ASX Announcement **20 January 2016**

DOOLGUNNA PROJECT – MONTY DRILLING UPDATE

Highlights

- **Diamond drilling continuing at Monty copper-gold discovery** with four diamond rigs and one RC rig operating
- **High-grade bornite zone extended up-dip and along strike** with significant new intercepts including (down-hole widths, not true widths):
  - **25.8m grading 24.1% Cu and 0.5g/t Au** from 299.0m down-hole including **14.9m grading 36.7% Cu and 0.4g/t Au** from 309.0m (TLDD0061); and
  - **9.6m grading 14.1% Cu and 1.5g/t Au** from 292.3m (TLDD0036)
- **Drilling continues to support interpretations of the Monty mineralisation** with the overall program on track to generate a maiden Mineral Resource estimate by the end of the March 2016 Quarter. Other significant new intercepts from recent in-fill drilling include (down-hole widths, not true widths):
  - **20.8m grading 14.9% Cu and 1.3g/t Au** from 372.7m (TLDD0042);
  - **11.3m grading 6.7% Cu and 2.9g/t Au** from 392.2m down-hole (TLDD0043); and
  - **13.9m grading 7.2% Cu and 2.3g/t Au** from 332.7m down-hole (TLDD0046)
- **Drilling of the Homer trend at Springfield has continued** with an initial diamond hole completed targeting the C5 host stratigraphic horizon along strike from DeGrussa.

Sandfire Resources NL (ASX: SFR; "Sandfire") is pleased to provide an update on resource drilling at the Monty copper-gold discovery, located 10km east of the DeGrussa Copper-Gold Mine on the Springfield Project, part of its joint venture with Talisman Mining Limited (ASX: TLM; "Talisman") (see Figures 1 and 4).

Monty Drilling Update

Diamond drilling resumed at Monty in early January 2016 and is continuing with four diamond drill rigs on double shift and one Reverse Circulation drill rig on single shift.

Since the last Monty exploration update (ASX Announcement – 17 December 2015), approximately 4,310m of drilling has been completed. This drilling has focused on resource definition within the lower massive sulphide zone to generate sufficient information to support an initial Mineral Resource estimate for Monty, which is on track to be completed during the March 2016 Quarter.

Of note are drill holes TLDD0061 and TLDD0036, which have intersected massive sulphides containing bornite mineralisation both up-dip and along strike from the previously reported high-grade bornite-rich intersections in TLDD0026 (7.3m grading 6.2% Cu and 2.8g/t Au from 325.6m down-hole and 21.6m grading 34.4% Cu and 0.4g/t Au from 339.4m down-hole).

Level 1, 31 Ventnor Avenue
WEST PERTH WA 6005 • AUSTRALIA
ABN 55 105 154 185

PO BOX 1495
WEST PERTH WA 6005 • AUSTRALIA
www.sandfire.com.au

T +61 8 6430 3800
F +61 8 6430 3849
E admin@sandfire.com.au

TLDD0061, which is located approximately 22 metres up-dip of TLDD0026, reflecting an apparent flattening of the dip of the mineralisation in this area, has returned the following intersections:

- 1.6 metres grading 7.9% Cu and 2.5g/t Au from 227.0m – 228.6m
  (down-hole width, top of intercept is 199m vertically below surface);
- 1.5 metres grading 7.2% Cu and 0.2g/t Au from 231.0m – 232.5m
  (down-hole width, top of intercept is 202m vertically below surface);
- 1.4 metres grading 3.5% Cu and 0.1g/t Au from 273.6m – 275.0m
  (down-hole width, top of intercept is 241m vertically below surface); and
- **25.8 metres grading 24.1% Cu and 0.5g/t Au** from 299.0m – 324.8m
  (down-hole width, top of intercept is 263m vertically below surface), including:
    - **14.9 metres grading 36.7% Cu and 0.4g/t Au** from 309.0m – 323.9m

TLDD0036, which is located approximately 43 metres to the north-east along strike from TLDD0026, returned the following intersections:

- 1.1 metres grading 3.8% Cu and 0.7g/t Au from 260.3m – 261.4m
  (down-hole width, top of intercept is 231m vertically below surface);
- **9.6 metres grading 14.1% Cu and 1.5g/t Au** from 292.3m – 301.9m
  (down-hole width, top of intercept is 258m vertically below surface);
- 1.1 metres grading 1.2% Cu and 0.4g/t Au from 305.4m – 306.5m
  (down-hole width, top of intercept is 269m vertically below surface);
- 3.9 metres grading 5.6% Cu and 1.4g/t Au from 312.2m – 316.1m
  (down-hole width, top of intercept is 275m vertically below surface); and
- 0.6 metres grading 1.8% Cu and 0.3g/t Au from 320.0m – 320.6m
  (down-hole width, top of intercept is 282m vertically below surface)

The recent drilling results continue to substantiate initial interpretations of the orientation, grade and extent of the mineralisation at Monty that were based on the initial wide-spaced exploration holes. As can be seen, the morphology of the Monty mineralisation is evolving with the closer spaced drilling (see Figure 2 for the updated Monty long section).

A number of significant intercepts continue to be generated by the resource in-fill drilling program, with some of the more notable down-hole intercepts including:

- TLDD0042 – 20.8 metres grading 14.9% Cu and 1.3g/t Au from 372.7m – 393.5m
- TLDD0043 – 11.3 metres grading 6.7% Cu and 2.9g/t Au from 392.2m – 403.5m
- TLDD0040 – 5.0 metres grading 9.8% Cu and 2.9g/t Au from 334.7m – 339.7m
- TLDD0046 – 13.9 metres grading 7.2% Cu and 2.3g/t Au from 332.7m – 346.6m

Exploration drilling at Springfield outside of Monty will continue as rigs become available with the progression of the resource definition drilling programme.

Drilling of the Homer trend at Springfield re-commenced following the Christmas break with a diamond drill hole testing the C5 host stratigraphic horizon along strike from drilling which had previously intersected exhalite sediments. Drill hole TLDD0068 is located 3.4km and 2.8km ENE of drill-holes TLDD0001 and TLDD0003 respectively, and was targeted at a base and trace metal geochemical anomaly identified from earlier drilling by Talisman.

No base metal sulphides were observed and assays are awaited. The drill hole has been PVC cased in preparation for down-hole EM surveying prior to further drilling in this emerging area.

Management Comment

Sandfire's Managing Director, Mr Karl Simich, said the Company was pleased with the progress being made as part of the resource drill-out at Monty, which was continuing to confirm the exceptional grade, consistency and tenor of the massive sulphide mineralisation in the lower massive sulphide zone.

"Monty is without doubt one of the most significant new high-grade copper discoveries in Australia, and our exploration team is continuing to make excellent progress towards establishing a maiden Mineral Resource estimate – which represents our first priority this year," he said.

"We are also continuing to develop a greater understanding of the potential of the Monty trend, where we believe there is excellent potential to discover new lenses and we have also re-commenced drilling at the Homer area, where we are targeting strike extensions of the highly prospective C5 stratigraphy.

"I am confident we will see further exploration success during the course of the year, building on the Monty discovery and reinforcing the potential of this district to host multiple VMS deposits."

ENDS

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)

Figure 1: Monty Prospect showing drill-hole collar locations and interpreted schematic geology

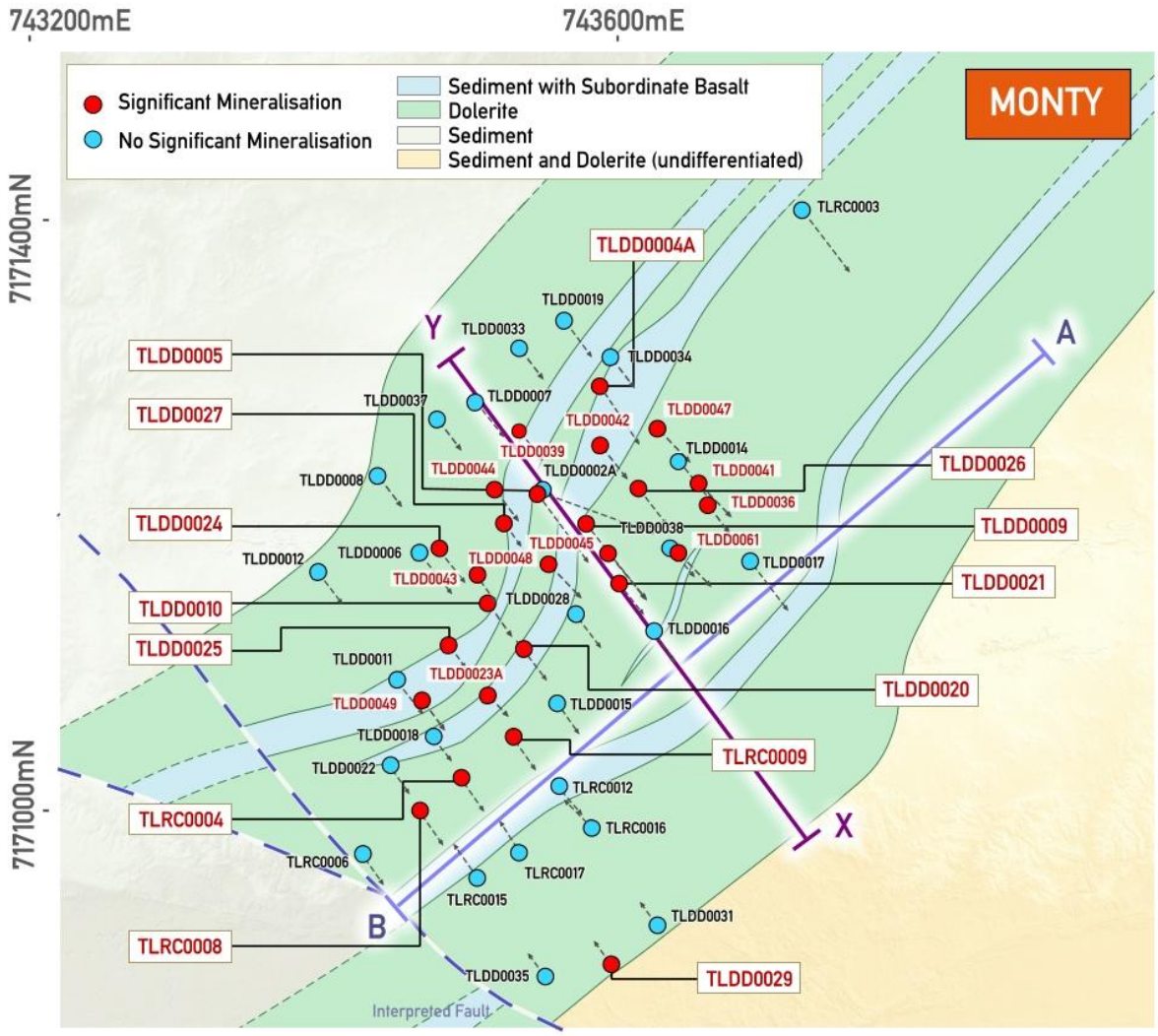


Figure 2: Vertical Longitudinal Projection and initial interpretation of the Monty Prospect showing drill-hole piercepoints at the top of the primary intercept shown in bold. All intercepts are down-hole widths. A significant intersection is defined here as any intersection ≥ 3m estimated true width that has a grade of ≥ 2.0 % Cu, inclusive of non-mineralised material. To determine whether intersections that are <3m estimated true width are significant in terms of the above definition, non-mineralised material has been included at a grade of 0.0% Cu (weighted by width) until a 3m estimated true width is reached. If the overall grade remained >2.0% Cu, with the non-mineralised material included, then the intersection is considered significant.

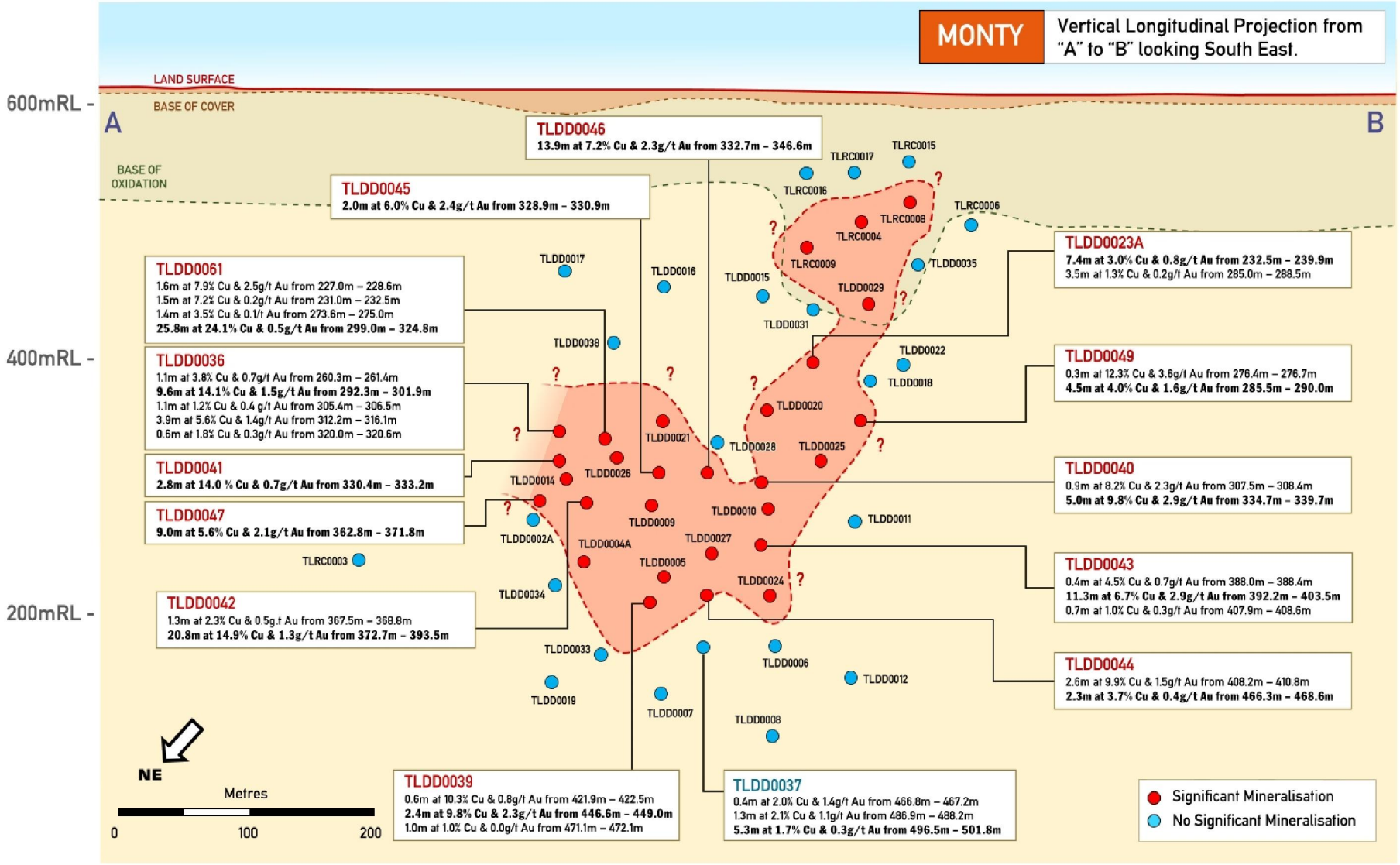


Figure 3: Interpretive cross-section of the Monty mineralisation (Lower Zone)

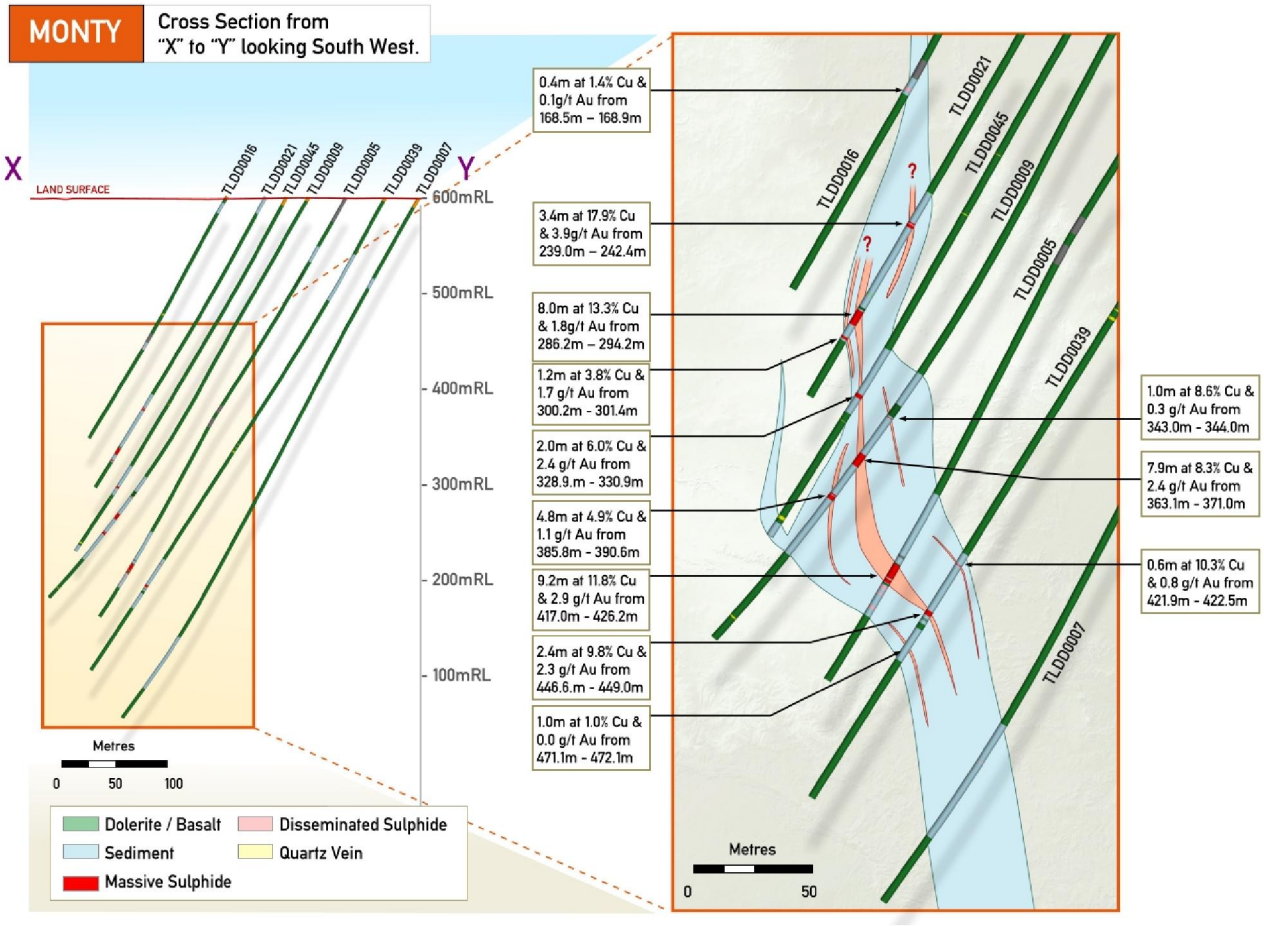
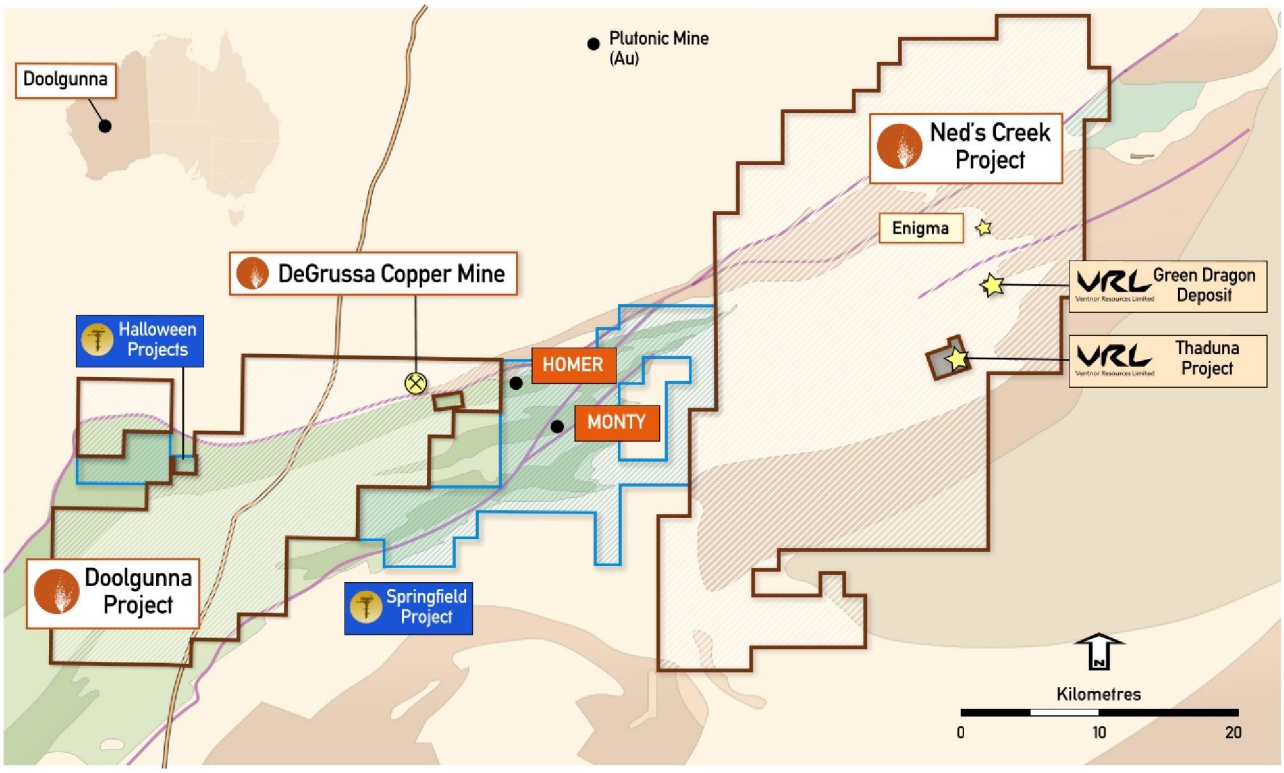


Figure 4: Sandfire's Greater Doolgunna Project, showing the Springfield Project (Joint Venture) and location of the Monty and Homer prospects



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.

Table 1 – Drill-hole Information Summary, Monty Project

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
TLDD0023A	346	-58°	145°	MGA94_50	743505	7171081	601	E52/2282	Complete
TLDD0024	571	-60°	141°	MGA94_50	743470	7171172	600	E52/2282	Complete
TLDD0025	406	-60°	141°	MGA94_50	743481	7171113	600	E52/2282	Complete
TLDD0026	409	-59°	141°	MGA94_50	743609	7171209	602	E52/2282	Complete
TLDD0027	511	-60°	143°	MGA94_50	743521	7171193	602	E52/2282	Complete
TLDD0028	441	-62°	143°	MGA94_50	743569	7171129	602	E52/2282	Complete
TLDD0029	247	-60°	319°	MGA94_50	743594	7170898	602	E52/2282	Complete
TLDD0031	237	-62°	317°	MGA94_50	743626	7170922	603	E52/2282	Complete
TLDD0033	589	-62°	142°	MGA94_50	743536	7171306	600	E52/2282	Complete
TLDD0034	523	-62°	138°	MGA94_50	743592	7171298	601	E52/2282	Complete
TLDD0035	244	-59°	320°	MGA94_50	743549	7170891	601	E52/2282	Complete
TLDD0036	378	-63°	145°	MGA94_50	743664	7171202	604	E52/2282	Complete
TLDD0037	564	-60°	140°	MGA94_50	743473	7171257	601	E52/2282	Complete
TLDD0038	313	-59°	147°	MGA94_50	743633	7171178	604	E52/2282	Complete
TLDD0039	547	-62°	140°	MGA94_50	743529	7171248	602	E52/2282	Complete
TLDD0040	409	-63°	143°	MGA94_50	743526	7171123	601	E52/2282	Complete
TLDD0041	382	-62°	144°	MGA94_50	743653	7171218	603	E52/2282	Complete
TLDD0042	439	-59°	139°	MGA94_50	743585	7171243	602	E52/2282	Complete
TLDD0043	505	-62°	141°	MGA94_50	743501	7171153	601	E52/2282	Complete

Hole ID	Depth	Dip	Azimuth	Grid_ID	East	North	RL	Lease ID	Hole Status
TLDD0044	552	-61°	141°	MGA94_50	743511	7171212	602	E52/2282	Complete
TLDD0045	405	-63°	142°	MGA94_50	743589	7171170	603	E52/2282	Complete
TLDD0046	409	-60°	142°	MGA94_50	743546	7171164	602	E52/2282	Complete
TLDD0047	406	-63°	140°	MGA94_50	743629	7171250	602	E52/2282	Complete
TLDD0049	355	-62°	140°	MGA94_50	743461	7171074	600	E52/2282	Complete
TLDD0061	391	-58°	141°	MGA94_50	743635	7171176	604	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
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

Table 2 – Drill-hole Assay Intersections >1% for the Monty Prospect

Details of all relevant intersections provided below. Estimated true widths have been calculated using estimated dip and dip-direction of modelled mineralisation surfaces at the drill-hole intersection and azimuth and dip of the drill-hole.

Hole ID	Interval	From (m)	To (m)	Downhole Width (m)	Estimated True Width (m)	Intersection		
						Cu (%)	Au (g/t)	Zn (%)
TLDD0004A		409.5	426.0	16.5	10.9	18.9	2.1	1.5
TLDD0005		417.0	426.2	9.2	6.1	11.8	2.9	2.3
TLDD0008		574.2	579.3	5.1	3.2	1.4	0.1	0.0
TLDD0009	1	343.0	344.0	1.0	0.5	8.6	0.3	0.1
	2	363.1	371.0	7.9	5.8	8.3	2.4	2.1
	3	385.8	390.6	4.8	3.0	4.9	1.1	1.4
TLDD0010	1	355.6	356.1	0.5	0.3	1.2	1.4	0.2
	2	359.7	370.2	10.5	6.3	18.9	3.1	1.1
	3	373.6	378.2	4.6	2.9	12.8	2.5	0.8
TLDD0011		370.9	371.3	0.4	0.2	1.2	1.3	0.9
TLDD0014	1	334.2	334.7	0.5	0.3	3.6	0.1	0.0
	2	359.4	362.8	3.4	2.0	3.5	0.8	0.6
TLDD0016		168.5	168.9	0.4	0.3	1.4	0.1	0.0
TLDD0020		272.3	273.8	1.5	0.9	13.8	1.1	1.2
TLDD0021	1	239.0	242.4	3.4	1.8	17.9	3.9	0.3
	2	286.2	294.2	8.0	4.6	13.3	1.8	2.1
	3	300.2	301.4	1.2	0.7	3.8	1.7	1.2
TLDD0024		445.6	448.2	2.6	1.7	14.2	1.1	0.6
TLDD0025		326.0	335.4	9.4	3.6	7.2	2.2	0.4
TLDD0023A	1	232.5	239.9	7.4	2.4	3.0	0.8	0.1
	2	285.0	288.5	3.5	1.1	1.3	0.2	0.1

Hole ID	Interval	From (m)	To (m)	Downhole Width (m)	Estimated True Width (m)	Intersection		
						Cu (%)	Au (g/t)	Zn (%)
TLDD0026	1	325.6	332.9	7.3	4.7	6.2	2.8	3.1
	2	339.4	361.0	21.6	15.2	34.4	0.4	0.8
TLDD0027	1	393.5	394.8	1.3	0.9	11.5	2.2	3.1
	2	411.0	421.7	10.7	7.0	6.2	2.0	1.4
TLDD0029		173.9	182.2	8.3	6.6	8.0	1.1	0.7
TLDD0031	1	175.7	176.0	0.3	0.2	2.9	0.2	0.0
	2	183.6	184.5	0.9	0.7	6.9	1.1	1.6
TLDD0033	1	485.1	485.4	0.3	0.2	4.1	0.9	0.1
	2	489.2	489.7	0.5	0.3	12.7	1.6	0.2
	3	496.0	498.0	2.0	1.3	4.2	1.4	1.5
TLDD0036	1	260.3	261.4	1.1	0.7	3.8	0.7	0.0
	2	292.3	301.9	9.6	6.3	14.1	1.5	1.7
	3	305.4	306.5	1.1	0.8	1.2	0.4	0.6
	4	312.2	316.1	3.9	2.9	5.6	1.4	0.3
	5	320.0	320.6	0.6	0.4	1.8	0.3	0.2
TLDD0037	1	466.8	467.2	0.4	0.3	2.0	1.4	0.0
	2	486.9	488.2	1.3	1.0	2.1	1.1	1.2
	3	496.5	501.8	5.3	4.3	1.7	0.3	0.0
TLDD0039	1	421.9	422.5	0.6	0.5	10.3	0.8	0.6
	2	446.6	449.0	2.4	2.0	9.8	2.3	2.4
	3	471.1	472.1	1.0	0.9	1.0	0.0	0.0
TLDD0040	1	307.5	308.4	0.9	0.3	8.2	2.3	3.2
	2	334.7	339.7	5.0	1.8	9.8	2.9	0.5
TLDD0041		330.4	333.2	2.8	2.6	14.0	0.7	0.2
TLDD0042	1	367.5	368.8	1.3	1.0	2.3	0.5	0.1
	2	372.7	393.5	20.8	16.9	14.9	1.3	1.6
TLDD0043	1	388.0	388.4	0.4	0.2	4.5	0.7	0.9
	2	392.2	403.5	11.3	4.9	6.7	2.9	2.3
	3	407.9	408.6	0.7	0.3	1.0	0.3	0.6
TLDD0044	1	408.2	410.8	2.6	2.2	9.9	1.5	0.1
	2	466.3	468.6	2.3	2.0	3.7	0.4	0.2
TLDD0045		328.9	330.9	2.0	1.0	6.0	2.4	1.7
TLDD0046		332.7	346.6	13.9	6.5	7.2	2.3	2.9
TLDD0047		362.8	371.8	9.0	4.4	5.6	2.1	0.1
TLDD0049	1	276.4	276.7	0.3	0.1	12.3	3.6	2.4
	2	285.5	290.0	4.5	2.0	4.0	1.6	0.5
TLDD0061	1	227.0	228.6	1.6	1.0	7.9	2.5	1.3
	2	231.0	232.5	1.5	0.9	7.2	0.2	0.4
	3	273.6	275.0	1.4	0.9	3.5	0.1	0.3
	4	299.0	324.8	25.8	15.9	24.1	0.5	0.5
	Including	309.0	323.9	14.9	9.2	36.7	0.4	0.3
TLRC0004	1	107.0	125.0	18.0	5.1	5.7	2.4	3.2
	2	158.0	162.0	4.0	1.2	4.2	0.7	0.1
TLRC0008	1	89.0	95.0	6.0	1.4	7.8	0.9	0.9
	2	112.0	123.0	11.0	2.5	15.0	1.9	1.0
TLRC0009		133.0	145.0	12.00	2.8	5.7	1.8	2.2

JORC 2012 TABLE 1 – EXPLORATION RESULTS

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• *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.*	• 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.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Sampling is guided by Sandfire protocols as per industry standard.
	• *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.*	• 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	• *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).*	• 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	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• 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.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• 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.
	• *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.*	• No sample recovery issues have impacted on potential sample bias.

Criteria	JORC Code Explanation	Commentary
Logging	• *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.*	• 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™.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• Logging is both qualitative and quantitative depending on field being logged. • All cores are photographed.
	• *The total length and percentage of the relevant intersections logged.*	• All drillholes are fully logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• 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.
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• 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.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• 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 75%µm using wet sieving technique.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• 1:20 grind quality checks are completed for 90% passing 75%µm criteria to ensure representativeness of sub-samples.
	• *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.*	• Sampling is carried out in accordance with Sandfire protocols as per industry best practice. • No field duplicates have been taken.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The sample sizes are considered appropriate for the VHMS and Gold mineralisation types.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• 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
	• *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.*	• No geophysical tools are used in the analysis.
	• *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.*	• 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	• *The verification of significant intersections by either independent or alternative company personnel.*	• Significant intersections have been verified by alternative company personnel.
	• *The use of twinned holes.*	• None of the drillholes in this report is twinned.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• 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.
	• *Discuss any adjustment to assay data.*	• The primary data is always kept and is never replaced by adjusted or interpreted data.
Location of data points	• *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.*	• 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.
	• *Specification of the grid system used.*	• Coordinate and azimuth are reported in MGA 94 Zone 50.
	• *Quality and adequacy of topographic control.*	• Topographic control was established LiDar laser imagery technology.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• 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.
	• *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.*	• Drilling is preliminary in its spacing and distribution and is not sufficient to at this stage to support Mineral Resources or Ore Reserves.
	• *Whether sample compositing has been applied.*	• No sample compositing have been applied to the Exploration Results.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• The drillhole may not necessarily be perpendicular to the orientation on the intersected mineralisation.
	• *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.*	• No significant orientation based sampling bias is known at this time. The drillholes may not necessarily be perpendicular to the orientation of the intersected mineralisation. Downhole intervals are converted to estimated true-widths.

Criteria	JORC Code Explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• 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	• *The results of any audits or reviews of sampling techniques and data.*	• 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	• *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 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 has farmed into the project on a staged basis and earned a 70% interest in the project area (subject to audit verification) which is now under joint venture.
	• *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.*	• 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	• *Acknowledgment and appraisal of exploration by other parties.*	• 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	• *Deposit type, geological setting and style of mineralisation.*	• 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	*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:*	• Refer to Appendix 1 of this accompanying document.

Criteria	JORC Code Explanation	Commentary
	• *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.* *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.*	
Data aggregation methods	• *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.*	• 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.
	• *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.*	• 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.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• 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	• *These relationships are particularly important in the reporting of Exploration Results.*	• All drillhole intercepts in this release are reported as both downhole and estimated true widths.
	• *If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.*	• The geometry of the mineralisation has been interpreted using top of mineralisation surfaces that link mineralised zones, thought to be continuous, between neighbouring drillholes. Given the variable, and often steeply dipping orientation of the mineralisation, the angle between mineralisation and drillholes is not consistent. Downhole intercepts for each drillhole are converted to estimated true widths using a trigonometric function that utilises the dip and dip direction of the interpreted top of mineralisation surface (at the intersection point of that drillhole) as well as the dip and azimuth of the drillhole at that position.
	• *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').*	• All drillhole intercepts in this release are reported as both downhole and estimated true widths.
Diagrams	• *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*	• Appropriate maps are included within the body of the accompanying document.

Criteria	JORC Code Explanation	Commentary
	drill hole collar locations and appropriate sectional views.	
Balanced reporting	• *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.*	• The accompanying document is considered to represent a balanced report. Reporting of grades is done in a consistent manner.
Other substantive exploration data	• *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.*	• 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	• *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.*	• 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.