



**TALISMAN  
MINING LIMITED**

ASX Code: TLM



**15<sup>th</sup> October 2015**

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**Shares on Issue:**

148,559,904 (TLM)

**Options on Issue:**

6,400,000 (Unlisted)

**ASX: TLM**

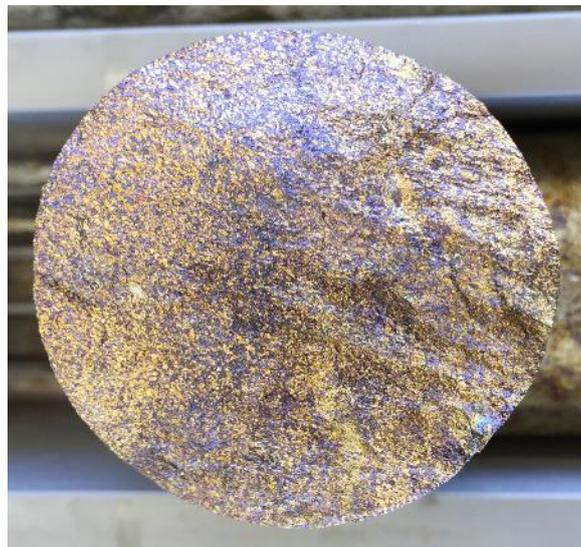


# Monty Exploration Update

## *Thick zone of bornite-bearing massive sulphides intersected in Lower Zone*

### Highlights

- **Three horizons of massive sulphides** intersected in step-out drill hole TLDD0026, 45 metres along strike from recently reported hole TLDD0021 (7.3 metres of massive sulphides from 286.2m downhole), including a significant intercept of:
  - **19.9 metres of massive sulphides** from 340.2m down-hole (true width not known at this time, top of intercept is approximately 286m vertically below surface).
- The primary mineralisation in TLDD0026 is similar to previous holes in the Lower Zone but also **contains variable amounts of bornite**, a copper mineral which has not previously been encountered by Sandfire in any significant quantities at Doolgunna. Bornite typically has a copper content of ~63% by mass compared with chalcopyrite's copper content of ~35% by mass.



*Photo: Cross section through TLDD0026 NQ2 drill core showing bornite disseminated in the matrix of the sulphides (359.3 metres down hole).*

- **High-grade copper assay results** returned from Reverse Circulation (RC) drill hole **TLRC0009** located in the Upper Zone:
  - **12 metres grading 5.7% Cu and 1.8 g/t Au** from 133m to 145m down-hole (true width not known at this time, but anticipated to be significantly less than down-hole widths).

**Sandfire is continuing drilling to define the extents of the mineralisation identified to date in both the Upper and Lower zones at Monty and is also targeting other prospective areas, both in the immediate vicinity of Monty and further afield within the Springfield Project.**



Talisman Mining Limited (ASX: TLM “Talisman”) is pleased to announce that Sandfire Resources NL (ASX: SFR; “Sandfire”) has provided an update on ongoing activities at the Monty copper-gold discovery within Talisman’s Springfield Project located approximately 10km east of the DeGrussa Copper-Gold Mine (see Appendix 1).

The collar locations of advised holes drilled to date by Sandfire are shown in the plan view diagram below (see Figure 1) and Table 1.

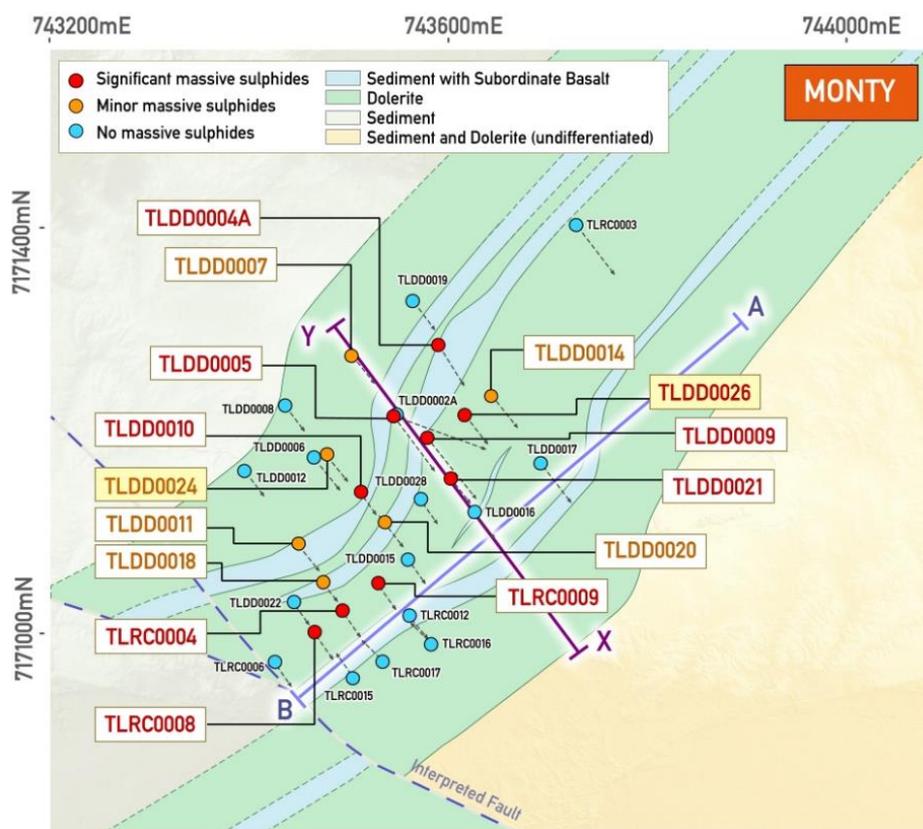


Figure 1: Plan view of Monty showing drill-hole collar locations and simplified interpreted geology.

## Monty Lower Zone

### Thick Zone (~20 metres) of massive sulphides intersected in Lower Zone

Diamond drill hole **TLDD0026** was drilled approximately 45 metres along strike from recently reported hole TLDD0021 (**7.3 metres of massive sulphides** from 286.2m down hole) (see TLM ASX announcement - 2 October 2015) and approximately 46 metres up-dip of the halo mineralisation intersected in TLDD0014 (see Figures 1 and 2).

Sandfire have advised that **TLDD0026** intersected **three horizons of massive sulphides** within the host sequence of the Lower Zone:

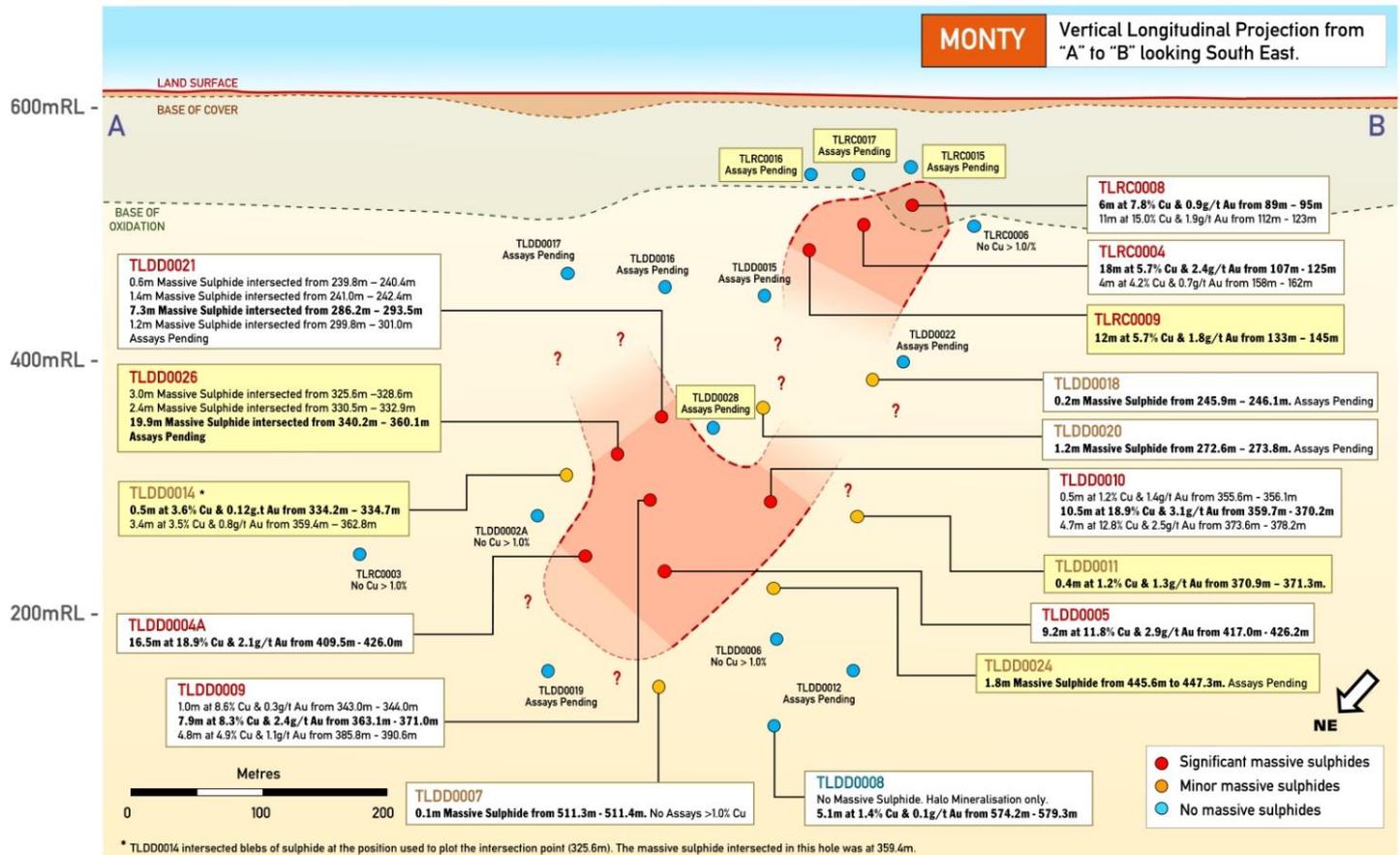
- **3.0 metres of massive sulphides** from 325.6m to 328.6m down-hole (true width not known at this time, top of intercept is approximately 275m vertically below surface);
- **2.4 metres of massive sulphides** from 330.5m to 332.9m down-hole (true width not known at this time, top of intercept is approximately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



## Geological Discussion of the Lower Zone and TLDD0026

Ongoing work at Monty has provided sufficient detail to enable Sandfire to provide an updated interpretation of the geological setting of the known mineralisation at Monty. An updated vertical longitudinal projection (looking to the south-east) is shown in *Figure 2*.

The Lower Zone at Monty incorporates the massive sulphide mineralisation intersected in TLDD0004A, TLDD0005, TLDD0009, TLDD0010 (previously reported), TLDD0021 (previously reported, assays pending) and TLDD0026 (reported above, assays pending).



**Figure 2: Vertical longitudinal projection of Monty showing drill-hole piercepoints at the top of the primary intercept shown in bold. All intercepts are down-hole widths.**

The 19.9 metre intersection of massive sulphides in TLDD0026 is interpreted by Sandfire to be a continuation of the 7.3m (down-hole width) primary mineralisation previously reported from TLDD0021 (see *TLM ASX announcement - 2 October 2015*) (see *Figure 2* above and *Appendix 3*). The mineralisation in the upper two intersections in TLDD0026 appears to be consistent with that of the higher level, subordinate mineralisation zones intersected in TLDD0021 (see *Appendix 3*).

Based on field observations by Sandfire, the mineralogy of the 19.9 metre intercept in TLDD0026 differs from that observed in the previously reported intersections of the primary mineralisation in TLDD0004A, TLDD0005, TLDD0009, TLDD0010, and TLDD0021.

The massive sulphides intersected in these earlier holes comprises variable amounts of chalcopyrite (main copper-bearing sulphide mineral), pyrite and pyrrhotite, minor sphalerite and galena, along with silicate and talc gangue minerals (with gold and silver).



The primary mineralisation in TLDD0026 has a similar composition to that of the earlier holes, but **also contains variable amounts of bornite (a copper-bearing sulphide)**. Photos of the drill core from the mineralised intervals in TLDD0026 are provided in *Appendix 2* to this release.

Bornite is an important copper mineral and commonly occurs in VMS deposits globally, along with the more common copper mineral; chalcopyrite. Bornite, in isolation, typically has a copper content of approximately 63 per cent by mass compared with chalcopyrite's typical copper content of ~35% by mass.

Both the bornite and other sulphide minerals are deformed and exhibit features consistent with re-crystallisation, which suggests that modification of the massive sulphide may have occurred during deformation.

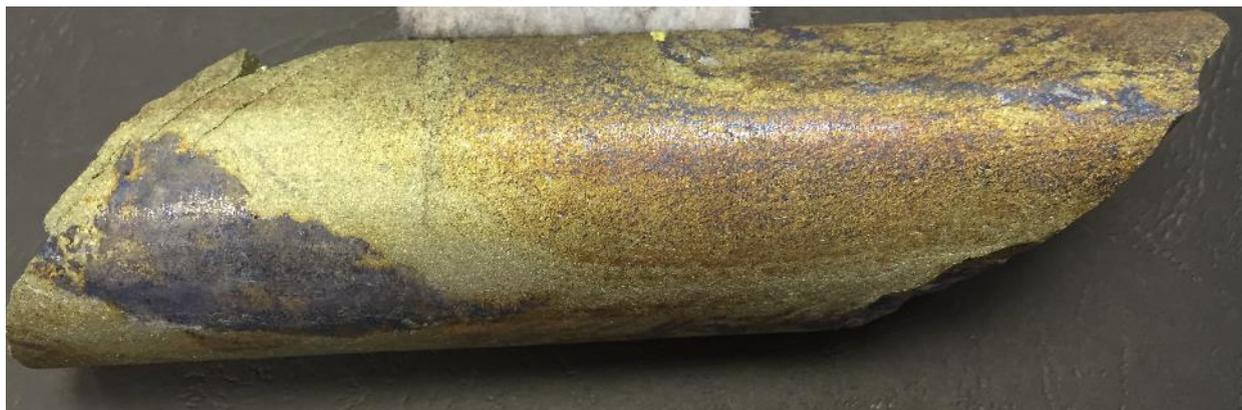


Photo: TLDD0026 NQ2 drill core showing bornite in foliation (right) and rimming pyrite and pyrrhotite (left) – intercept shown is from 351m down-hole.

Talisman understands that Bornite has not previously been seen at the DeGrussa mine to any material extent.

This potentially significant sighting of Bornite mineralisation at Monty will require additional work to put its presence in TLDD0026 into context and determine its significance in the exploration campaign at Monty and further afield at Springfield, but is considered by Talisman to be highly encouraging at this stage.

Diamond core from TLDD0026 will be despatched by Sandfire for analysis.

### **Additional Recent Lower Zone Drilling Results**

Sandfire have also advised Talisman of the results from two other diamond drill holes targeting the Lower Zone at Monty; TLDD0024 and TLDD0028.

**TLDD0024** was drilled approximately 66 metres down-dip of previously reported hole TLDD0010 (intercepts including **10.5m grading 18.9%Cu and 3.1 g/t Au** from 359.7m down hole and **4.7m grading 12.8%Cu and 2.5 g/t Au** from 373.6m down hole ) (see TLM ASX announcement - 8 September 2015) (see Figures 1 and 2).

Sandfire have advised that **TLDD0024** intersected a single horizon of **1.8 metres of massive sulphides** within the host sequence of the Lower Zone from 445.6m to 447.3m down-hole (*true width not known at this time, top of intercept is approximately 381m vertically below surface*). Assays are awaited.

**TLDD0028** was drilled approximately 37 metres along strike to the south-west from previously reported hole TLDD0021 (**7.3 metres of massive sulphides** from 363.1m down-hole) (see TLM ASX announcement – 2 October 2015) and 46 metres from the mineralisation intersected in TLDD0020 (**1.2 metres of massive sulphides** from 272.6m down-hole), (see Figures 1 and 2).



TLDD0028 intersected the prospective horizon with weak haematite, jasper and minor disseminated sulphides logged in the core. No massive sulphides were encountered and Sandfire have advised that further drilling will be undertaken down-dip to help define the extents of the mineralisation in this area.

### ***Recent Lower Zone Assay Results***

Sandfire have also advised that it has received assay results from the previously reported Diamond drill holes **TLDD0014** and **TLDD0011** (see *Figure 1, Figure 2 and Table 1*)

**TLDD0014** was located 45 metres along strike of TLDD0026 (see *Figures 1 and 2*) and intersected:

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

**TLDD0011** was drilled along strike of TLDD0010 (see *Figures 1 and 2*) and returned an intersection of:

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

### **Monty Upper Zone**

#### ***Upper Zone Drilling Results and Geological Discussion / Interpretation***

Sandfire have advised that reverse circulation drill holes TLRC0015, TLRC0016 and TLRC0017 were drilled up-dip of, and at the opposite orientation to, previously reported holes TLRC0004, TLRC0008 and TLRC0009 to test for potential mineralisation (see *Figures 1 and 2*).

No visible mineralisation was observed by Sandfire and the mineralised zone is therefore interpreted by Sandfire to not extend to the surface (see *Figure 2*).

Sandfire advise that the spatial position of the host horizon intersected in TLRC0016 and TLRC0017 indicates at this time that the host horizon in the near-surface portion of the Upper Zone may be locally overturned and dip at approximately 75° to the south-east.

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

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



## **Assay Results Upper Zone**

Sandfire have also advised that it has received assay results from the previously reported reverse circulation drill hole **TLRC0009** (see *Figures 1 and 2 and Tables 1 and 2*).

**TLRC0009** intersected mineralisation approximately 40 metres along strike to the north-east of TLRC004 (see *Figures 1 and 2*) and returned an intersection of:

- **12.0 metres grading 5.7% Cu and 1.8g/t Au from 133m to 145m down-hole**  
(*true width not known at this time, but anticipated to be significantly less than down-hole widths*).

## **Further Exploration Activity**

Sandfire is continuing drilling at Monty, in both the Lower and Upper Zones, to define of the extents of the currently known mineralisation and to provide information on the overall orientation and extents of this mineralisation.

In addition to continuing definition drilling around the currently known mineralisation, Sandfire is also beginning to step further afield, with the objective of finding the next lenses or clusters of lenses of VMS mineralisation, both at Monty and also within the broader Springfield Project.

The Springfield Project is subject to an exploration farm-in joint venture between Sandfire and Talisman where Sandfire has the right to earn up to a 70% interest in Talisman's Doolgunna Projects by the expenditure of \$15 million on exploration at the Projects.

**ENDS**

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## **Competent Person's Statement**

*Information in this ASX release that relates to Exploration Results is based on information compiled by Mr Graham Leaver, who is a member of the Australian Institute of Geoscientists. Mr Leaver is a full time employee of Talisman Mining Ltd and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Mineral Resources and Ore Reserves". Mr Leaver consents to the inclusion in this report of the matters based on information in the form and context in which it appears.*



## Table 1 – Drill-hole Information Summary, Monty Prospect

Details and co-ordinates of all relevant drill hole collars are provided in the table below:

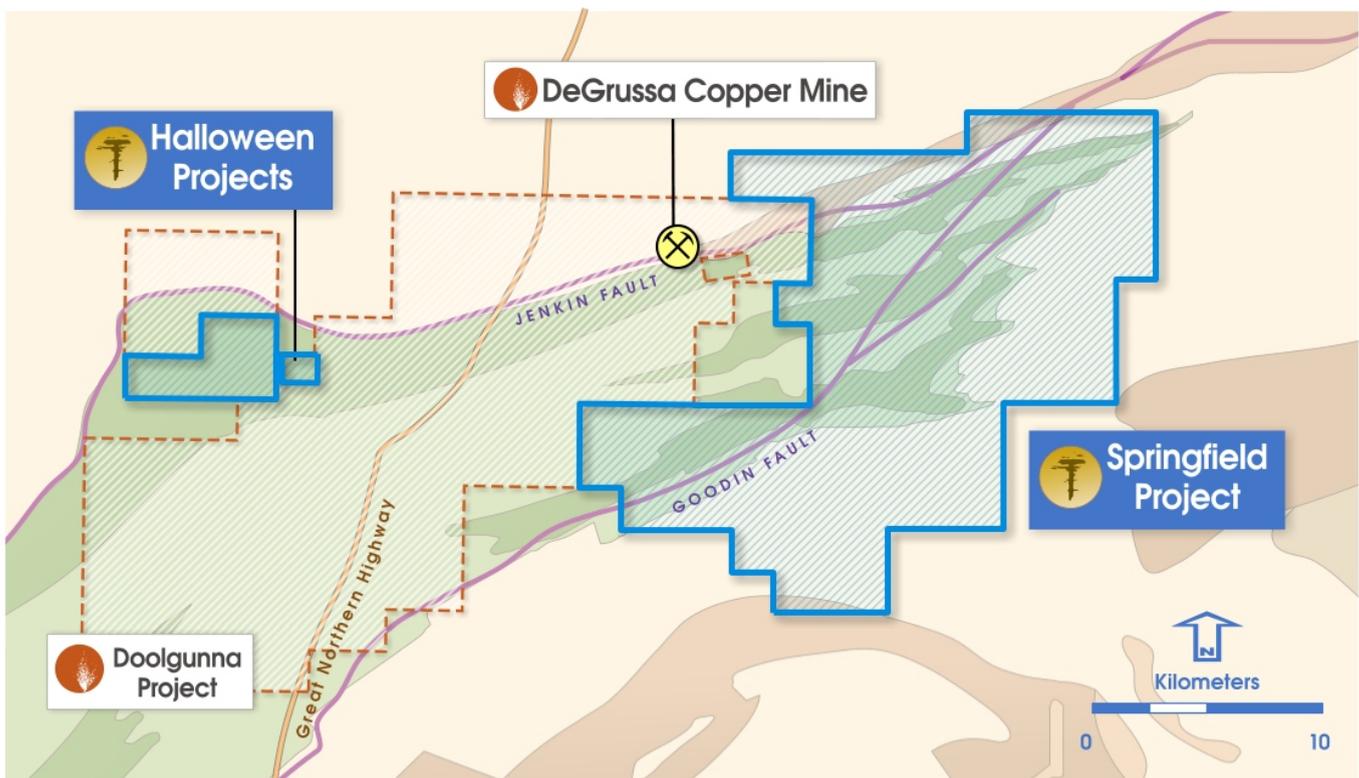
Hole ID	Depth	Dip	Azimuth	Grid_ID	East	North	RL	Lease ID	Hole Status
TLDD0002A	463	-61°	110°	MGA94_50	743544	7171211	602	E52/2282	Complete
TLDD0004A	817	-60°	148°	MGA94_50	743588	7171281	601	E52/2282	Complete
TLDD0005	478	-62°	139°	MGA94_50	743544	7171210	602	E52/2282	Complete
TLDD0006	554	-62°	140°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



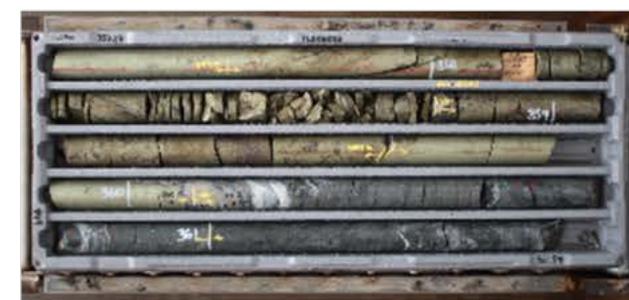
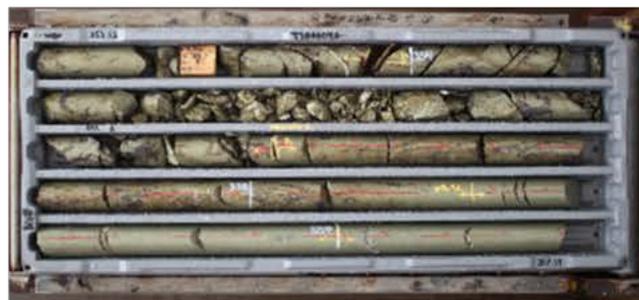
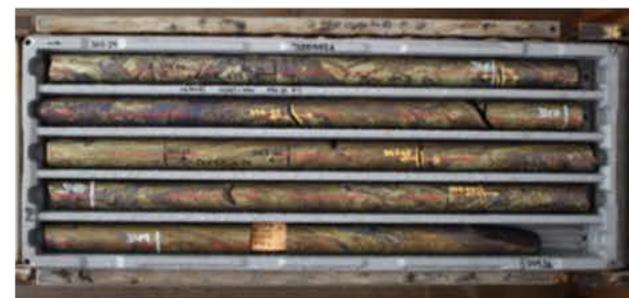
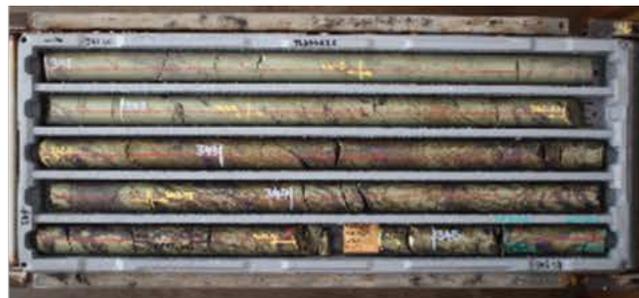
**Table 2 – Significant Drill-hole Assay Intersections, Springfield Project**

Details of all relevant intersections are provided below:

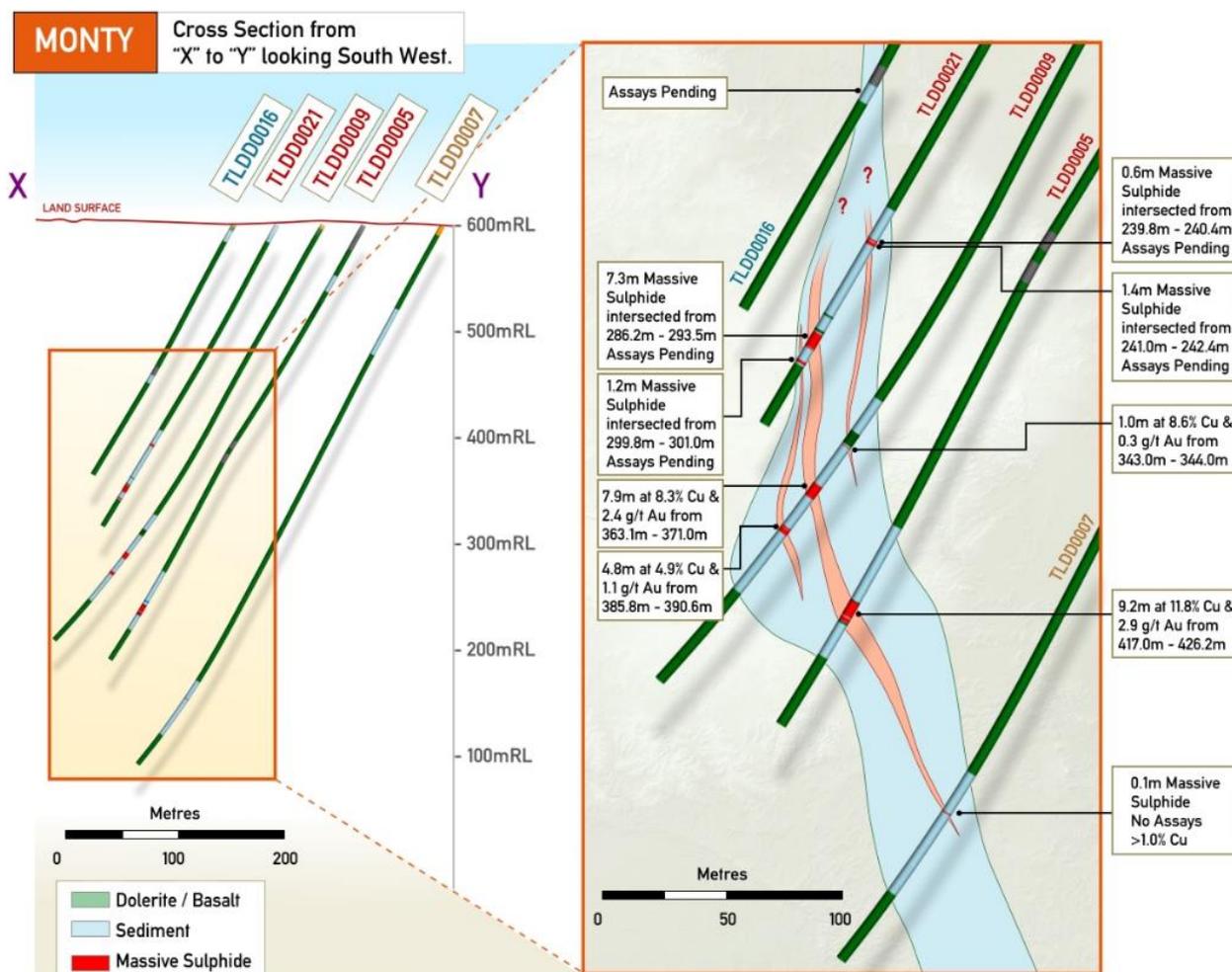
Hole ID	Int	From	To	Downhole Width	Intersection		
					Cu (%)	Au (g/t)	Zn (%)
TLDD0004A		409.5	426.0	16.5	18.9	2.1	1.5
TLDD0005		417.0	426.2	9.2	11.8	2.9	2.3
TLDD0009	1	343.0	344.0	1.0	8.6	0.3	0.1
	2	363.1	371.0	7.9	8.3	2.4	2.1
	3	385.8	390.6	4.8	4.9	1.1	1.4
TLDD0010	1	355.6	356.1	0.5	1.2	1.4	0.2
	2	359.7	370.2	10.5	18.9	3.1	1.1
	3	373.6	378.2	4.7	12.8	2.5	0.8
TLRC0004	1	107.0	125.0	18.0	5.7	2.4	3.2
	2	158.0	162.0	4.0	4.2	0.7	0.1
TLRC0008	1	89.0	95.0	6.0	7.8	0.9	0.9
	2	112.0	123.0	11.0	15.0	1.9	1.0
TLRC0009		133.0	145.0	12.0	5.7	1.8	2.2



**Appendix 1: Talisman's Doolgunna Copper-Gold Projects subject to the \$15M Exploration Farm-In Joint Venture with Sandfire Resources NL**



Appendix 2: TLDD0026 Core Tray Pictures



Appendix 3 – Interpretive cross-section of the Monty mineralisation (Lower Zone)



## Appendix 4 - JORC TABLE 1

### Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (e.g. 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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The sampling method employed by Sandfire is half-core sampling of NQ2 core from diamond drilling (DD)</li> <li>• Sandfire collect RC samples by cone splitter for single metre samples or a sampling spear for first pass composite samples using a face sampling hammer with a nominal hole diameter of 140mm</li> <li>• Sampling is guided by Sandfire protocols as per industry standard.</li> <li>• Diamond drill core sample size reduction is through a Jaques jaw crusher to -10mm and a second stage reduction via Boyd crusher to -4mm. Representative sub samples are split and pulverised via an LM5 mill.</li> <li>• RC samples are crushed to -4mm through a Boyd crusher and representative sub samples are split and pulverised with an LM5 mill.</li> <li>• Pulverising is to nominal 90% passing -75µm and is checked using wet sieving technique.</li> <li>• Samples are assayed using Mixed 4 Acid Digest (MAD) 0.3g charge and MAD Hotbox 0.15g charge methods with ICPOES or ICPMS.</li> <li>• Fire Assay is completed by firing 40g portion of the sample with ICPMS finish.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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></li> </ul>	<ul style="list-style-type: none"> <li>• Sandfire diamond drilling is completed using NQ2 size coring equipment.</li> <li>• RC drilling is with a face sampling hammer of a nominal 140mm hole diameter.</li> <li>• All drill collars are surveyed using RTK GPS.</li> <li>• All core, where possible is oriented using a Reflex ACT II RD orientation tool.</li> <li>• Downhole surveying is undertaken using a gyroscopic survey instrument.</li> </ul>



<p>Drill sample recovery</p>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Sandfire 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 of core recovered.</li> <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, metre marking and reconciled against core block markers.</li> <li>• RC sample recovery is good with almost no wet sampling in the project area</li> <li>• Samples are routinely weighed and the information captured into the central secured database.</li> <li>• No sample recovery issues have impacted on potential sample bias</li> </ul>
<p>Logging</p>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sandfire Geological logging is completed for all holes and is 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™.</li> <li>• Logging is both qualitative and quantitative depending on field being logged.</li> <li>• All cores are photographed.</li> <li>• All drill holes are fully logged.</li> </ul>
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <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></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sandfire complete diamond core orientation where possible and all core is marked prior to sampling. Half core samples are produced using an Almonte Core Saw. Samples are weighed and recorded.</li> <li>• RC samples are split using a cone or riffle splitter. The majority of samples collected are dry. On occasion that wet samples are encountered they are dried prior to splitting with a riffle splitter.</li> <li>• All samples are sorted, dried at 80° for up to 24 hours and weighed. Samples are then crushed through a Jaques crusher to nominal -10mm. A second stage crushing is through a Boyd crusher to nominal -4mm.</li> <li>• Sample splits are weighed at a frequency of 1:20 and entered into the job results file. Pulverising is completed using LM5 mill to 90% passing 75µm using wet sieving technique.</li> <li>• 1:20 grind quality checks are completed for 90% passing 75µm criteria to ensure representativeness of sub-samples.</li> </ul>



<p>Sub-sampling techniques and sample preparation <i>(Continued)</i></p>		<ul style="list-style-type: none"> <li>• Sampling is carried out in accordance with Sandfire protocols as per industry best practice.</li> <li>• No field duplicates have been taken.</li> <li>• The sample sizes are considered appropriate for VHMS and Gold mineralisation types.</li> </ul>
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <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></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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 analysis 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.</li> <li>• The analytical methods are considered appropriate for this mineralisation styles.</li> <li>• No geophysical tools are used in the analysis.</li> <li>• 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.</li> </ul>
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections have been verified by alternate Sandfire personnel.</li> <li>• None of the drillholes in this report are twinned.</li> <li>• Primary data is captured on field Toughbook laptops using Logchief™ Software. The software has validation routines and data is then imported into a secure central database.</li> <li>• The primary data is always kept and is never replaced by adjusted or interpreted data.</li> </ul>



<p>Location of data points</p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The 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>• Downhole surveys are completed by gyroscopic downhole methods at regular intervals.</li> <li>• Coordinate and azimuth are reported in MGA 94 Zone 50.</li> <li>• Topographic control was established from LiDar laser imagery technology</li> </ul>
<p>Data spacing and distribution</p>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill spacing is currently defined by geological criteria and is regarded as appropriate to determine the extents of mineralisation. This spacing is nominally 80m x 80m. Spacing is shown by the accompanying tables and figures. Some holes are drilled at a closer spacing to determine the edges of mineralisation.</li> <li>• Exploration drilling at Monty is preliminary and spacing and distribution of exploration results is not sufficient to support Mineral Resources or Ore Reserves.</li> <li>• No sample compositing has been applied to these exploration results.</li> </ul>
<p>Orientation of data in relation to geological structure</p>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No significant orientation based sampling bias is known at this time.</li> <li>• The drill holes may not necessarily be perpendicular to the orientation of the intersected mineralisation. All reported intervals are downhole intervals, not true widths. This will be established with additional drilling.</li> </ul>
<p>Sample security</p>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sandfire ensures 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>
<p>Audits or reviews</p>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sandfire have not completed any external audits or reviews of the sampling techniques and data</li> </ul>



## Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li><i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond and RC drilling by Farm-in Partner Sandfire is on tenements E52/2313 and E52/2282. Tenements E52/2282, E52/2313 and E52/2466 form Talisman's 100% owned Springfield Project, 150km north-east of Meekatharra, WA. Sandfire is currently farming into the project on a staged basis with the right to earn 70% interest in the project</li> <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 mining and exploration activities on their traditional land.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></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>Historic exploration work at Springfield completed prior to Talisman's tenure included geochemical soil and rock chip sampling combined with geological mapping. Some targeted RC drilling was completed over gold and diamond targets.</li> </ul>
Geology	<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>Talisman's Doolgunna 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.</li> <li>The principal exploration targets at the Doolgunna Projects are Volcanogenic Massive Sulphide (VMS) deposits located with the Proterozoic Bryah Basin of Western Australia.</li> <li>The discovery of Bornite at Doolgunna is new and its full context and implication is still to be determined.</li> </ul>



<p>Drill hole Information</p>	<ul style="list-style-type: none"> <li>• <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> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </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 Table 1 of this document – Drillhole Information Summary, Monty Prospect.</li> </ul>
<p>Data aggregation methods</p>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <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> <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>• 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.</li> <li>• Cu grades used for calculating significant intersections are uncut.</li> <li>• Minimum and maximum diamond core sample intervals used for intersection calculation are 0.3m and 1.2m respectively subject to location of geological boundaries.</li> <li>• Reported intersections from RC drilling are based on regular 1 metre sample intervals.</li> <li>• No metal equivalents are used in the intersection calculation.</li> <li>• 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.</li> </ul>



<p>Relationship between mineralisation widths and intercept lengths</p>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• The geometry of the mineralisation, relative to the drill holes, is targeted to be approximately perpendicular. As geological interpretation advances, any area where drilling is interpreted to be at a low angle will be tested with holes from a more suitable orientation and reported as such.</li> <li>• All intersections reported in this release are downhole intervals. True widths are not known.</li> </ul>
<p>Diagrams</p>	<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 with scale are included within the body of the accompanying document.</li> </ul>
<p>Balanced reporting</p>	<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> <li>• Reporting of grades is done in a consistent manner</li> </ul>
<p>Other substantive exploration data</p>	<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>
<p>Further work</p>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. 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>• Sandfire advise that drilling is continuing to test for extensions of mineralisation up- and down dip and along strike subject to geological and geophysical interpretation</li> <li>• Additional drilling may include holes targeting the definition of mineralisation extents. This drilling will be on a nominal 40m x 40m grid pattern.</li> </ul>