$40 million project, which is located near the site of the current DeGrussa underground mine and Concentrator, comprises a 10.6MW solar array utilising 34,080 solar panels over 20 hectares. It uses single-axis tracking technology, combined with 6MW of short term battery storage. Once completed, it will be one of the world's largest integrated solar installations providing peak load power to a mining operation.

The solar power station will be fully integrated with the existing 19MW diesel-fired power station at DeGrussa, which is owned and operated by Kalgoorlie Power Systems (a subsidiary of Pacific Energy, ASX: PEA) under an agreement with KPS. This integrated system will be designed with the diesel power station continuing to provide base-load power to the DeGrussa mine with sufficient minimum load to ensure it can respond quickly to meet the power requirements of the process plant and underground mine. Agreements have been completed with KPS for the integration of the solar power facility.

Under the PPA, Sandfire will purchase the solar power generated at a fixed rate that is lower than the historical cost of diesel-generated power. The project is expected to achieve savings in the consumption of diesel fuel and will deliver a significant environmental benefit for DeGrussa, reducing its CO₂ emissions by an estimated 12,000 tonnes per year.

6.0 FEASIBILITY STUDIES & METALLURGY

6.1 Oxide copper

The Sandfire Oxide Copper Project at DeGrussa has been extensively tested and a Scoping Study undertaken on the basis of a traditional sulphuric acid heap leach combined with a solvent extraction circuit with a strong electrolyte fed to an electrowinning circuit to produce 99.99-99.999% copper cathode.

As outlined in the December 2014 Quarterly Report, the preliminary economics from the Scoping Study indicate that the Oxide Project has an Internal Rate of Return (IRR) exceeding 10% and requiring capital expenditure of over \$50 million. The project is sensitive to acid costs, copper recovery and capital costs.

The investigation of Innovat continuous vat leach leaching as an alternative to heap leaching and glycine as a potential alternative to a sulphuric acid leach environment continued during the Quarter. A second round of benchtop testing, as noted in the June 2015 Quarterly Report, has been completed using new samples collected from site stockpiles to confirm consistency of the results.

Assay results from this testing are expected during the December 2015 Quarter and will provide an insight into the suitability of changing from an acid-leach environment to a glycine leach environment to improve the project economics.

Sandfire anticipates that, should the results be consistent with the first round of testing, a high level study will be completed to understand the economics of this innovative process leading to the possible construction and then treatment of material in a small pilot plant.

7.0 DEGRUSSA EXPLORATION

7.1 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 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 DeGrussa during the September Quarter included:

- Additional diamond and RC drilling at the high-grade Monty VMS copper-gold discovery, part of the farm-in with Talisman Mining, which has significantly enhanced the Company's understanding of the nature and controls of the mineralisation;
- Continued underground resource definition drilling of the Conductor 5 deposit to allow conversion of the existing Inferred Resource to Indicated and Measured status; and
- RC drilling at the Thaduna Copper Project with the aim of targeting gaps in drill coverage over the main orebody between known mineralised intercepts and to test drill methods in order to maintain RC resource definition holes and diamond pre-collars at the proposed trajectory.

The aggregate exploration metres drilled on Sandfire's tenements during the September 2015 Quarter are summarised below:

Drilling	AC/RAB Drilling (m)	RC Drilling (m)	UG Diamond Drilling (m)	Surface Diamond Drilling (m)	Total Drilling (m)
Q1FY2016	49,654	8,868	2,190	5,089	65,801

Note:

- 49,654 metres of AC/RAB drilling, 7,654 metres RC, and 5,089 metres of DDH during the quarter related to the Talisman farm-in.
- 1,214 metres of RC drilling during the quarter related to the Ventnor Joint Venture.

7.3 DeGrussa Near-Mine Extensional Exploration

During the Quarter, Swick completed nine resource definition drill holes for a total of 2,190 metres. Drilling was primarily designed to allow upgrading of the C5 orebody from an Inferred to an Indicated Mineral Resource status, as well as testing the eastern extents of the currently modelled C5 orebody.

7.4 DeGrussa Regional Exploration

The Greater Doolgunna Project now includes the Talisman Farm-in and the tenements acquired from Sipa Resources, which have increased the aggregate contiguous exploration area to 1,700km². This includes over 65km of strike extent in VMS lithologies. Much of this stratigraphy is obscured beneath transported alluvium and requires systematic aircore (AC) drilling to test the bedrock geochemistry and identify prospective areas.

7.4.1 VMS Discovery – Talisman Farm-In

The Talisman Projects comprise the Springfield, Halloween and Halloween West Projects, which abut Sandfire's DeGrussa-Doolgunna tenements and contain extensions of the lithological sequence which hosts the DeGrussa VMS deposits. The projects are being explored under a Farm-in Agreement with Talisman Mining Limited (ASX: TLM) under which Sandfire has the right to earn up to a 70% interest by spending \$15 million on exploration over five-and-a-half years.

During the Quarter, Sandfire carried out extensive Diamond (DDH) and Reverse Circulation (RC) drilling at the Monty VMS copper-gold discovery announced in the June 2015 Quarter. To date, 5,998m of diamond drilling and 6,960m of RC drilling has been completed at Monty.

This work has resulted in the delineation of two mineralised horizons to date – an upper horizon and a lower horizon – with significant intersections including (not true width):

- 16.5m @ 18.9% Cu, 2.1g/t Au from 409.5m (TLDD0004A) – Lower Zone;
- 9.2m @ 11.8% Cu, 2.9g/t Au from 417.0m (TLDD0005) – Lower Zone;
- 7.9m @ 8.3% Cu, 2.4g/t Au from 363.1m and 4.8m @ 4.9% Cu and 1.1g/t Au from 385.8m (TLDD0009) – Lower Zone;
- 10.5m @ 18.9% Cu, 3.1g/t Au from 359.7m and 4.7m @ 12.8% Cu, 2.5g/t Au from 373.6m (TLDD0010) – Lower Zone; and
- 18.0m at 5.7% Cu, 2.4g/t Au from 107m and 4.0m grading 4.2% Cu, 0.7g/t Au from 158.0m (TLRC0004) – Upper Zone.

Initial interpretation of Lower Zone

Ongoing work at the Monty Prospect has resulted in an initial interpretation of the setting of the Lower Zone. The Lower Zone incorporates the massive sulphide mineralisation intersected in TLDD0004A, TLDD0005, TLDD0009, TLDD0010 (previously reported), TLDD0021 (assays pending), and TLDD0026 (assays pending) drilled subsequent to the end of the quarter.

The mineralisation can variably be seen as an individual primary lens (as seen in holes TLDD0004A and TLDD0005), and as a primary lens with minor subordinate lenses (as seen in holes TLDD0009, TLDD0010 and TLDD0021). An updated collar plan is provided in Figure 3 below, an updated Vertical Longitudinal Projection in Figure 4 and the interpretive cross-section for the Lower Zone is shown in Figure 5.

Other minor intersections of massive sulphides in surrounding holes, and the top of alteration and disseminated sulphides in the periphery of the mineralisation, have informed this interpretation. The primary zone of mineralisation strikes approximately 220° and ranges in dip from 65°- 85° to the north-west.

Initial interpretation of Upper Zone

Ongoing work at the Monty Prospect has also resulted in an initial interpretation of the geometry of the Upper Zone mineralisation currently defined by RC holes TLRC0004, TLRC0008 and TLRC0009 (as previously reported, see Figure 4). This interpretation suggests that the mineralisation in the Upper Zone, and its host stratigraphy, may be steep to sub-vertical in dip.

As a result, the RC holes in the Upper Zone are likely to have intersected the mineralisation at a low angle, with the reported intersections being considerably thicker than the anticipated true width. The grades reported in this Upper Zone may also therefore not be fully representative and further drilling is required to confirm the interpretation and determine the optimum angle for drilling to further define the mineralisation.

Thick zone of massive sulphides intersected in Lower Zone

Subsequent to the end of the Quarter, Sandfire reported further encouraging results from ongoing diamond drilling at Monty including a thick intersection of bornite-bearing massive sulphides in the Lower Zone.

Diamond hole TLDD0026, which was drilled approximately 45 metres along strike from recently reported hole TLDD0021 (which returned **7.3 metres of massive sulphides** from 286.2m down-hole) and 46 metres up-dip from the halo mineralisation intersected in TLDD0014 (see Figures 2 and 3), has intersected **three horizons of massive sulphides** within the host sequence of the Lower Zone:

- **3.0 metres of massive sulphides** from 325.6m to 328.6m down-hole (*true width not known at this time, top of intercept is approximately 275m metres vertically below surface*);
- **2.4 metres of massive sulphides** from 330.5m to 332.9m down-hole (*true width not known at this time, top of intercept is approximately 279m metres vertically below surface*); and
- **19.9 metres of massive sulphides** from 340.2m to 360.1m down-hole (*true width not known at this time, top of intercept is approximately 286 metres vertically below surface*).

The 19.9 metre intersection of massive sulphides in TLDD0026 is interpreted to be a continuation of the 7.3m (down-hole width) primary mineralisation previously reported from TLDD0021 in the ASX announcement on 2 October 2015 (Figures 3 and 4).

The mineralisation in the upper two intersections in TLDD0026 appears to be consistent with that of the higher level, subordinate mineralisation zones intersected in TLDD0021 (Figure 4).

Based on field observations, the mineralogy of the 19.9 metre intercept in TLDD0026 differs from that observed in the previously reported intersections of the primary mineralisation in TLDD0004A, TLDD0005, TLDD0009, TLDD0010, and TLDD0021. The massive sulphides intersected in these earlier holes comprises variable amounts of chalcopyrite (main copper-bearing sulphide mineral), pyrite and pyrrhotite, minor sphalerite and galena, along with silicate and talc gangue minerals (with gold and silver).

The primary mineralisation in TLDD0026 has a similar composition to that of the earlier holes but also contains variable amounts of bornite (a copper-bearing sulphide). Both the bornite and other sulphide minerals are deformed and exhibit features consistent with re-crystallisation, which suggests that modification of the massive sulphide may have occurred during deformation.

Bornite is an important copper mineral and commonly occurs in VMS deposits globally, along with the more common chalcopyrite. Bornite, in isolation, typically has a copper content of approximately 63 per cent by mass.

Further work is required to put the presence of bornite in TLDD0026 into further context and determine its significance in the exploration campaign at Monty and further afield at Doolgunna. Diamond core from TLDD0026 will be despatched for analysis.

Additional Lower Zone Drilling Results

Diamond hole TLDD0024, which was drilled approximately 66 metres down-dip of previously reported hole TLDD0010 (which returned intercepts including **10.5m at 18.9% Cu and 3.1g/t Au** from 359.7m down-hole and **4.7m at 12.8% Cu and 2.5/t Au** from 373.6m down-hole), intersected a single horizon of massive sulphides within the Lower Zone host sequence:

- **1.8 metres of massive sulphides** from 445.6m to 447.3m down-hole (*true width not known at this time, top of intercept is approximately 381 metres vertically below surface*).

Diamond hole TLDD0028, which was drilled approximately 37 metres along strike from previously reported hole TLDD0021 (**7.3 metres of massive sulphides** from 286.2m down-hole) and 46 metres from the mineralisation intersected in TLDD0020 (**1.2 metres of massive sulphides** from 272.6m down-hole), intersected the prospective horizon with weak haematite, jasper, and minor disseminated sulphides logged in the core. No massive sulphides were encountered and further drilling will be undertaken down-dip to help define the extents of the mineralisation in this area.

Assay results have also been received for previously reported drill-hole TLDD0014, which was completed 45 metres along strike of TLDD0026 (see Figures 3 and 4). TLDD0014 intersected:

- **0.5 metres at 3.6% Cu and 0.1g/t Au** from 334.2m to 334.7m down-hole (*corresponding to the stratigraphic position of the main mineralised zone*); and
- **3.4 metres at 3.5% Cu and 0.8g/t Au** from 359.4m to 362.8m down-hole (*true widths for both intersections not known at this time*).

Diamond hole TLDD0011, which was drilled along strike of TLDD0010 (see Figures 3 and 4), returned an intersection of:

- **0.4 metres at 1.2% Cu and 1.3g/t Au** from 370.9m to 371.3m down-hole (*true width not known at this time*).

Upper Zone Drilling

Reverse Circulation holes TLRC0015, TLRC0016 and TLRC0017 were drilled up-dip of, and at the opposite orientation to, previously reported holes TLRC0004, TLRC0008 and TLRC0009 to test for potential mineralisation (Figures 3 and 4).

No visible mineralisation was observed and the mineralised zone is therefore interpreted to not reach the surface (see Figure 4). The spatial position of the host horizon intersected in TLRC0016 and TLRC0017 indicates that the host horizon in the near-surface portion of the Upper Zone may be locally overturned and dip at approximately 75° to the south-east.

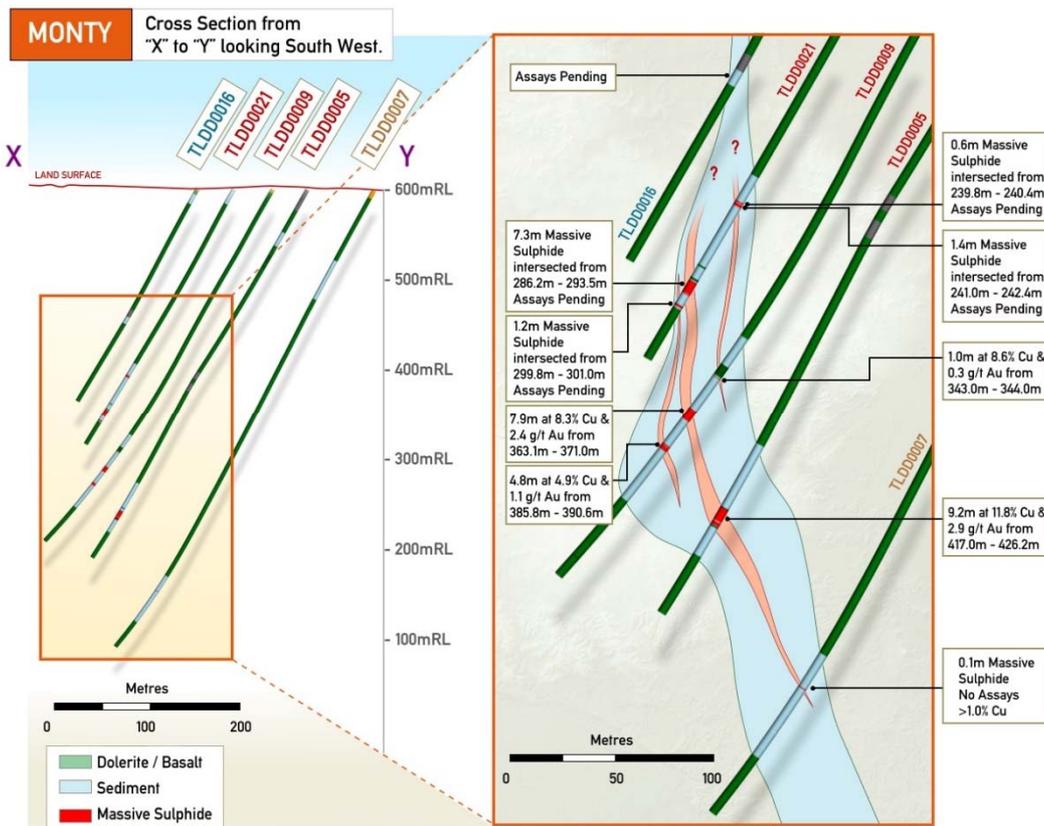
As the earlier drill-holes that intersected mineralisation in the Upper Zone (TLRC0004, TLRC0008 and TLRC0009) were drilled at a dip of 60 - 62° to the south-east, the true widths of mineralisation in these holes is anticipated to be significantly lower than the down-hole widths (as previously announced).

Additional diamond holes are planned to be drilled below TLRC0004, TLRC0008 and TLRC0009 in order to test for down-dip mineralisation as well as to provide information to accurately constrain the dip of the Upper Zone.

Assay results have been received for drillhole TLRC0009 drilled during the quarter, which returned an intersection of:

- **12.0 metres at 5.7% Cu and 1.8g/t Au** from 133m – 145m down-hole (*true width unknown but anticipated to be significantly less than down-hole widths*).

Figure 5: Interpretive cross-section of the Monty mineralisation (Lower Zone)



Sandfire is encouraged by the results to date from this exciting new area, which has the hallmarks of a significant new centre of VMS mineralisation within the greater Doolgunna Project.

Homer Prospect

With the focus of exploration at Doolgunna remaining on the Monty VMS discovery during the Quarter, the priority exploration opportunity at Homer, located approximately 4km east of the DeGrussa Copper Mine, remains to be tested.

Drill sites are prepared and it is envisaged that the first phase of drilling following up the initial encouraging results from TLDD0001 and TLD0003 will commence in the coming quarter. These drill-holes intersected haematitic exhalite with jasper clasts, which is interpreted to be the C5 target horizon. This horizon returned weakly anomalous base metal and trace elements.

7.4.2 Seismic Survey and Other Regional Exploration

Processing of the recently acquired seismic data has been unable to definitively demonstrate that the method can be used as an exploration tool for the direct detection of massive sulphides at DeGrussa. The focus with this seismic dataset now shifts to better utilising it to define basin architecture, including the location and depths of prospective stratigraphy as well as significant faults.

High-powered electromagnetic surveys are continuing as part of the exploration program with all RC and DDH holes being surveyed. In addition to this, further surveys are being conducted where more detailed information gained through drilling may indicate that the original survey did not optimally couple with the prospective stratigraphy.

Litho-geochemistry processing and interpretation continued throughout the reporting period. This project was successful in identifying two significant geochemical indices that correlate to areas of known mineralisation. Drill targeting is progressing and is focused on areas where the geochemical anomalism aligns with favourable stratigraphy and structure.

7.4.3 Thaduna Project Joint Venture

The Thaduna Project 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 (7.9Mt @ 1.8% Cu for 142,000 tonnes of contained copper). Sandfire currently owns a 35% interest in the project, and has entered into a farm-in agreement to earn up to a further 45% (total of 80%) with Ventnor Resources (ASX: VRX).

During the Quarter, Sandfire completed an RC drill program at Thaduna with results including:

- TDRC001: 5m @ 3.2% Cu and 9.6g/t Ag from 251m down-hole
- TDRC004: 4m @ 1.5% Cu and 1.9g/t Ag from 193m down-hole

The RC drill program comprised five holes drilled at a dip of 63° to an average depth of approximately 240m down-hole. Holes had been planned and selected to target gaps in drill coverage over the main orebody between known mineralised intercepts, and to test drill methods in order to maintain RC resource definition holes and diamond pre-collars at the proposed trajectory given that the Thaduna Copper Project is susceptible to significant drill-hole deviation.

The Company plans to undertake a diamond drilling program comprising six drill-holes during the December 2015 Quarter aimed at resource definition.

7.4.4 Ned's Creek Project

The Ned's Creek Project comprises all of the tenements acquired from Sipa Resources. The package totals over 900km² of prospective geology and surrounds the Thaduna Project Joint Venture in totality.

During the Quarter, the Company finalised the parameters of a proposed detailed airborne magnetic survey at Neds Creek and awarded a contract to fly the survey. It is anticipated that the results will aid detailed drill targeting at the project, with drilling expected to commence in Q3 FY 2016.

8.0 AUSTRALIAN EXPLORATION

Sandfire has a number of exploration joint ventures around Australia. The Company recognises that its activities impact directly and indirectly on the local environments and communities in which we operate. Sandfire is committed to conducting its activities in a sustainable and socially responsible manner to minimise and mitigate these impacts. In order to achieve its sustainability objectives, Sandfire applies the same high standards and commitment to absolute safety in the workplace, environmentally sound practices and transparent social responsibility at its exploration joint ventures as it does at its DeGrussa Copper Mine in Western Australia.

8.1 Borroloola Project

The Borroloola Project is located north of the McArthur River Mine (Xstrata), and is prospective for base metals, sedimentary manganese and iron ore. 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 the right to earn up to an 80% interest.

Pacifico Minerals advised Sandfire during the Quarter that it had completed expenditure of \$1.5 million at the Borroloola West Project, thereby earning the right to acquire a 51% interest in the Project. Under the terms of the farm-in agreement, Pacifico may (within 60 days) elect to continue sole funding exploration into the second earn-in period with the objective of earning a 70% interest through expenditure of a further \$2.5 million over 2 years.

Drilling conducted by Pacifico Minerals at Coppermine Creek subsequent to the reporting period (see *Pacifico Minerals release – 6 August 2015*) intersected extensive zones of fracturing that contained disseminations and lenses of semi-massive chalcopyrite. All three drill holes intersected copper mineralisation and extend the known mineralisation along the east-west trending Gordons Fault by more than 300m west of previous drilling, for a total strike length of just over 500m.

Pacifico reported that the drilling may have hit the fringe of a major copper mineralised system, with key highlights including:

- CCD03 10m @ 1.3% Cu from 68m, including 2m @ 4.0 % Cu
- CCR01 16m @ 0.5% Cu from 43m
- CCD02 23m @ 0.3% Cu from 136m

Pacifico Minerals plans to undertake diamond drilling at the Coppermine Creek prospect during the December 2015 Quarter to test key targets.

Through the North Batten JV, MMG commenced drilling at the Rosie Creek Prospect in the Northern Territory with a total of five diamond holes and 1500 metres completed to the end of the quarter. Results confirm the presence of prospective stratigraphy and structure at the prospect with assay results awaited.

An NSAMT survey was also completed within the northern tenements hosting the Rosie Creek prospect during the period. The survey was effective in delineating the basin architecture.

8.2 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 style lead-zinc-silver deposits such as the Cannington deposit (BHP) and the Ernest Henry Iron Oxide copper-gold deposits (Xstrata).

During the Quarter, Sandfire completed its initial \$4 million earn-in at the Altia Project, located 65km south-east of Cloncurry, Queensland. This project has been explored under a Farm-in Joint Venture agreement with Minotaur Exploration, giving Sandfire the right to acquire its minimum interest of 60% in the tenements. Further, Sandfire has elected to continue sole funding exploration at Altia with a view to earning the right to acquire an 80% interest over the next three years through further expenditure of \$4 million.

The activities undertaken by Sandfire at the Altia Project to date provide encouragement for further discoveries and increases in the current mineral inventory. One hole was completed at the Altia Main deposit targeting extensions to the north of the resource. The host lithologies were intersected, although no significant mineralisation was reported. Assay results are awaited.

During the Quarter, a total of five diamond drill-holes for 3,500m were completed at Sandfire's 100%-owned Breena Plains Project. Drilling tested historical lead-zinc drilling results in favourable stratigraphy at the BRLZ02 prospect. Anomalous assay results were returned for the three holes completed, but no significant mineralisation was identified. Down-hole EM surveys were completed on the holes, but no conductors were identified. At the BRLZ01 prospect, a highly magnetic anomaly was targeted with two holes during the Quarter. Neither hole successfully intersected the favourable stratigraphy for the style of mineralisation being targeted.

A small ground gravity survey over the BRCG02 and BRCG03 prospects, combined with soil sampling and an IP survey at BRCG03, assisted in delineating IOCG drill targets to be tested in the December 2015 Quarter.

8.3 New South Wales Projects

A number of project areas are held in the Lachlan Fold Belt of New South Wales near West Wyalong which are prospective for porphyry copper-gold mineralisation as found at Northparkes (China Moly), Cadia (Newcrest) and Cowal (Barrick). Farm-in agreements to earn up to 80% are held with Straits Resources Ltd (ASX: SRQ) on the Bland Creek Project and with Gold Fields Australasia Pty Ltd on the Marsden South Project.

Sandfire has entered into a binding agreement with Straits Resources Limited (ASX: SRQ) to acquire Straits' interests in the Temora and Currumburrama exploration projects in New South Wales for A\$2.5 million (payable in Sandfire shares).

The Temora Project, located within the Lachlan Fold Belt, is 100%-owned by Straits and comprises the tenements EL6845 and EL5864. The Currumburrama Project, comprising the tenement EL5792, is 100%-owned by Straits with Sandfire earning into the tenement through a joint venture. The Project is prospective for gold-copper porphyry mineralised systems associated with the Currumburrama intrusive complex.

Completion of the sale is subject to various standard Conditions Precedent including approval by the NSW Minister for Trade and Investment – Resources and Energy.

Work on the Temora Project will initially focus on data mining and developing a coherent mineralisation model to test underexplored targets. Preparations have commenced for an Aircore drilling program across the Wingrunner, Wilga Hills and Wellington North projects which will commence in the December 2015 Quarter. Drilling will test areas within the Lachlan fold belt for porphyry-style mineralisation.

A small diamond program is also planned for the December 2015 Quarter at the Marsden South Project.

8.4 Alford Project

The Alford Project on the Yorke Peninsula lies 20km NE of Wallaroo, South Australia in the southern portion of the Gawler Craton. The tenements are prospective for iron oxide copper-gold mineralisation as found at Prominent Hill (OZ Minerals), Olympic Dam (BHP) and Hillside (Rex Minerals). The Project includes an option to Joint Venture into the Alford Project (EL3969, PM268) with Argonaut Resources (ASX: ARE) to earn up to 75% of the project.

A geological review of the Netherleigh Park core is currently underway by consultant Graham Teale. Initial results suggest the presence of skarn-style mineralisation similar to the Kalkaroo deposit in the Curnamona, with a strong IOCG signature.

9.0 INTERNATIONAL EXPLORATION

9.1 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)¹.

Further details can be found in WCB’s News Releases, which are available at the WCB Resources website, www.wcbresources.com.

9.2 Tintina Resources – Black Butte Project, USA

Sandfire holds an initial 36% interest in Vancouver-based copper development company, Tintina Resources (TSX-V: TAU), after subscribing for C\$16 million of shares in a private share placement. 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.

¹ Production + Resources, Intierra 2014

Tintina advised that it continues studies on development of the Johnny Lee deposit to support an application for a Mine Operating Permit which the Company anticipates completing in 2015.

Full details can be found in the Tintina announcements, which are available at the Tintina website, www.tintinaresources.com.

10.0 CORPORATE

10.1 Cash on hand and finance facility

Sandfire announced a final unfranked dividend of 10 cents per share for the 2015 Financial Year, bringing the total dividend distribution for the year to 13 cents (franked to 10 cents). The record date to determine entitlements was 10 September 2015, and dividend payments commenced on 24 September 2015 via electronic funds transfer.

Cash on hand at 30 September 2015 totalled \$60 million following a reduction in outstanding debt of \$40 million (from \$120 million to \$80 million) and payment of the \$16 million final dividend.

10.2 Sustainability Report

Subsequent to the end of the reporting period, Sandfire Resources released its inaugural Sustainability Report, for the year ended 30 June 2015.

The Sustainability Report – which complies with the G4 Global Reporting Initiative (GRI), the leading international framework for sustainability reporting – provides a comprehensive overview of the Company's sustainability performance, including details regarding Sandfire's corporate governance systems, social responsibility, environmental, health and safety, and employee relations performance and targets.

The Company has delivered a number of significant achievements and developments in these areas over the past 12 months, with key highlights including:

- Royalty and company tax of \$43.1 million to the Government and Native Title Claimant Groups (paid and payable);
- Commencement of construction of a 10.6 megawatt solar power station at DeGrussa, an innovative \$40 million project which represents the largest integrated off-grid solar and battery storage facility in Australia, and one of the largest in the mining industry worldwide; and
- Ongoing support for a wide variety of local community initiatives including the Meekatharra Outback Festival and local Aboriginal commercial and community development initiatives.

The 2015 Sustainability Report is available to download from the ASX website or from the Company's website, www.sandfire.com.au.

10.3 Investor Call and Webcast

An investor conference call on Sandfire's September 2015 Quarterly Report will be held today 23 October 2015) for investors and analysts, commencing at 11.00am (AWST) / 2.00pm (AEST). Analysts, brokers, investors and media can join the conference call by dialling the following numbers:

Australia Toll Free:	1 800 558 698
Alternate Australia Toll Free:	1 800 809 971
International:	+61 2 9007 3187
Audio Access Code:	779216

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

In addition, a live webcast of the investor call and the slide presentation will be available via the Boardroom Radio (BRR Media) service by clicking on the following link:

<http://webcasting.brrmedia.com/broadcast/preview/140464>

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

ENDS

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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.

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.

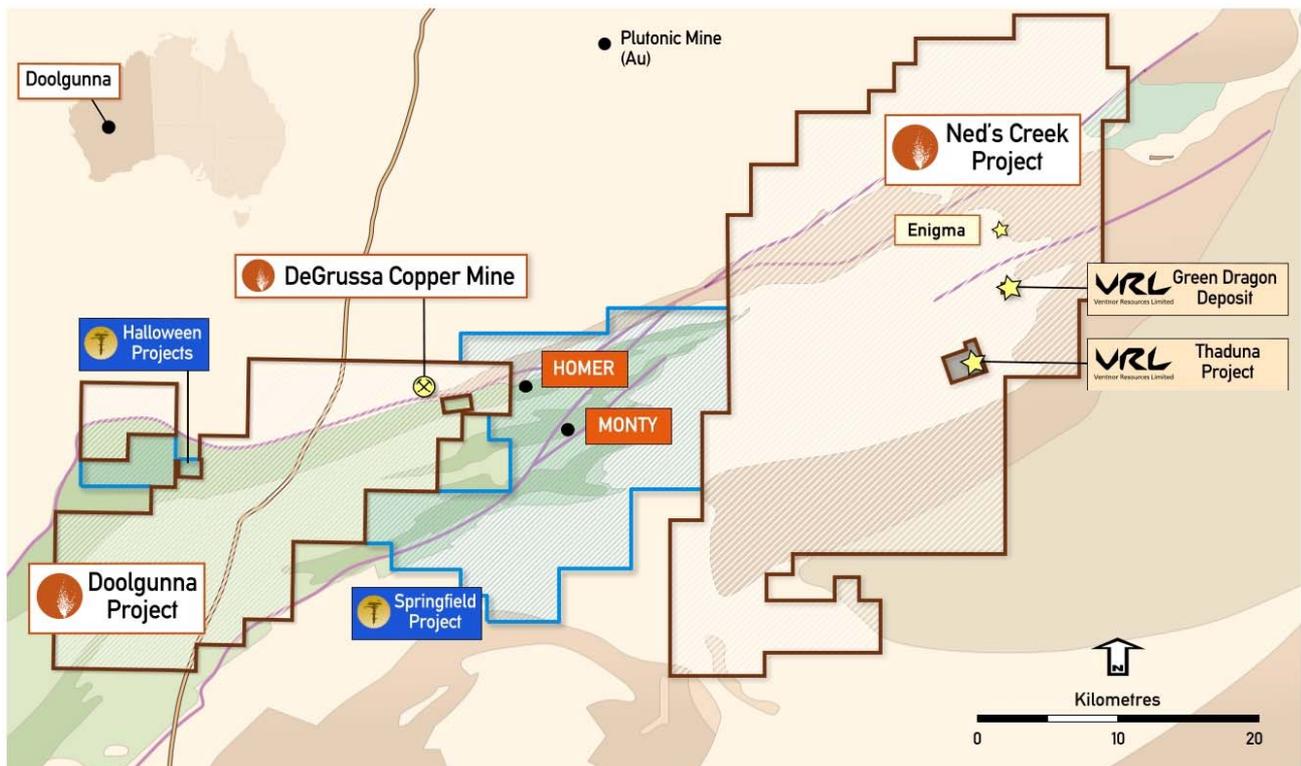
Density of the massive sulphide orebody ranges from 2.8g/cm³ to 4.9g/cm³, with an average density reading of 3.7g/cm³. Geotechnical and structural readings recorded from diamond drilling include recovery, RQD, structure type, dip, dip direction, alpha and beta angles, and descriptive information. All 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.

Figure 6: Sandfire's Greater Doolgunna Project, showing the Springfield Project (farm-in) and location of the Monty and Homer prospects



Appendix 1 – Drill-hole Information Summary, Springfield Project

Details and coordinates of all relevant drill collars are provided below:

Hole ID	Depth	Dip	Azimuth	Grid_ID	East	North	RL	Lease ID	Hole Status
TLDD0002A	463	-61°	110°	MGA94_50	743544	7171211	602	E52/2282	Complete
TLDD0004A	817	-60°	148°	MGA94_50	743588	7171281	601	E52/2282	Complete
TLDD0005	478	-62°	139°	MGA94_50	743544	7171210	602	E52/2282	Complete
TLDD0006	554	-62°	140°	MGA94_50	743469	7171174	601	E52/2282	Complete
TLDD0007	589	-62°	138°	MGA94_50	743504	7171271	601	E52/2282	Complete
TLDD0008	688	-62°	138°	MGA94_50	743441	7171223	600	E52/2282	Complete
TLDD0009	472	-61°	140°	MGA94_50	743578	7171190	602	E52/2282	Complete
TLDD0010	433	-62°	142°	MGA94_50	743514	7171138	601	E52/2282	Complete
TLDD0011	472	-62°	141°	MGA94_50	743451	7171092	598	E52/2282	Complete
TLDD0012	598	-62°	140°	MGA94_50	743403	7171155	599	E52/2282	Complete
TLDD0014	399	-62°	143°	MGA94_50	743638	7171231	603	E52/2282	Complete
TLDD0015	376	-62°	146°	MGA94_50	743561	7171073	602	E52/2282	Complete
TLDD0016	274	-61°	147°	MGA94_50	743621	7171119	604	E52/2282	Complete
TLDD0017	236	-62°	146°	MGA94_50	743686	7171166	605	E52/2282	Complete
TLDD0018	340	-62°	146°	MGA94_50	743471	7171054	599	E52/2282	Complete
TLDD0019	552	-62°	141°	MGA94_50	743566	7171329	600	E52/2282	Complete
TLDD0020	340	-61°	141°	MGA94_50	743536	7171106	602	E52/2282	Complete
TLDD0021	331	-62°	144°	MGA94_50	743599	7171152	603	E52/2282	Complete
TLDD0022	304	-62°	141°	MGA94_50	743441	7171035	599	E52/2282	Complete
TLDD0024	571	-60°	141°	MGA94_50	743470	7171172	600	E52/2282	Complete
TLDD0026	409	-59°	141°	MGA94_50	743609	7171209	602	E52/2282	Complete
TLDD0028	441	-62°	143°	MGA94_50	743569	7171129	602	E52/2282	Complete
TLRC0003	544	-61°	144°	MGA94_50	743720	7171393	599	E52/2282	Complete
TLRC0004	306	-62°	142°	MGA94_50	743497	7171025	600	E52/2282	Complete
TLRC0006	318	-62°	143°	MGA94_50	743430	7170973	598	E52/2282	Complete
TLRC0008	294	-62°	143°	MGA94_50	743461	7171001	599	E52/2282	Complete
TLRC0009	265	-62°	141°	MGA94_50	743527	7171050	601	E52/2282	Complete
TLRC0012	210	-62°	143°	MGA94_50	743553	7171017	602	E52/2282	Complete
TLRC0015	138	-60°	320°	MGA94_50	743503	7170953	600	E52/2282	Complete
TLRC0016	120	-58°	317°	MGA94_50	743580	7170985	602	E52/2282	Complete
TLRC0017	120	-60°	318°	MGA94_50	743548	7170968	601	E52/2282	Complete

Appendix 2 – Significant Drill-hole Assay Intersections, Springfield Project

Details of all relevant intersections are provided below:

Hole ID	Interval	From (m)	To (m)	Downhole Width (m)	Intersection		
					Cu (%)	Au (g/t)	Zn (%)
TLDD0004A		409.5	426.0	16.5	18.9	2.1	1.5
TLDD0005		417.0	426.2	9.2	11.8	2.9	2.3
TLDD0009	1	343.0	344.0	1.0	8.6	0.3	0.1
	2	363.1	371.0	7.9	8.3	2.4	2.1
	3	385.8	390.6	4.8	4.9	1.1	1.4
TLDD0010	1	355.6	356.1	0.5	1.2	1.4	0.2
	2	359.7	370.2	10.5	18.9	3.1	1.1
	3	373.6	378.2	4.7	12.8	2.5	0.8
TLRC0004	1	107.0	125.0	18.0	5.7	2.4	3.2
	2	158.0	162.0	4.0	4.2	0.7	0.1
TLRC0008	1	89.0	95.0	6.0	7.8	0.9	0.9
	2	112.0	123.0	11.0	15.0	1.9	1.0
TLRC0009		133.0	145.0	12.00	5.7	1.8	2.2

Note: Calculation is based on a 0.5% cut-off, no more than 3m of internal dilution and a minimum composite grade of 1%. Intersection length, Cu (%), Au (ppm), Ag (ppm) and Zn (%) are rounded to 1 decimal point.

JORC 2012 TABLE 1 – EXPLORATION RESULTS

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. 	<ul style="list-style-type: none"> Sampling method include half-core sampling of NQ2 core diamond drilling (DD). RC samples are collected by a cone splitter for single metre samples or a sampling spear for first pass composite samples using a face sampling hammer with a nominal 140mm hole.
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	<ul style="list-style-type: none"> Sampling is guided by Sandfire protocols as per industry standard.
	<ul style="list-style-type: none"> Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> DD Sample size reduction is through a Jaques jaw crusher to -10mm with a second stage reduction via Boyd crusher to -4mm. Representative subsamples are split and pulverised through LM5. RC sample are crushed to -4mm through a Boyd crusher and representative subsamples pulverised via LM5. Pulverising is to nominal 90% passing -75µm and checked using wet sieving technique. Samples are assayed using Mixed 4 Acid Digest (MAD) 0.3g charge and MAD Hotbox 0.15g charge methods with ICPOES or ICPMS. Fire Assay is completed by firing 40g portion of the sample with ICPMS finish.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> DD is completed using NQ2 size coring equipment. RC drilling is with sampling hammer of nominal 140mm hole. All drill collars are surveyed using RTK GPS with downhole surveying. All core where possible is oriented using a Reflex ACT II RD orientation tool. Downhole surveying is undertaken using a gyroscopic survey instrument.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> Diamond core recovery is logged and captured into the database. Core recoveries are measured by drillers for every drill run. The core length recovered is physically measured for each run and recorded and used to calculate the core recovery as a percentage core recovered.
	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. 	<ul style="list-style-type: none"> Appropriate measures are taken to maximise sample recovery and ensure the representative nature of the samples. This includes diamond core being reconstructed into continuous intervals on angle iron racks for orientation, metre marking and reconciled against core block markers. RC sampling is good with almost no wet sampling in the project area. Samples are routinely weighed and captured into the central secured database.
	<ul style="list-style-type: none"> Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> No sample recovery issues have impacted on potential sample bias.

Criteria	JORC Code Explanation	Commentary
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. 	<ul style="list-style-type: none"> Geological logging is completed for all holes and representative across the orebody. The lithology, alteration and structural characteristics of core are logged directly to a digital format following procedures and using Sandfire NL geologic codes. Data is imported into Sandfire NL's central database after validation in LogChief™.
	<ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. 	<ul style="list-style-type: none"> Logging is both qualitative and quantitative depending on field being logged. All cores are photographed.
	<ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All drillholes are fully logged.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. 	<ul style="list-style-type: none"> Core orientation are completed where possible and all are marked prior to sampling. Half core samples are produced using Almonte Core Saw. Samples are weighed and recorded.
	<ul style="list-style-type: none"> If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. 	<ul style="list-style-type: none"> RC samples are split using a cone or riffle splitter. A majority of RC samples are dry. On occasions that wet samples are encountered they are dried prior to splitting with a riffle splitter.
	<ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	<ul style="list-style-type: none"> All samples are sorted, dried at 80° for up to 24 hours and weighed. DD samples are crushed through Jaques crusher to nominal -10mm. A second stage crushing is through Boyd crusher to nominal -4mm. RC samples are only Boyd crushed to -4mm. 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 using wet sieving technique.
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	<ul style="list-style-type: none"> 1:20 grind quality checks are completed for 90% passing 75µm criteria to ensure representativeness of sub-samples.
	<ul style="list-style-type: none"> Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. 	<ul style="list-style-type: none"> Sampling is carried out in accordance with Sandfire protocols as per industry best practice. No field duplicates have been taken.
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> The sample sizes are considered appropriate for the VHMS and Gold mineralisation types.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 	<ul style="list-style-type: none"> Samples are assayed using 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, Re, Mn, Co, Cd, Cr, Ni, Se, Te, Ti, Zr, V, Sn, W and Ba. 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 S, Cu, Zn, Co, Fe, Ca, Mg, Mn, Ni, Cr, Ti, K, Na, V are determined by ICPOES, and Ag, Pb, As, Sb, Bi, Cd, Se, Te, Mo, Re, Zr, Ba, Sn, W are determined by ICPMS. Samples are analysed for Au, Pd and Pt by firing a 40g of sample with ICP AES/MS finish. Lower sample weights are employed where samples have very high S contents. This is a classical FA process and results in total separation of Au, Pt and Pd in the samples. The analytical methods are considered appropriate for this mineralisation styles.

Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. 	<ul style="list-style-type: none"> No geophysical tools are used in the analysis.
	<ul style="list-style-type: none"> Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Sandfire DeGrussa QAQC protocol is considered industry standard with standard reference material (SRM) submitted on regular basis with routine samples. SRMs and blanks are inserted at a minimum of 5% frequency rate.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	<ul style="list-style-type: none"> Significant intersections have been verified by alternative company personnel.
	<ul style="list-style-type: none"> The use of twinned holes. 	<ul style="list-style-type: none"> None of the drillholes in this report is twinned.
	<ul style="list-style-type: none"> Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	<ul style="list-style-type: none"> Primary data are captured on field tough book laptops using Logchief™ Software. The software has validation routines and data is then imported into a secure central database.
	<ul style="list-style-type: none"> Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> The primary data is always kept and is never replaced by adjusted or interpreted data.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. 	<ul style="list-style-type: none"> Sandfire Survey team undertakes survey works under the guidelines of best industry practice. All drill collars are accurately surveyed using RTK GPS system within +/-50mm of accuracy (X,Y,Z). Downhole survey completed by gyroscopic downhole methods at regular intervals.
	<ul style="list-style-type: none"> Specification of the grid system used. 	<ul style="list-style-type: none"> Coordinate and azimuth are reported in MGA 94 Zone 50.
	<ul style="list-style-type: none"> Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Topographic control was established LiDar laser imagery technology.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 	<ul style="list-style-type: none"> Drill spacing is currently defined by geological criteria regarded as appropriate to determine the extents of mineralisation. This is nominally an 80m by 80m spacing. Spacing is shown by in the accompanying tables and collar plans. Some holes are drilled at a closer spacing to determine the edges of mineralisation.
	<ul style="list-style-type: none"> Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. 	<ul style="list-style-type: none"> Drilling is preliminary in its spacing and distribution and is not sufficient to at this stage to support Mineral Resources or Ore Reserves.
	<ul style="list-style-type: none"> Whether sample compositing has been applied. 	<ul style="list-style-type: none"> No sample compositing have been applied to the Exploration Results.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	<ul style="list-style-type: none"> The drillhole may not necessarily be perpendicular to the orientation on the intersected mineralisation.
	<ul style="list-style-type: none"> If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> No significant orientation based sampling bias is known at this time. The drillholes may not necessarily be perpendicular to the orientation of the intersected minerlisation. All reported intervals are downhole intervals not true widths. This will be established with additional drilling.

Criteria	JORC Code Explanation	Commentary
Sample security	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> Appropriate security measures are taken to dispatch samples to the laboratory. Chain of custody of samples is being managed by Sandfire Resources NL. Samples are stored onsite and transported to laboratory by a licence transport company in sealed bulker bags. The laboratory receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> No external audits or reviews of the sampling techniques and data have been completed.

Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> 	<ul style="list-style-type: none"> The Talisman project encompasses E52/2282, E52/2313 and E52/2466 which are wholly owned by Talisman Mining Ltd, with no known third party encumbrances. Sandfire is currently farming into the project on a staged basis with the right to earn 70% interest in the project area.
	<ul style="list-style-type: none"> <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i> 	<ul style="list-style-type: none"> All tenements are current and in good standing. The Talisman tenements are currently subject to a Native Title Claim by the Yungunga-Nya People (WAD6132/98). Sandfire currently has a Land Access Agreement in place with the Yungunga-Nya Native Title Claimants and have assumed management of Heritage Agreements which were executed by Talisman. These agreements allow Sandfire to carry out mining and exploration activities on their traditional land.
Exploration done by other parties	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> Aside from Sandfire Resources and Talisman Mining Limited there has been no recent exploration undertaken on the Talisman Project. Exploration work completed prior to Talisman's tenure included geochemical soil and rock chip sampling combined with geological mapping. Some targeted RC was completed over gold and diamond targets.
Geology	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> The Doolgunna Talisman's Project lies within the Proterozoic-aged Bryah rift basin enclosed between the Archaean Marymia Inlier to the north and the Proterozoic Yerrida basin to the south. The principal exploration targets at the Doolgunna Projects are the Volcanogenic Massive Sulphide (VMS) deposits located with the Proterozoic Bryah Basin of Western Australia. The discovery of Bornite at Doolgunna is new and its full context and implication is still to be determined.
Drill hole information	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p>	<ul style="list-style-type: none"> Refer to Appendix 1 of this accompanying document.

Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> • easting and northing of the drill hole collar; • elevation or RL (Reduced Level – elevation above sea level in metres); • of the drill hole collar; • dip and azimuth of the hole; • down hole length and interception depth; and • hole length. <p>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</p>	
Data aggregation methods	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 	<ul style="list-style-type: none"> • Significant intersections are based on greater than 0.5% Cu and may include up to a maximum of 3.0m of internal dilution, with a minimum composite grade of 1.0% Cu. • Cu grades used for calculating significant intersections are uncut.
	<ul style="list-style-type: none"> • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. 	<ul style="list-style-type: none"> • Minimum and maximum DD sample intervals used for intersection calculation are 0.3m and 1.2m respectively subject to location of geological boundaries. • RC reported intersections are based on a regular 1m sample intervals.
	<ul style="list-style-type: none"> • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • No metal equivalents are used in the intersection calculation. • Where core loss occurs; the average length-weighted grade of the two adjacent samples are attributed to the interval for the purpose of calculating the intersection. The maximum interval of missing core which can be incorporated with the reported intersection is 1m.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. 	<ul style="list-style-type: none"> • Downhole intercepts of mineralisation reported in this release are from a drillhole orientated perpendicular to a modelled EM plate. The drillhole may not necessarily be perpendicular to the mineralised zone. All widths reported are downhole intervals.
	<ul style="list-style-type: none"> • If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported. 	<ul style="list-style-type: none"> • The geometry of the mineralisation, relative to the drillhole, is targeted to be approximately perpendicular. As geological interpretation advances any areas where the drilling is at a low angle to the mineralisation will be tested with holes from a more suitable orientation and reported as such.
	<ul style="list-style-type: none"> • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • All intersections reported in this release are downhole intervals. True widths are not known.
Diagrams	<ul style="list-style-type: none"> • Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> • Appropriate maps are included within the body of the accompanying document.

Criteria	JORC Code Explanation	Commentary
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> The accompanying document is considered to represent a balanced report. Reporting of grades is done in a consistent manner.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> Other exploration data collected is not considered as material to this document at this stage. Further data collection will be reviewed and reported when considered material.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Step-out drilling for along-strike and down-dip extensions of mineralisation continue on 160m x 80m x 80m grid pattern subject to geological and geophysical interpretation. Additional drilling may include holes targeting the definition of mineralisation extents, this drilling will be on a nominal 40m x 40m grid.