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## DOOLGUNNA PROJECT – EXPLORATION UPDATE

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Sandfire Resources NL (ASX: **SFR**; “Sandfire”) is pleased to advise that diamond drilling at the Springfield Project, part of its joint venture with Talisman Mining Limited (ASX: TLM; “Talisman”), has intersected a zone of massive sulphides approximately 10km east of its 100%-owned DeGrussa Copper Mine.

Diamond drill hole TLDD004A intersected **14 metres of massive sulphides** from 411m down-hole to 425m (for hole details see Table 1 below). Based on field observations, the interval contains visible chalcopyrite and is similar to the massive sulphides seen at DeGrussa. Drilling is continuing with the hole currently in fragmental siltstone and basalt with trace chalcopyrite and pyrrhotite to 427m down-hole. Note, all widths are down hole as true widths are not currently known.

TLDD004A was drilled as a follow-up hole to TLDD002A, completed last month, which intersected a sedimentary package that closely resembles the exhalative VMS sequence observed in proximity to the massive sulphide mineralisation at the Conductor 5 deposit.

TLDD004A was designed to intersect an off-hole EM response identified from DHEM surveys on the original Talisman drill-hole SPD021 and refined by Sandfire in subsequent DHEM surveys. Diamond drill core from TLDD004A will be dispatched for priority assaying, with results expected in the coming weeks.

Sandfire is very encouraged by the intercepted massive sulphide in TLDD004A, which represents the first significant accumulation of massive sulphides to be intersected within its Greater Doolgunna Project outside of the four known lenses of VMS mineralisation at DeGrussa. Follow-up diamond drilling will be undertaken as a priority.

Sandfire is earning a 70% interest in the Talisman Mining’s Doolgunna Project, which forms part of its Greater Doolgunna Project comprising a 1,700 square kilometre package of contiguous tenements surrounding the DeGrussa Copper Mine.

**ENDS**

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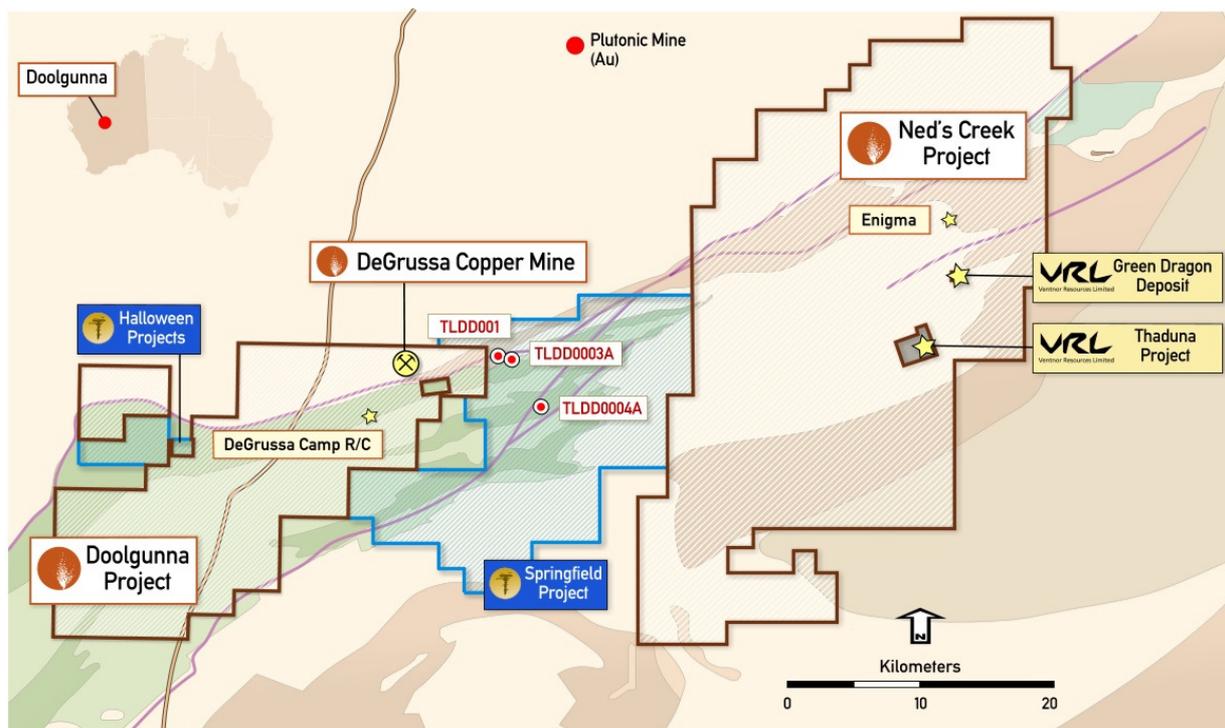
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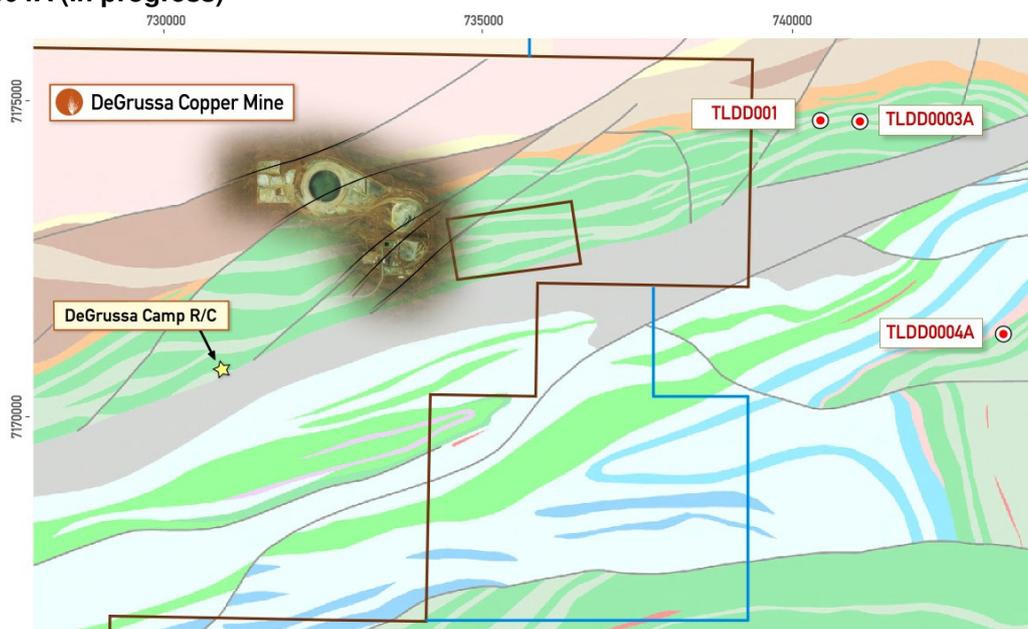
**Table 1 – Drill-hole Information Summary, Springfield Project**

Details and coordinates of the historical drill-hole SPD021 and recent drill holes completed by Sandfire at the Springfield Project, TLDD0001, TLDD0002A, TLDD0003, TLD0004 and TLDD0004A, are provided below:

Hole ID	Depth	Dip	Azimuth	Grid_ID	East	North	RL	Lease ID	Hole Status
SPD021	552.80	-60°	180°	MGA94_50	743598	7171437	598	E52/2282	Complete
TLDD0001	1099.1	-60°	360°	MGA94_50	740146	7174149	588	E52/2313	Complete
TLDD0002A	500	-60°	112°	MGA94_50	743540	7171212	602	E52/2282	Complete
TLDD0003	658	-60°	360°	MGA94_50	740600	7174550	594	E52/2313	Complete
TLDD0004A	ongoing	-57°	141°	MGA94_50	743588	7171282	601	E52/2282	In Progress



**Figure 1 – Sandfire’s Greater Doolgunna Project, showing the Springfield Project and the location of drill hole TLDD0004A (in progress)**



**Figure 2 – Location of recent drilling relative to the DeGrussa Copper Mine**

**Competent Person's Statement – Exploration Results**

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

**Exploration and Resource Targets**

Any discussion in relation to the potential quantity and grade of Exploration Targets is only conceptual in nature. While Sandfire is confident that it will report additional JORC compliant resources for the DeGrussa Project, there has been insufficient exploration to define mineral resources in addition to the current JORC compliant Mineral Resource inventory and it is uncertain if further exploration will result in the determination of additional JORC compliant Mineral Resources.

**Forward-Looking Statements**

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

**JORC Compliance Statement**

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

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

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

Sandfire Resources are currently exploring the defined prospective sequence in its 100% held tenements and within the Talisman Mining earn in and joint Venture agreement.

**JORC 2012 TABLE 1 – EXPLORATION RESULTS**

**Section 1: Sampling Techniques and Data**

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling is completed using NQ2 size coring equipment.</li> <li>All drill collars are surveyed using RTK GPS survey instrument.</li> <li>All core possible is oriented, where possible, using an electronic core orientation tool (Reflex ACT).</li> <li>Downhole surveying is undertaken using a gyroscopic survey instrument.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <li>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, recorded and used to calculate the core recovery as a percentage core recovered.</li> </ul>
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <li>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 and reconciled against core block markers..</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No sample recovery issues have impacted on reported downhole width of mineralisation.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging is completed for all holes and representative across the orebody. The lithology, alteration and structural characteristics of core are logged and captured in digital format using Sandfire Resources NL geology codes and following established procedures. Data is imported into Sandfire Resources NL's central database after validation in LogChief™.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <li>Logging is both qualitative and quantitative depending on the attribute being logged.</li> <li>All cores are photographed.</li> </ul>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All drillholes are fully logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled</li> </ul>	<ul style="list-style-type: none"> <li>Sampling is intended. Not applicable to this release.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <li>Analyses are intended. Not applicable to this release.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No geophysical tools or hand-held analytical instruments were utilised in the preparation of this release.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Analyses are intended. Not applicable to this release.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Determination of reported downhole intervals of visible mineralisation have been verified by alternative company personnel.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>None of the drillholes in this report are twinned.</li> </ul>
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data are captured on field toughbook laptops using Logchief™ Software. The software has validation routines and data is then imported into a secure central database.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Analyses are intended. Not applicable to this release.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sandfire Survey team undertakes survey works under the guidelines of best industry practice.</li> <li>All drill collars are accurately surveyed using RTK GPS system within +/-50mm of accuracy (X, Y, Z).</li> <li>Coordinates are based on control previously established by MHR Surveyors which was derived by ties into the Government SSM/BM network.</li> <li>Downhole survey completed by gyroscopic survey at regular intervals</li> </ul>
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate and azimuth are reported in MGA 94 Zone 50.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Topographic control was established from aerial photography using a series of 33 surveyed control points.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>TLDD0004a is the first drillhole to intersect the modelled EM plate.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>As TLDD0004a is the first drillhole to intersect the modelled EM plate. It is not possible to make any conclusions regarding sample spacing and distribution.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling intended. Not applicable to this release.</li> </ul>

Criteria	JORC Code Explanation	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>Drillhole TLDD0004a was orientated to intersect a modelled EM plate. The drillhole may not necessarily be perpendicular to the orientation of the intersected mineralisation..</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No significant orientation based sampling bias is known at this time. Drillhole TLDD0004a was orientated to intersect a modelled EM plate. The drillhole may not necessarily be perpendicular to the orientation of the intersected mineralisation. <b>All reported mineralised intervals are downhole intervals not true widths.</b></li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>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 bulka bags. The laboratory receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling intended. Not applicable to this release.</li> </ul>

## Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Talisman project encompasses E52/2282, E52/2313 and E52/2466 which are wholly owned by Talisman Mining Ltd, with no known third party encumbrances. Sandfire is currently farming into the project on a staged basis with the right to earn 70% interest in the project area.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All tenements are current and in good standing.</li> <li>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 exploration activities on their traditional land.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Aside from Sandfire Resources and Talisman Mining Limited there has been no recent exploration undertaken on the Talisman Project.</li> <li>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.</li> </ul>

<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Doolgunna Talisman Project lies within the Proterozoic-aged Bryah Basin bounded by the Archaean Marymia Inlier to the north and the Proterozoic Yerrida basin to the south.</li> <li>• The principal exploration targets at the Doolgunna Projects are Volcanogenic Massive Sulphide (VMS) deposits located within the Proterozoic Bryah Basin.</li> </ul>
<b>Drill hole Information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li>o <i>easting and northing of the drill hole collar</i></li> <li>o <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>o <i>dip and azimuth of the hole</i></li> <li>o <i>down hole length and interception depth</i></li> <li>o <i>hole length.</i></li> </ul> <p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• Refer to Appendix 1 of the accompanying document for details regarding the position of the drillholes.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• No analyses are reported in this release.</li> </ul>
	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• No analyses are reported in this release.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No analyses are reported in this release</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Downhole intercepts of mineralisation reported in this release are from a drillhole orientated perpendicular to a modelled EM plate. The drillhole may not necessarily be perpendicular to the mineralised zone. All widths reported are downhole intervals.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The geometry of the mineralisation, relative to the drillhole, is unknown at this stage.</li> </ul>
	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• All intersections reported in this release are downhole intervals. True widths are not known..</li> </ul>

<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate maps and tabulation are included within the body of the accompanying document.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The accompanying document is considered to represent a balanced report.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Additional work will be planned once analytical results are received for drillhole TLDD0004a</li> </ul>