



SANDFIRE RESOURCES NL

Sandfire Resources NL ABN 55 105 154 185
Level 1, 31 Ventnor Ave, West Perth Western Australia 6005
Phone: +61 8 6430 3800 **Fax:** +61 8 6430 3849
Email: info@sandfire.com.au **Web:** www.sandfire.com.au

21 January 2014

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

Dear Sebastian,

**LODGEMENT OF DECEMBER 2013 QUARTERLY REPORT, QUARTERLY UPDATE PRESENTATION
INVESTOR CONFERENCE CALL AND WEBCAST**

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

1. December 2013 Quarterly Activities Report
2. December 2013 Quarterly Update Powerpoint Presentation

In addition, Sandfire's Managing Director and CEO, Karl Simich, is hosting an investor teleconference and live webcast on the December 2013 Quarterly Report at 10.00am (AWST) / 1.00pm (AEST) today. Details of the call are provided in the December 2013 Quarterly Activities Report.

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

Access this webcast at: <http://www.brrmedia.com/event/119667/karl-simich-managing-director-and-ceo>
<http://www.sandfire.com.au>

Yours sincerely,

Matt Fitzgerald
Chief Financial Officer
and Company Secretary

For further information contact:
Sandfire Resources NL
Karl Simich – Managing Director/CEO
Office: +61 8 6430 3800

Read Corporate
Mobile: +61 419 929 046 (Nicholas Read)
Mobile: +61 421 619 084 (Paul Armstrong)





Surface drilling crew, DeGrussa



SANDFIRE RESOURCES NL

QUARTERLY REPORT

For the period ended 31 December 2013

HIGHLIGHTS

Production & Operations

Contained metal production	Sep 2013 Quarter	Dec 2013 Quarter	FY2014 To Date
COPPER			
Concentrator (t)	16,446	15,492	31,938
GOLD			
Concentrator (oz)	8,613	5,957	14,570

- 15,492t copper and 5,957oz gold produced at a C1 cash operating cost of US\$1.29/lb.
- Underground mining rate of 1.5Mtpa achieved with five stopes now online. Development of C1 and C4/C5 declines progressing with total underground development exceeding 17km.
- Increased copper recovery of 89.7% achieved with further recovery improvement initiatives underway targeting ~92% during 2H FY2014.
- FY2014 production guidance maintained: mid-point of 65-75,000t of copper; lower end of 35-45,000oz of gold; upper end of C1 cash costs of US\$1.05-1.15/lb.

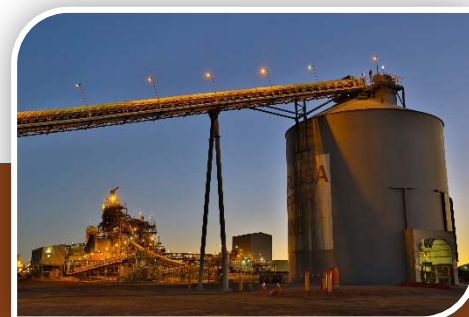
Exploration

- Further encouraging results from underground drilling to test down-plunge extensions of Conductor 4 and down-dip boundary of Conductor 1: resource model update underway.

Corporate

- Farm-in and joint venture completed with Ventnor Resources (ASX: VXR) giving Sandfire the right to earn up to 80% of the Thaduna/Green Dragon copper project.
- Farm-In Agreement signed with Talisman Mining (ASX: TLM) to farm into its three key Doolgunna copper-gold projects, located immediately adjacent to DeGrussa.
- \$230M remaining facility balance at 31 December 2013; \$75M cash and deposits. High inventories as at 31 December 2013.

December 2013 Quarterly Report Presentation to be webcast live at 10am (WST)/1pm (AEDT) today, 21 January 2014, with a simultaneous investor conference call (details inside).



ASX Code:

SFR

Issued Capital:

Ordinary Shares 155.6M
Options 8.1M

Major Shareholders:

OZ Minerals 19.2%
POSCO 15.3%

Directors:

Derek La Ferla
Non-Executive Chairman

Karl M. Simich
Managing Director and
Chief Executive Officer

Paul Hallam
Non-Executive Director

W. John Evans
Non-Executive Director

Soocheol Shin
Non-Executive Director

Robert Scott
Non-Executive Director

Management:

Michael Spreadborough
Chief Operating Officer

Matthew Fitzgerald
Chief Financial Officer and
Joint Company Secretary

Robert Klug
Chief Commercial Officer and
Joint Company Secretary

Date:

21 January 2014

Sandfire Resources NL ABN 55 105 154 185
Level 1, 31 Ventnor Ave, West Perth Western Australia 6005
Phone: +61 8 6430 3800 Fax: +61 8 6430 3849
Email: info@sandfire.com.au Web: www.sandfire.com.au

1.0 OVERVIEW

Copper production for the December Quarter was 15,492 tonnes (September Quarter: 16,446 tonnes) which was at the upper end of guidance with an average head grade of 5.1% Cu (September Quarter: 5.3% Cu). C1 cash operating costs for the Quarter were US\$1.29/lb (September Quarter: US\$1.28/lb).

Mill throughput is on target for an annualised rate of 1.5Mtpa (million tonnes per annum) with 338,140 tonnes milled for the December Quarter and 715,859 tonnes milled for the first half of FY2014. Average copper recovery increased to 90% in the December Quarter from 82% in the previous quarter. This was mainly due to the fact that no open pit material was processed during the Quarter, allowing only primary underground sulphide ore to be milled.

Underground mining progressed on schedule with five stopes now in various stages of development and production. The underground mine achieved the targeted ore production rate of 1.5Mtpa (125,000 tonnes per month) during the Quarter with a total of 378,824 tonnes of underground sulphide ore mined for the Quarter.

Sandfire maintained a strong focus on underground development, with the Conductor 1 and Conductor 4/5 Declines well advanced from the junction off the Evans Decline and total underground development reaching over 17km at Quarter-end.

FY2014 copper production is expected to be at the mid-point of the previously announced range of 65-75,000 tonnes of contained copper metal and gold production at the lower end of the previously announced range of 35-45,000oz. C1 cash operating costs are forecast to be at the upper end of the previously announced range of US\$1.05-1.15/lb, influenced by the lower gold production.

As previously advised, production will be weighted towards the second half of FY2014 due to expected variability in mined head grade across different stopes as part of the underground mine plan. The March and June 2014 Quarters will see copper grades in the range of 5.0-6.0% Cu.

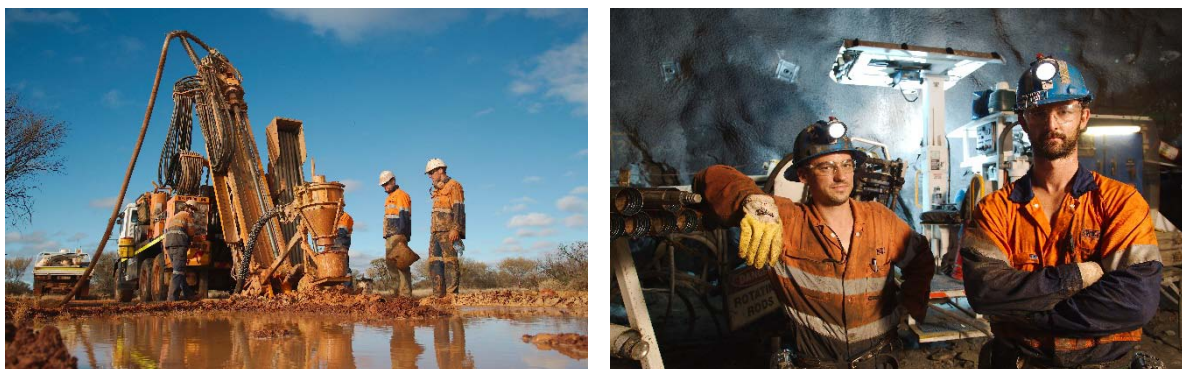


Figure 1 – Surface (left) and underground (right) diamond drilling at DeGrussa

1.1 Safety

The major lag indicator reporting for safety will be undertaken utilising a Total Recordable Injury Frequency Rate (TRIFR). The TRIFR continued to show a steady decline to 13.5 at the end of the December Quarter, compared with 17.6 at the end of the September Quarter. The TRIFR for the Quarter was 9.1.

Recordable injuries include those injuries that result in any days away from work (Lost Time Injuries) and injuries where an employee or contractor cannot perform all or any part of their normal shift (Restricted Work Day Injuries) and any injury that requires services that only a medical practitioner can provide (Medical Treatment Injuries).

Injury rates are continuing to show a positive downward trend following a visible leadership initiative being undertaken by Management.

The refinement of safe systems of work and training in Safety Essentials, JHA, Legislative Obligations, Back Care and Manual Handling during the Quarter also made a positive contribution to the good safety outcome.

A focus on visual leadership (Formal Leader Safety Observations) was commenced during the December Quarter, and will be a major focus going forward.

2.0 MINING & PRODUCTION

2.1 Overview

December 2013 Quarter – Production Statistics		Tonnes	Grade (% Cu)	Grade (g/t Au)	Contained Copper (t)	Contained Gold (oz)
Concentrator	Mined	378,825	5.2	1.5	19,855	18,587
	Milled	338,140	5.1	1.4	17,270	14,933
	Production	62,159	24.9	3.0	15,492	5,957
	Copper and gold sales	55,717	24.7	3.3	13,136	5,694

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.

2.2 Underground Mining

Underground mining progressed on schedule with five stopes on-line during the Quarter. The ramp-up of the underground mine towards the targeted annualised ore production rate of 1.5Mtpa (125,000 tonnes per month) was achieved with a total of 378,824 tonnes of underground sulphide ore mined for the Quarter.

For the project-to-date, a total of 1,487,030 tonnes of sulphide ore at a grade of 5.1% Cu has been mined and delivered to the ROM (run-of-mine) pad since stoping commenced in October 2012.

The performance of the paste-fill plant has improved with paste delivery rates increased during the Quarter. Filling of the upper level stopes has been delayed due to reliability issues with the paste pump.

Strategies including improved maintenance schedules and mine design changes will reduce the need for pumping of the fill and, following a planned campaign of paste filling during January and in the September 2014 Quarter using the pump, all filling for the next couple of years will be completed by gravity filling, eliminating any delays associated with pump reliability.

The Conductor 1 Decline advanced 369m from the junction off the Evans Decline at Quarter-end and will enable the large Conductor 1 deposit to be fully developed and extracted. The Conductor 4/5 Decline advanced 384m from the junction at Quarter-end will enable development and mining of the deeper high-grade Conductor 4 and 5 deposits to occur.

At Quarter-end, the Conductor 4/5 Decline encountered some deteriorating ground conditions and increased water ingress. Further diamond drilling is being undertaken to confirm the optimal decline path. This Decline is expected to reach Conductor 4, located approximately 400m east of Conductor 1, towards the end of the year.

The development of these new declines is important as it will ensure that DeGrussa can source ore from multiple underground locations, providing stability and consistency of production in the long term.

It is also facilitating the establishment of underground diamond drilling platforms from which extensions and potential repeats of the Conductor 4 and 5 deposits can be targeted.

These drill positions will also be used to allow early grade control drilling to define mining shapes in Conductor 4 and 5 and to conduct in-fill drilling to enable conversion of Inferred Mineral Resources to Ore Reserves in these deposits.

Total development for the underground mine to date is over 17km.

2.3 Processing

The ramp-up of the DeGrussa Concentrator continued during the Quarter, with key metrics including:

- 338,140 tonnes milled at an average head feed grade of 5.1% Cu (September Quarter: 377,719 tonnes at 5.3% Cu), with the plant on target for an annualised throughput rate of 1.5Mtpa;
- increased overall copper recovery of 90% (September Quarter: 82%), reflecting the cessation of blending open pit transitional material with primary underground sulphide ore;
- concentrate production of 62,159 tonnes (September Quarter: 68,018 tonnes); and
- metal production of 15,492 tonnes of contained copper (September Quarter: 16,446 tonnes of contained copper).

Overall copper concentrator recoveries continued to be optimised through increased plant stability and following the cessation of campaign processing of transitional open pit ore. Approximately 40,000 tonnes of open pit sulphide ore remains stockpiled for future processing if and when required.

With primary sulphide ore from the underground mine comprising 100 per cent of ore feed to the concentrator, pleasing copper recoveries ranging from 85-96% and on-spec copper concentrate at 24-25% Cu were achieved during the Quarter.

Further optimisation programs, in line with plant ramp-up, were completed during the Quarter including the installation of control system upgrades to allow implementation of the expert control system, a full change-out of the diaphragms and plate seals on the Larox filter and replacement of SAG mill grate plates. The slightly lower mill throughput for the Quarter reflected plant shut-downs to implement these programs.

2.4 Guidance – FY2014

FY2014 targeted copper production expected to be around the mid-point of the previously announced range of 65-75,000 tonnes of contained copper metal and gold production expected to be at the lower end of the previously announced range of 35-45,000oz.

Headline C1 cash operating costs are expected to be at the upper end of the previously announced range of US\$1.05-1.15/lb, influenced by the level of gold production which is a by-product credit against cash operating costs.

As previously advised, production will be weighted towards the second half of FY2014 due to expected variability in mined head grade across different stopes as part of the underground mine plan. March and June 2014 Quarters will see copper grades being in the range of 5.0-6.0% Cu. Refer to Sandfire's December 2013 Quarterly Presentation (released today) for further detail and guidance on operating parameters and unit costs.

3.0 SALES AND MARKETING

3.1 Copper Concentrate Shipments

A total 55,717 tonnes of plant concentrate grading 24.7% Cu containing 13,136 tonnes of copper was sold for the Quarter. Gold sales totalled 5,694 ounces for the Quarter.

The final shipment of production from the December Quarter was completed in the first half of January 2014, with the revenue and profit for this shipment to be recorded in the financial accounts for the second half of FY2014.

4.0 FEASIBILITY STUDIES & METALLURGY

4.1 Oxide copper

The Sandfire Oxide Copper Project at DeGrussa has been extensively tested and the project is being evaluated on the following basis:

- existing stockpiled oxide material will be scrubbed to remove fine clays;
- the -150um material will be deposited in a purpose-built additional tailings storage facility and the +150um material will be all in crushed to -24mm for heap leaching;
- the heap leach will be a combination of a traditional sulphuric acid leach coupled with bio-leaching; and
- the pregnant liquor from the heap leach will be concentrated in a solvent extraction circuit with the strong electrolyte fed to a electrowinning circuit to produce 99.99-99.999% copper cathode.

All the testing required to support this study has been completed and the test work reports have been finalised. The project is now focused on optimising the capital and operating cost with the aim of completing a Feasibility Study report late in the December Quarter 2014.

In December 2013, Sandfire signed a joint venture agreement with Ventnor Resources at the Thaduna/Green Dragon Copper Project (see Section 7.1 below). Ventnor has significant oxide ore which has the potential to be processed through the oxide facility being proposed for DeGrussa.

Geological investigation and metallurgical testing will be undertaken during the first half of CY2014 to determine this potential. Subject to the results of this work, the capacity of the proposed oxide plant may be adjusted (currently 6,000-7,000t copper metal per year) to allow for combined processing of the Ventnor ore and improved project economics.

5.0 DEGRUSSA EXPLORATION

5.1 Overview

Sandfire continues to progress a tightly focused, multi-disciplined 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 (volcanogenic massive sulphide) deposits or clusters of deposits.

Key components of the Company's exploration program at DeGrussa during the December Quarter included:

- further underground diamond drilling from newly established drilling platforms off the Conductor 1 and Conductor 4/5 Declines to test for extensions of the known mineralisation in the near-mine environment;
- deep surface drilling to test for the presence of the VMS stratigraphic horizon below the Conductor 4/5 positions;
- continued first-pass regional exploration over a number of exploration targets within the broader Doolgunna tenement holding;
- follow-up Reverse Circulation (RC) drilling at a number of more advanced targets;
- ongoing aircore drilling and regional geochemical sampling and mapping to define the interpreted volcanic host sequence across the broader Doolgunna tenement holding;
- continued development of the Company's mine-scale exploration model; and
- continued development of the host stratigraphy for potential accumulations of VMS mineralisation away from the known ore zones.

The breakdown of metres drilled for the Quarter is shown below:

Drilling	AC/RAB Drilling (m)	RC Drilling (m)	UG Diamond Drilling (m)	Surface Diamond Drilling (m)	Total Drilling (m)
Q1FY2013	36,238	1,002	1,550	0	38,790
Q2FY2013	32,217	7,460	5,745	4,951	53,373

5.2 DeGrussa Mine Extensional Exploration

During the Quarter, exploration within the DeGrussa mine corridor continued to focus on underground diamond drilling to test for extensions of the Conductor 4 and Conductor 1 deposits. The objective of this drilling was to identify potential extensions to the known deposits and, in some instances, close off zones that were open down-plunge or down-dip.

Extensional exploration drilling down-plunge of Conductor 4 was completed from the 2200DDD drilling platform during the Quarter, with assays returned from this drilling including:

- DGUE0017: **19.6m @ 4.72% Cu and 2.1g/t Au** from 181.65m depth
- DGUE0012: **8.68m @ 2.63% Cu and 2.68g/t Au** from 197.29m depth
- DGUE0013: **3.48m @ 3.45% Cu and 1.80g/t Au** from 218.30m depth
- DGUR0004: **4.13m @ 4.24% Cu and 3.38g/t Au** from 195.83m depth
- DGUE0019: **1.43m @ 2.13% Cu and 2.32g/t Au** from 236.55m depth
- DGUR0004: **1.23m @ 1.32% Cu and 2.39g/t Au** from 169.97m depth

Results from drilling targeting these down-plunge extension indicate that the extents of the Conductor 4 deposit are now well constrained and effectively closed (see Figure 2 below).

The Company commenced updates to the interpretations of the Conductor 4 orebody during the Quarter with the final versions to be used in the resource model update which is scheduled be completed in the March Quarter this year.

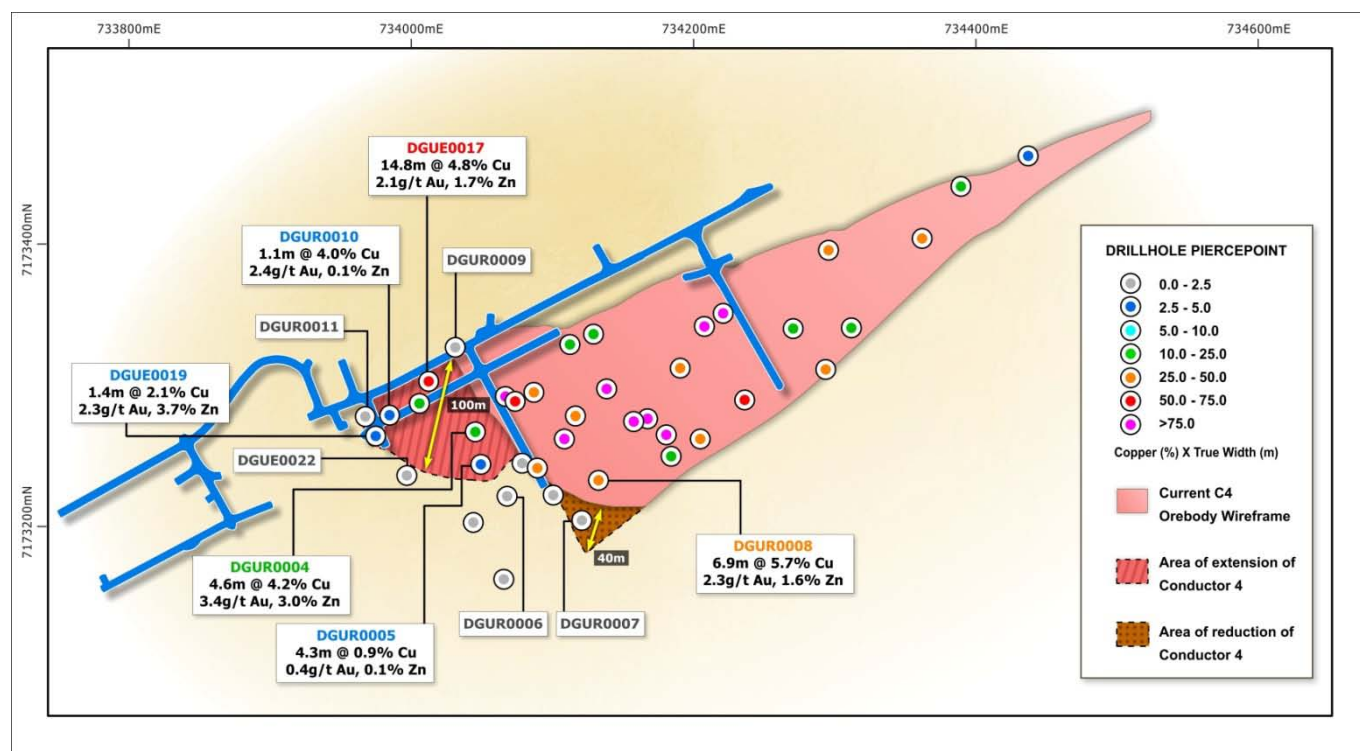


Figure 2 – Conductor 4 down-plunge underground diamond drilling program

Underground exploration diamond drilling comprising six holes (1,665m) from the 2250 FWW underground drill drive has aided in the delineation of the down-dip boundary of Conductor 1 and the contact with the Shiraz fault in that area. Updated orebody interpretations in this area are being completed and will be included in the resource model update in the current Quarter.

Further underground exploration diamond drilling will be undertaken as drilling positions become available during the year.

During the Quarter, a deep diamond drill hole, DGDD394, was drilled from surface targeting the potential host horizon some 400m down-dip from Conductor 5. The hole reached a depth of 1,354m and was successful in identifying the host horizon at approximately 950m down-hole, however no sulphides were encountered. A down-hole electro-magnetic (DHEM) survey of this hole will be completed in March Quarter targeting off-hole conductors.

A further deep diamond drill hole is planned for the near-mine corridor next Quarter.

5.3 DeGrussa Regional Exploration

The DeGrussa regional land-holding comprises over 400km² of contiguous tenements – many of which have never been explored using a modern understanding of the regolith. In the southern extents of the land-holding little work has been completed while the Company focused on testing potential DeGrussa extensions in the immediate mine corridor.

During the Quarter, assays were returned from a number of RC drill holes completed at the Cow Hole Bore prospect, located to the south-west of the DeGrussa mine (Figure 3). The best intercepts included:

- DGRC800: 22m @ 5.26g/t Au from 173m
- DGRC801: 6m @ 2.82g/t Au from 199m
- DGRC803: 8m @ 2.51g/t Au from 55m
3m @ 1.41g/t Au from 132m
3m @ 14.26g/t Au from 160m
3m @ 1.35g/t Au from 249m
2m @ 1.76g/t Au from 256m (EOH)
- DGRC805: 5m @ 1.34g/t Au from 10m (Composite)
5m @ 0.69g/t Au from 35m (Composite)

The +1g/t Au anomaly at Cow Hole Bore has now been defined over a strike length of 2,600m. Currently the interpretation of the Cow Hole Bore prospect is that of shear zone located on the contact between dolerite and sediments hosting an auriferous quartz vein stockwork.

Current drill density is sparse (nominal 200m line spacing) and two diamond drill holes are planned in the coming Quarter to aid in structural interpretation.

In addition, further geochemically anomalous assays were returned from aircore drilling at the Shed Well, Homestead and Gascoyne West prospects, located further to the south-west within the Doolgunna tenement package (Figure 3). Better intersections include:

- DGAC4017: 10m @ 0.75ppm Au, 20-30m (Composite)
- DGAC4025: 25m @ 690ppm Cu and 456ppm Zn, 55-80m (Composite)
- DGAC4074: 15m @ 653ppm Cu, 35-50m (Composite)
- DGAC4078: 2m @ 2,100ppm Cu, 100-102m EOH Composite)
- DGAC4098: 5m @ 690ppm Cu, 160-165m (Composite)
- DGAC4118: 5m @ 795ppm Cu and 500ppm Zn, 45-50m Composite)
10m @ 1,115ppm Cu and 423ppm Zn, 55-65m Composite)
- DGAC4144: 20m @ 661ppm Cu, 65-85m (Composite)
- DGAC4177: 5m @ 510ppm Cu, 105-110m Composite)
5m @ 645ppm Cu and 305ppm Zn, 145-150m Composite)
- DGAC4242: 25m @ 645ppm Cu, 115-140m (Composite)
- DGAC4260: 5m @ 0.87ppm Au, 55-60m (Composite)
- DGAC4273: 10m @ 900ppm Cu, 25-335m (Composite)

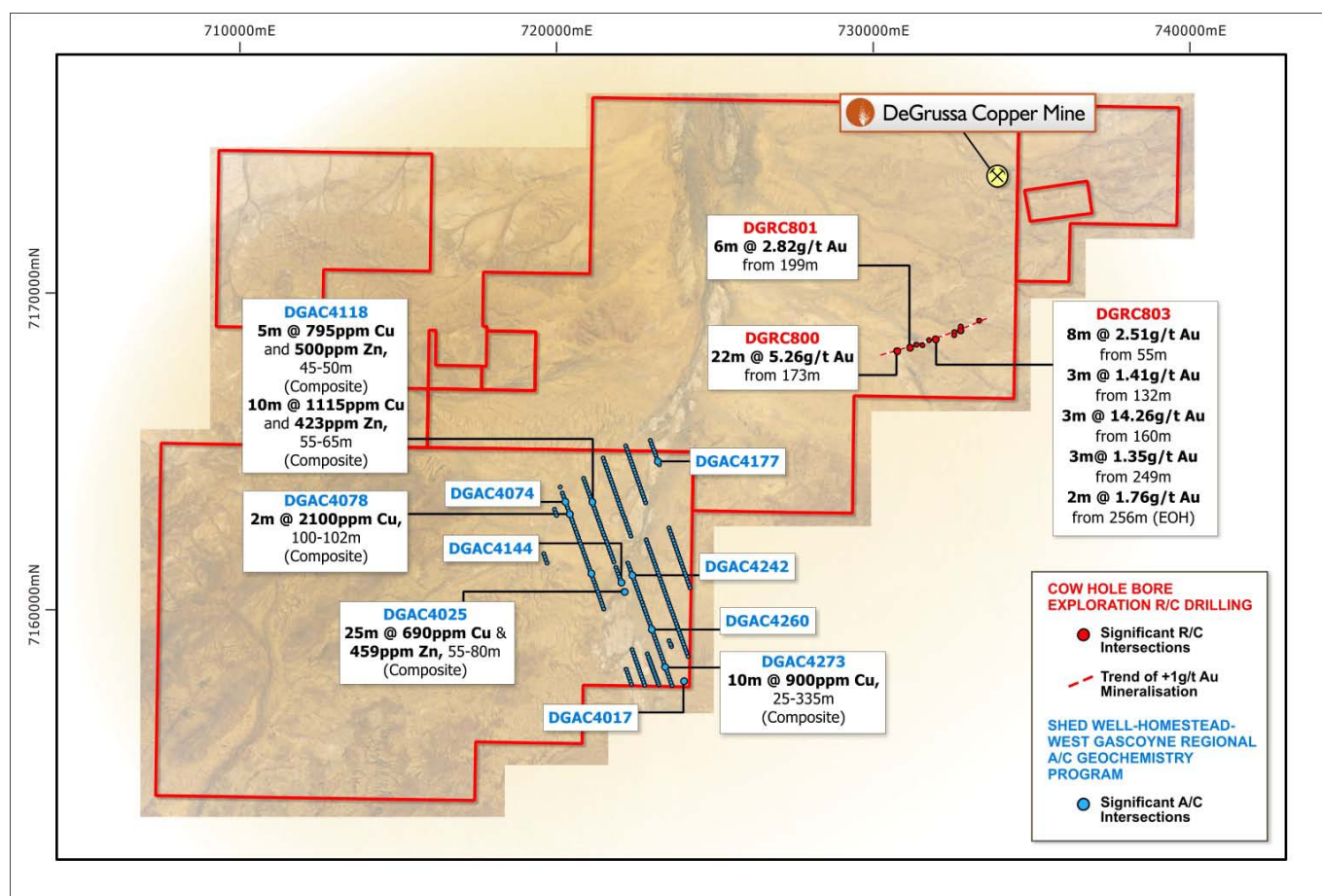


Figure 3 – Anomalous intercepts in initial first pass AC drilling at Shed Well, Homestead and Gascoyne West prospects, and follow up RC drilling locations at Cow Hole Bore

Aircore drilling continues as part of the Shed Well, Homestead and Gascoyne West Regional geochemistry programs. Work on these prospects will continue this year as the Company's geological team continues to develop an enhanced geological understanding of this area.

As the Company's geological understanding of these areas increases, follow-up RC programs will be planned.

6.0 AUSTRALIAN EXPLORATION

6.1 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 Joint Venture 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 in alliance with Cliffs Natural Resources, which has the right to earn up to an 80% interest.

A program of 10 shallow RC holes was completed at the Hells Gate Prospect during the Quarter to test for high-grade DSO iron ore beneath outcropping iron rich units. A number of narrow iron-rich horizons were intersected and the results are being evaluated for potential follow-up drilling or alternative commercialization strategies.

Pacifico Minerals has reported that further fieldwork was completed during the Quarter in the Borroloola West JV region and that they have now completed the minimum expenditure requirements. Pacifico has announced their intention to continue to the next stage of the Joint Venture regardless of the intentions of Cliffs Natural Resources.

6.2 Kennedy Highway Project

The Kennedy Highway Project includes five exploration licenses in the Eastern Succession of the Mount Isa Block, south of Cloncurry, Queensland. The tenements are prospective for Broken Hill Type lead-zinc-silver deposits similar to the high grade Cannington mine (BHP) to the north and Iron Oxide Copper-Gold deposits similar to the Ernest Henry Mine (Xstrata). The project includes an option agreement for a Joint Venture on EPM15948 with Global Resources Corporation Ltd, where Sandfire can earn up to an 80 per cent interest by funding exploration.

A single deep hole was drilled during the Quarter at the Lillyvale prospect, located on 100%-owned Sandfire tenements. The hole did not intersect economic mineralization, however the alteration intersected has explained the large gravity anomaly. No further work is planned on the project.

6.3 Altia Project

The Altia Project is located 70km south-east of Cloncurry in north-west Queensland. The project includes an option to Joint Venture into two areas encompassing 43.7 km² with Minotaur Resources Limited (ASX: MEP) to earn up to 80% of the project. The tenements are prospective for Broken Hill style lead-zinc-silver deposits such as the nearby Cannington deposit (BHP) to the south and the Ernest Henry Iron Oxide copper-gold deposits (Xstrata) to the northwest. The Joint Venture area includes the Altia Deposit, where previous exploration has defined the deposit and a number of regional targets.

Results were received during the Quarter for the 18 holes completed in the September Quarter with a number of anomalous results but no major new significant intercepts. Down-hole geophysics has reported a number of potential further targets which will be evaluated for testing in the June Quarter. Results from the Coral Reef soil surveying has highlighted potential areas for in-fill sampling during the next field season.

6.4 Bland Creek Project

The Bland Creek Project lies 50km south-east of West Wyalong, in the Lachlan Fold Belt of New South Wales. The tenements are prospective for porphyry copper-gold mineralisation as found at Northparkes (Rio Tinto), Cadia (Newcrest) and Cowal (Barrick). A farm-in agreement to earn up to 80% is held with Straits Resources Ltd (ASX:SRQ) on EL 5792, surrounding tenements and applications are 100% owned by Sandfire.

An aircore drilling program has been completed comprising approximately 3,000m in 26 holes at the Sao Paulo prospect to in-fill a broad copper and molybdenum anomaly defined by previous drilling. Results are pending and a follow-up program will be dependent on these geochemical results.

6.5 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 similar to that 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 gravity survey was completed in the December Quarter with the commencement of an IP survey to follow up on the work completed in the Alford East trend. Targets defined will be further tested with aircore and diamond drilling during the March Quarter.

7.0 CORPORATE

7.1 Thaduna / Green Dragon Project Farm-in and Joint Venture

During the Quarter, Sandfire reached agreement to secure up to an 80% interest in the Thaduna/Green Dragon Copper Project, located 40km east of DeGrussa, through a farm-in and joint venture with Ventnor Resources Limited (ASX: VRX) and its wholly-owned subsidiary Delgare Pty Ltd.

The agreement will enable the Joint Venture to explore, evaluate and potentially develop the largest copper resource in the Doolgunna-Bryah Basin Region outside of Sandfire's flagship DeGrussa-Doolgunna Project, providing an attractive future organic growth opportunity in the region.

Under the agreement, with Ventnor and its wholly-owned subsidiary Delgare Pty Ltd, Sandfire will acquire an immediate 35% interest in the Project and immediately form a joint venture with Delgare by paying \$3 million cash directly to Ventnor to enable it to meet its short-term funding requirements.

Under the terms of the joint venture, Sandfire can earn up to a further 45% (total of 80%) interest in the Project in two stages within a four-year period, namely:

- a 16% interest for a total of 51% by sole funding up to \$3 million of expenditure within two years; and
- a further 29% interest for a total of 80% by sole funding a further \$3 million of expenditure within four years.

While sole funding, Sandfire will manage the Joint Venture and keep the tenements in good standing, conduct all exploration activities and undertake all required rehabilitation activities.

As manager of the Joint Venture during the sole funding stage, Sandfire will bring its operational, geological and technical expertise to the Joint Venture, as well as the logistical and strategic advantages of having an operating 1.5Mtpa treatment facility and infrastructure located just 40km away (see Figure 3 below).

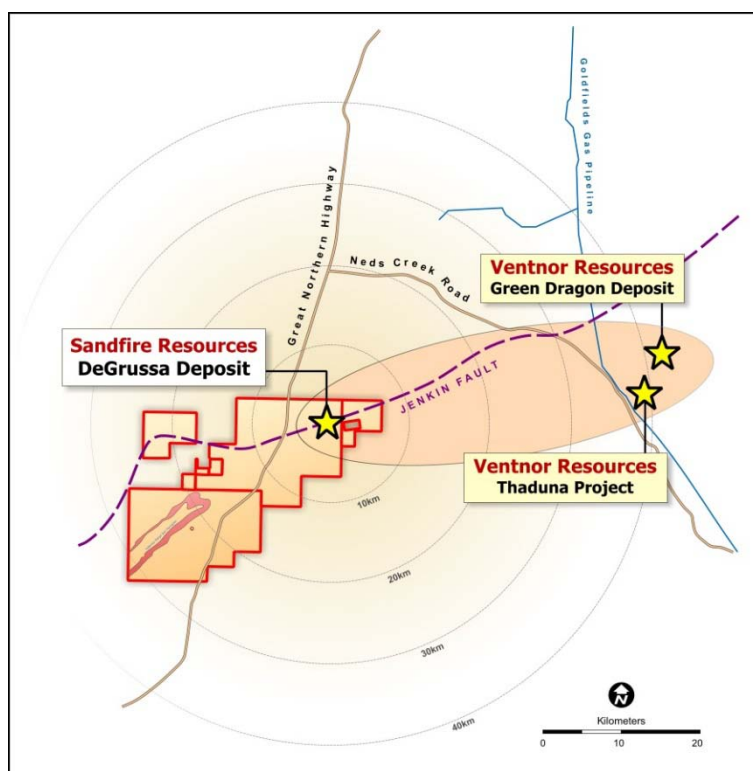


Figure 4 – Location of the Thaduna/Green Dragon Project relative to DeGrussa

Ventnor has completed over 50,000m of drilling at the Project since April 2011. Ventnor's drilling has returned sulphide intersections at depth, indicating the potential to extend the mineralisation and increase the higher grade sulphide component. A Scoping Study completed by Ventnor in February 2013 outlined a potential production profile of 15,000tpa of copper over an anticipated mine life of 10 years.

Sandfire believes that there may be an opportunity, subject to further evaluation and technical studies, to process both the sulphide and oxide material contained within the resource.

The sulphide material is potentially amenable for processing through the existing DeGrussa Concentrator and the oxide material will be considered for processing as part of, or in conjunction with, the DeGrussa Oxide Copper Project which the Company is currently reviewing (see above).

The farm-in agreement with Ventnor and Delgare Pty Ltd was completed on 3 December 2013 following satisfaction of all conditions precedent. As a result Sandfire and Delgare Pty Ltd have formed the joint venture over the Thaduna/Green Dragon Project, with Sandfire acquiring an immediate 35% interest in the Project.

7.2 Farm-in Agreement with Talisman Mining

During the Quarter, Sandfire reached agreement with Talisman Mining Limited (ASX: TLM; "Talisman") to farm into its three key Doolgunna copper-gold projects. Under the agreement, Sandfire can earn up to a 70% interest in Talisman's Springfield, Halloween and Halloween West Projects by spending a minimum of \$15 million on exploration over 5.5 years, with a minimum expenditure commitment of \$5 million within two years.

The Springfield Project lies immediately along strike to the east from the DeGrussa Copper-Gold mine (see Figure 2 below). The Halloween and Halloween West Projects abut the Doolgunna Project to the west. The projects contain extensions of the volcanic rock package which hosts the DeGrussa VMS deposits.

Talisman has invested more than \$20 million exploring its Doolgunna Projects over the past three years, assembling a comprehensive geo-scientific database and identifying a series of high-quality VMS copper-gold exploration targets, especially across the Springfield Project and within the interpreted extension of the DeGrussa Mine Corridor.

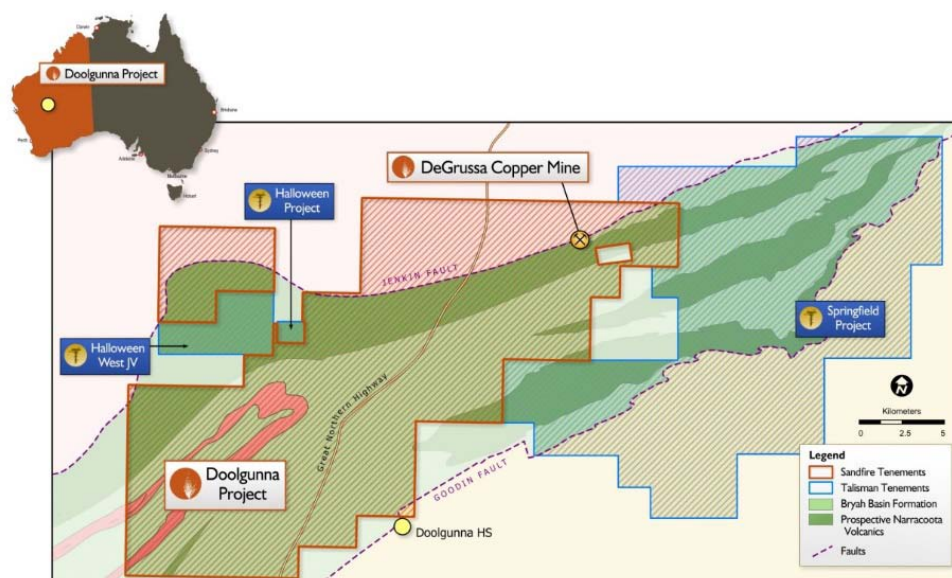


Figure 5 – Sandfire's DeGrussa and Talisman's Doolgunna Projects

The Agreement grants Sandfire the right to farm into an exploration joint venture interest in Talisman's wholly-owned Springfield and Halloween Exploration Projects, as well as its joint venture rights over the Halloween West Project (Talisman's Doolgunna Copper-Gold Projects). The key commercial terms of the Agreement are:

- Sandfire has the right to earn a 70% interest in the Doolgunna Copper-Gold Projects by spending a minimum of \$15 million on exploration across the Doolgunna Projects within 5.5 years;
- Sandfire has a minimum expenditure commitment of \$5 million within the first two years before it can elect to either:
 - i. withdraw from the agreement with no further commitment; or
 - ii. spend an additional \$5 million within a further 2-year period to earn a 51% interest in the Doolgunna Copper-Gold Projects (First Earn-in);
- After satisfying the First Earn-In Conditions, Sandfire has the option to either cease sole funding or to acquire a further 19% in the Tenements, taking its total interest to 70%, by sole funding a further \$5 million on Exploration Expenditure within 18 months (Second Earn-In);

- If Sandfire gives a notice ceasing sole funding prior to fulfilling the Second Earn-in Conditions, it shall be deemed to have earned a 51% interest (First Interest) and the joint venture will be formed on that basis with Talisman retaining its 49% interest by contributing to exploration expenditure on a pro rata basis or dilute under industry standard terms; and
- Should Sandfire sole fund \$15 million and earn a 70% joint venture interest, Talisman will have the right to maintain its 30% interest by contributing to exploration expenditure on a pro rata basis or dilute under industry standard terms.

Under the terms of the Agreement, Sandfire will manage all exploration activities during the farm-in period.

7.3 Finance Facility

A scheduled repayment of \$40 million under the Company's debt finance facility was completed at the end of December 2013, reducing the balance of the facility to \$230 million at 31 December 2013. Further repayments of \$40 million and \$30 million are due in the second half of FY2014.

Cash on hand and deposits at 31 December 2013 totalled \$75 million, following the \$40 million repayment.

7.4 Investor Call and Webcast

An investor conference call on Sandfire's December 2013 Quarterly Report will be held today (Tuesday, 21 January 2014) for investors and analysts, commencing at 10.00am (WST)/1.00pm (AEDT). Analysts, brokers and investors 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:	730163

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://www.brr.com.au/event/119667/karl-simich-managing-director-and-ceo>. A recording of the webcast will be available at the same link shortly following the conclusion of the conference call.

ENDS

For further information, please contact:
Karl Simich – Managing Director/CEO
Office: +61 8 6430 3800

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

Competent Person's Statement – Exploration Results

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

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.

Figure 5 – DeGrussa Copper-Gold Project Location

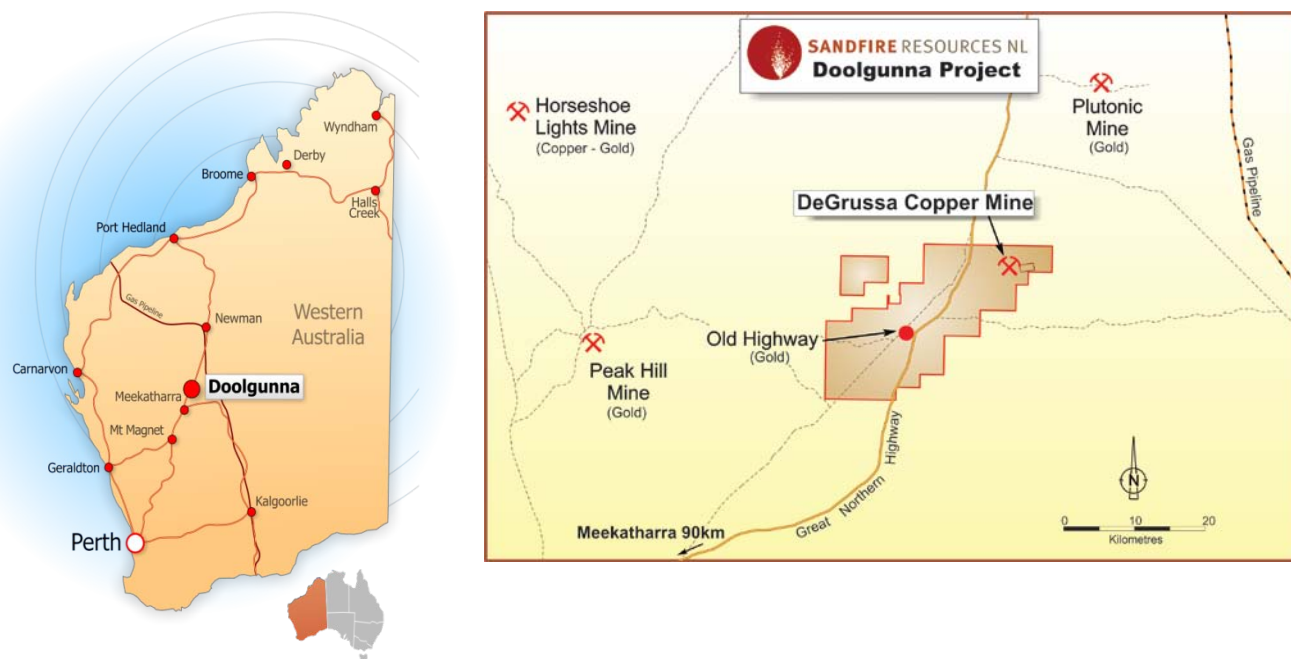
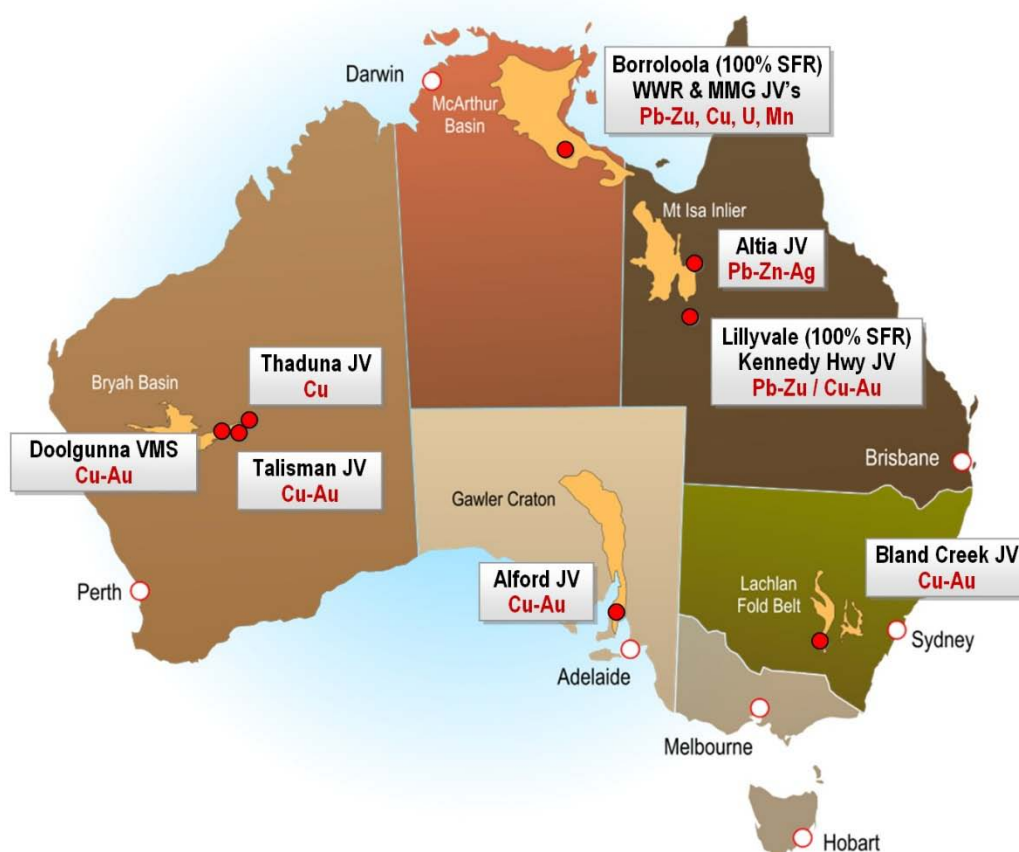


Figure 6 – Australian Joint Venture and Exploration Project Locations



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 re-evaluated 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 then 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.

Appendix 1 – Exploration Drilling Results

REGIONAL EXPLORATION SURFACE DRILLING (AC/RC)

		MGA Zone 50 Co-ordinates						Intersection				Mineralisation			
Hole ID	Hole Type	East	North	RL	Depth (m)	Azimuth	Inclination	From (m)	To (m)	Intercept Down Hole	Approx True Width	Cu [ppm]	Au [ppm]	Zn [ppm]	Sample Type
DGAC4017	AC	723,985	7,157,676	557	96	340°	-60°	20	30	10	N/A		0.8		Spear Composite
DGAC4025	AC	722,105	7,160,504	555	122	340°	-60°	55	80	25	N/A	690		456	Spear Composite
DGAC4074	AC	720,224	7,163,331	556	57	340°	-60°	35	50	15	N/A	653			Spear Composite
DGAC4078	AC	720,361	7,162,955	556	102	340°	-60°	100	102 EOH	2	N/A	2100			Spear Composite
DGAC4098	AC	721,045	7,161,076	554	165	340°	-60°	160	165	5	N/A	690			Spear Composite
DGAC4118	AC	721,079	7,163,323	554	165	340°	-60°	45	50	5	N/A	795		500	Spear Composite
								55	65	10	N/A	1115		423	Spear Composite
DGAC4144	AC	722,002	7,160,785	554	91	340°	-60°	115	140	25	N/A	645			Spear Composite
DGAC4177	AC	723,163	7,164,613	553	165	340°	-60°	105	110	5	N/A	510			Spear Composite
								145	150	5	N/A	645		305	Spear Composite
DGAC4242	AC	722,344	7,161,016	553	141	340°	-60°	115	140	25	N/A	645			Spear Composite
DGAC4260	AC	722,959	7,159,325	554	135	340°	-60°	55	60	5	N/A		0.9		Spear Composite
DGAC4273	AC	723,404	7,158,103	555	50	340°	-60°	25	35	10	N/A	900			Spear Composite
DGRC800	RC	730,701	7,168,049	559	252	360°	-60°	173	195	22	N/A		5.3		1m Riffle Split
DGRC801	RC	731,100	7,168,152	560	240	360°	-60°	199	205	6	N/A		2.8		1m Riffle Split
DGRC803	RC	731,900	7,168,433	562	258	360°	-60°	55	63	8	N/A		2.5		1m Riffle Split
								132	135	3	N/A		1.4		1m Riffle Split
								160	163	3	N/A		14.3		1m Riffle Split
								249	252	3	N/A		1.4		1m Riffle Split
								256	258 EOH	2	N/A		1.8		1m Riffle Split
DGRC805	RC	732,703	7,168,701	564	234	360°	-60°	10	15	5	N/A		1.3		Spear Composite
								35	40	5	N/A		0.7		Spear Composite

C4 UG EXPLORATION DIAMOND DRILLHOLES

Hole ID	Drill Hole Type	East	MGA Zone 50 Co-ordinates					Intersection				Mineralisation			Sample Type
			North	RL	Depth (m)	Azimuth	Inclination	From (m)	To (m)	Intercept Down Hole	Approx True Width	Cu [pct]	Au [ppm]	Zn [pct]	
DGUE0012	Diamond	734,071	7,173,268	198	270	287	-70	197.3	206.8	9.5	8.7	2.7	2.7	2.2	1/2 core
DGUE0013	Diamond	734,071	7,173,268	198	270	287	-70	218.3	222.0	3.7	3.5	3.4	1.8	1.8	1/2 core
DGUE0014	Diamond	734,086	7,173,240	198	282	226	-76	No Intersection							1/2 core
DGUE0015	Diamond	734,086	7,173,240	198	369	195	-71	No Intersection							1/2 core
DGUE0017	Diamond	734,071	7,173,267	198	238	299	-67	181.7	205.4	23.7	14.8	4.8	2.1	1.7	1/2 core
DGUE0019	Diamond	734,071	7,173,267	198	329	266	-65	236.6	238.2	1.6	1.4	2.1	2.3	3.7	1/2 core
DGUE0022	Diamond	734,077	7,173,260	198	280	253	-70	No Intersection							1/2 core
DGUR0004	Diamond	734,071	7,173,268	198	246	271	-81	195.8	200.4	4.6	4.6	4.2	3.4	3.0	1/2 core
DGUR0005	Diamond	734,071	7,173,267	199	249	232	-81	217.1	221.6	4.5	4.3	0.9	0.4	0.1	1/2 core
DGUR0006	Diamond	734,086	7,173,240	199	260	223	-83	No Intersection							1/2 core
DGUR0007	Diamond	734,086	7,173,240	199	378	134	-77	No Intersection							1/2 core
DGUR0008	Diamond	734,086	7,173,240	199	273	93	-77	198.2	207.9	9.7	6.9	5.7	2.3	1.6	1/2 core
DGUR0009	Diamond	734,076	7,173,262	199	264	324	-67	No Intersection							1/2 core
DGUR0010	Diamond	734,077	7,173,260	198	338	281	-65	242.9	244.5	1.6	1.1	4.0	2.4	0.1	1/2 core
DGUR0011	Diamond	734,077	7,173,260	198	307	275	-59	242.4	242.7	0.3	0.2	2.6	1.6	1.6	1/2 core

TABLE 1: EXPLORATION RESULTS - JORC 2012
DEGRUSSA COPPER MINE

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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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"> Sampling methods include half-core sampling of NQ2 core from underground diamond drilling (DD) , Reverse Circulation drilling (RC) samples are collected by a cone splitter for single metre samples or by a smpling spear for first pass composite samples using a face sampling hammer with a nominal 140mm hole, aircore drilling. Air Core (AC) samples are collected from spear samples for both composite and single metre samples. Sampling is guided by Sandfire DeGrussa protocols and QAQC procedures as per industry standard. Underground DD sample size reduction is completed through a Jaques jaw crusher to -10mm and all samples Boyd crushed to -4mm and pulverised via LM2 to nominal 90% passing -75µm. RC and AC sample size reduction is completed through a Boyd crusher to -10mm and pulverised via LM5 to nominal -75µm. Pulp size checks are completed. Pulp samples are fused into a glass bead by the combination of 0.4g of assay sample plus 9.0g flux XRF analysis. A 40g and 0.15g assays charges are used for FA and mixed acid digest respectively. Core samples areroutinely sampled for SG determination.
Drilling techniques	<i>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).</i>	<ul style="list-style-type: none"> Underground drilling is completed by DD rig with a core size of NQ2. Surface drilling is by RC with sampling hammer of nominal 140mm hole and AC drilling with a blade bit. . All surface drill collars are surveyed using RTK GPS . All underground drill collars are surveyed using Trimble S6 electronic theodolite with downhole survey completed by gyroscopically.. Holes are inclined at varying angles for optimal ore zone intersection from the drilling position. All core where possible is oriented using a Reflex ACT II RD orientation tool with stated accuracy of +/-1% in the range 0 to 88°.
Drill sample recovery	<ul style="list-style-type: none"> <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> <i>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.</i> 	<ul style="list-style-type: none"> Core is meter marked and orientated to check against the driller's blocks, ensuring that all core loss is taken into account. Diamond core recovery is logged and captured into the database with weighted average core recoveries of approximately 99%. Surface RC sampling is good with almost no wet sampling in the project area. AC drilling recovery is good with sample quality captured in the database. Samples are routinely weighed and captured into the central secured database. No sample recovery issues have impacted on potential sample bias.

Logging	<ul style="list-style-type: none"> • <i>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.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • Geological logging is completed for all holes and representative across the ore body. The lithology, alteration, and structural characteristics of core are logged directly to a digital format following standard procedures and using Sandfire DeGrussa geological codes. Data is imported into the central database after validation in LogChief™. • Logging is both qualitative and quantitative depending on field being logged. • All cores are digitally photographed and stored.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • DD Core orientation is completed where possible and all are marked prior to sampling. Half core samples are produced using Almonte Core Saw. Samples are weighed and recorded. • 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. • AC samples consist of 5m composite spear samples produced from 1m drilling with weights averaging approximately 3kg. In certain locations after composite samples are received additional 1m sampling may be completed • At the on-site laboratory, the original sample is dried at 80° for up to 24 hours and weighed on submission to laboratory. Sample is then crushed through Jaques crusher to nominal -10mm (DD samples only). Second stage crushing Boyd crusher to nominal -4mm. Where required samples are split to less than 2kg through linear splitter. Sample splits are weighed at a frequency of 1/20 and entered into the job results file. Pulverising is completed using LM2 mill to 90% passing 75µm. Two lots of pulp packets are retained for on-site laboratory services whilst the pulverised residue is shipped to Ultra Trace in Perth for further analysis. • Sample preparation at Ultra Trace in Perth involves the original samples being dried at 80° for up to 24 hours and weighed. DD Samples are then crushed through Jaques crusher to nominal -10mm. Second stage crushing uses Boyd crusher to nominal -4mm. All RC and AC samples are 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. • Sandfire has protocols that cover auditing of sample preparation at the laboratories and the collection and assessment of data to ensure accurate steps in producing representative samples for the analytical process. Key performance indices include contamination index of 90% (that is 90% blanks pass); Crush Size index of P95-10mm; Grind Size index of P90-75µm and Check Samples returning at worse 20% precision at 95% confidence interval and bias of 5% or better. • Duplicate analysis has been completed and identified no issues with sampling representatively. • The sample size is appropriate for the VHMS and Gold mineralisation styles.

Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> • Samples submitted to Ultra Trace in Perth 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. • Samples submitted to the on-site laboratory have 0.4g of sample plus 9.0g flux combined and fused into a glass bead. XRF is used to analyse for a suite of elements (including Cu, Fe, SiO₂, Al, Ca, MgO, P, Ti, Mn, Co, Ni, Zn, As, and Pb). Pulps are dispatched to Ultra Trace in Perth for ICPOES or ICPMS for extended elements (including Cu, Fe, As, Pb, S, Zn, Fe, Ag, Sb, Bi, Cd, Cl, F, and Hg). Au, Pt, and Pd analysed by FA/ICP AES/MS on a 40g assay charge (assay charge is variable depending on Sulphur content). • 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. A minimum of 2% of assays are routinely re-submitted as Check Assays and Check Samples through blind submittals to external and primary laboratories respectively. Adhoc umpire checks are completed annually.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Significant intersections have been verified by alternative company personnel. • There are no twinned holes drilled for the DeGrussa deposit. • 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. • 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. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • Sandfire DeGrussa Survey team undertakes survey works under the guidelines of best industry practice. • Underground drilling collar surveys are carried out using Trimble S6 electronic theodolite and wall station survey control. Re-traverse is carried out every 100 vertical meters within main decline. Downhole surveys are completed by gyroscopic downhole methods at regular intervals. • Downhole survey completed by gyroscopic downhole methods at regular intervals in the mine area or by electronic multishot systems in regional exploration. • MGA94 Zone 50 grid coordinate system is used. • A 1m ground resolution DTM with an accuracy of 0.1m was collected by Digital Mapping Australia using LiDAR and a vertical medium format digital camera (Hasselblad). The LiDAR DTM and aerial imagery were used to produce a 0.1m resolution orthophoto that has been used for subsequent planning purposes.
Data spacing and distribution	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • UG DD drilling was at a nominal 40m x 30m grid with additional holes in areas of potential complexity to remove bias. • DD Data spacing and distribution are sufficient to establish geological and grade continuity. This latest drilling has not been included in the Mineral Resources. • No sample compositing have been applied to the Exploration Results. • RC drilling is at a nominal nominal 100m line spacing at Cow Hole Bore. • AC drill spacing is initially at 800m x 100m line spacing with infill to 400m x 100m in areas of geological or geochemical interest.
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. • 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"> • The majority of the DD drillholes are orientated to achieve intersection angles as close to perpendicular to the mineralisation as practicable. • No significant sampling bias occurs in the data due to the orientation of drilling with regards to mineralised bodies. • In regional exploration holes are oriented to achieve high angles of intersection. DD drilling is used as required to determine structural orientations in regional programs.
Sample security	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • All samples are prepared onsite under the supervision of Sandfire Geological staff. • Samples are transported to the Perth Ultra Trace laboratory by Toll IPEC or Nexus transport companies in sealed bulka bags, or to the on-site laboratory by company personell. • The laboratories receipt 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"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • The sampling techniques and data collection processes are of industry standard and have been subjected to multiple internal and external reviews.

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> M52/1046, E52/1698, E52/1699, E52/1715, E52/2208, E52/2209, E52/2358 and E52/2401 are wholly owned by Sandfire Resources NL, with no known third party ownership encumbrances. All tenements are current and in good standing. The mentioned tenements are currently subject to 3 Native Title Claims by the Gingirana People (WC06/002), the Yungunga-Nya People (WC99/046) and the Nharnuwangga Wajarri Ngarlawangga People (WC99/013). Sandfire currently has Land Access Agreements in place with the Gingirana and Yungunga-Nya Native Title Claimants which overlay the DeGrussa Copper deposit and has allowed mining and exploration activities to commence on their traditional land.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> There has been no significant previous historical drilling by parties other than Sandfire Resources N.L. within the leases.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The Degrussa Copper Mine is a Volcanogenic Massive Sulphide deposit located with the Proterozoic Bryah Basin of Western Australia. In some areas zones of regional land holding it is currently the interpreted that there is shear zones located on the contact between dolerite and sediments hosting an auriferous quartz vein stockworks with some coincident copper mineralisation.
Drill hole Information	<ul style="list-style-type: none"> 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: <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 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>	<ul style="list-style-type: none"> Refer to Appendix 1 of this accompanying document. All DD drillholes are downhole gyroscopically surveyed at completion with Total Station survey pickup of drill collars. Electronic multishot downhole surveys are completed for RC drilling and with a subset of holes gyroscopically surveyed for internal checks. AC drill holes are not down hole surveyed

Data aggregation methods	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> Significant Resource intersections are calculated using a 0.5% Cu cut-off grade 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. Reported intersections are based on a regular sample interval of 1m or 5m composites in regional drilling subject to the location of geological boundaries. Minimum and maximum sample intervals used for intersection calculations are 0.3m and 1.3m respectively. 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 purposes of calculating the intersection. The maximum interval of missing core which can be incorporated with the reported intersection is 1.0m.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.</i> <i>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').</i> 	<ul style="list-style-type: none"> Estimated true width is presented in the Table in Appendix 1 where possible Underground drilling is based on the DeGrussa local mine grid. Where the geometry of the mineralisation is known; estimated true widths of mineralisation will be estimated and reported. Where the geometry is uncertain; no true width of mineralisation will be estimated or reported.
Diagrams	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Appropriate maps and cross-sections with scale are included within the body of the accompanying document
Balanced reporting	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> The accompanying document is considered to represent a balanced report.
Other substantive exploration data	<ul style="list-style-type: none"> <i>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.</i> 	<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"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> Exploration drilling will continue to target projected lateral and depth extensions of known mineralisation. Additionally regional anomalism will be investigated as required to determine the opportunity to identify economic mineralisation.