



**TALISMAN  
MINING LIMITED**

ASX Code: TLM



**31<sup>st</sup> July 2015**

**COMPANY SNAPSHOT**

**Board of Directors**

**Alan Senior**  
Non-Executive Chairman

**Gary Lethridge**  
Managing Director

**Brian Dawes**  
Non-Executive Director

**Karen Gadsby**  
Non-Executive Director

**Contact Details**

**Telephone:**  
+61 8 9380 4230

**Email:**  
info@talismanmining.com.au

**Website:**  
www.talismanmining.com.au

**Capital Structure**

**Shares on Issue:**  
148,559,904 (TLM)

**Options on Issue:**  
6,250,000 (Unlisted)



# Quarterly Activities Report June 2015

## *Highlights*

**Doolgunna Cu-Au Projects – (Farm-In JV with Sandfire Resources NL)**

- Program of diamond drilling commenced by Sandfire at Springfield Project including drilling at Monty and Homer Prospects.
- Significant high-grade VMS copper-gold discovery at Monty Prospect located approximately 10km east of the DeGrussa Copper Mine.
- Results include:
  - TLDD0004A – intersection of **16.5m @18.9% Cu & 2.1g/t Au** from 409.5m downhole
  - TLDD0005 – further intersection of **9.2m @ 11.8% Cu & 2.9g/t Au** from 417m downhole and ~70m along strike from TLDD0004A
  - TLRC0004 – **18m of massive sulphides** intercepted from 108m downhole, 200m along strike from TLDD0004A. (*assays pending*)
- Follow-up drilling continues with the aim of determining the extent of identified mineralisation at the Monty Prospect and to develop understanding of its economic and geological context.

**Sinclair Nickel Project**

- Regional exploration targeting review has identified Delphi North & South as being prospective for Sinclair look-alike nickel occurrences.
- Electromagnetic (EM) surveys and drilling programs at the Delphi Prospect set to commence in first-half of August 2015.
- Regional exploration targeting review now focusing on the remainder of the tenements.
- Geological modelling of the Sinclair deposit (incorporating both the deposit extension and remnant mine mineralisation) progressed.
- Scenario planning of development options continued.
- Transfer of tenement titles to Talisman completed in April 2015.

**Capital Raising**

- Subsequent to the end-of-quarter, Talisman raised \$8.0 million through a strongly supported share placement of 17 million shares at 47 cents.



## **Doolgunna Copper-Gold Projects (Exploration Farm-in JV with Sandfire Resources)**

*Talisman has a portfolio of high-quality VMS copper-gold exploration projects in the Bryah Basin region of Western Australia (see Appendix 1). Leading Australian copper producer Sandfire Resources NL (ASX: SFR) is funding active exploration at these projects as part of a joint venture exploration farm-in. Sandfire has the right to earn up to a 70% interest in Talisman's Doolgunna Projects by spending \$15 million on exploration over five-and-a-half years.*

Sandfire commenced a new program of reconnaissance diamond drilling at the Springfield Project during the quarter, targeting the Monty and Homer prospects. The key achievement during the quarter was the discovery of two significant zones of high-grade massive sulphide mineralisation at the Monty Prospect which is emerging as an important new VMS discovery within the Springfield Project.

### **Monty Prospect**

Diamond drill hole TLDD0004A at the Monty Prospect intersected a significant zone of high-grade copper-gold mineralisation approximately 10km east of the DeGrussa Copper Mine, with final assays returning an exceptional massive sulphide intercept of **16.5 metres grading 18.9% Cu and 2.1g/t Au** from 409.5m to 426m down-hole (not true width & from 365m below surface vertical depth). *Full details of the hole are provided in the Company's ASX Announcement dated 25 June 2015.*

TLDD0004A was drilled as a follow-up hole to TLDD0002A, completed in May, and was designed to intersect an off-hole EM response detected in a down-hole electro-magnetic (DHEM) survey on TLDD0002A.

The intersection in TLDD0004A represents a significant development for Sandfire and Talisman and the ongoing exploration efforts within the Springfield Project. While exploration of this emerging VMS prospect is still at an early stage, the width, exceptional grade and tenor of the copper-gold mineralisation intersected is considered to be very encouraging.

This is also the first significant intersection of high-grade copper-gold mineralisation to be discovered by Sandfire or Talisman outside of the known lenses of VMS mineralisation at DeGrussa. Additionally, the massive sulphide mineralisation intersected in TLDD0004A (see *Figure 1*) is similar to that seen in the DeGrussa, Conductor 1, 4 and 5 VMS lenses and occurs within a host sequence that bears many similarities to that which hosts the massive sulphide mineralisation at DeGrussa.



**Figure 1:** *Drill Core photos of massive sulphide mineralisation from hole TLDD0004A*



A follow-up diamond hole TLDD0005, which was completed subsequent to the end of the June quarter, intersected the mineralised horizon approximately 70 metres south-west of TLDD0004A, returning an outstanding high-grade massive sulphide intercept of:

- **9.2 metres grading 11.8% Cu and 2.9 g/t Au** from 417.0m to 426.2m down-hole (not true width & from 370m below surface, vertical depth)

This intercept occurs within a broader mineralised zone of:

- **13.1 metres grading 8.4% Cu and 2.1 g/t Au** from 416.7m to 429.8m down-hole

Also subsequent to the end of the June quarter, Sandfire drilled RC drill-hole TLRC0004 as a pre-collar for planned diamond drilling and as a platform for down-hole EM surveying along strike from the massive sulphide intercepts in TLDD0004A and TLDD0005.

TLRC0004 hole intersected **18 metres of massive sulphides** from 108.0m to 126.0m down-hole. (Note all intercepts are stated as down-hole, true widths are not currently known).

Based on field observations, the massive sulphides intersected in TLRC0004 also contain visible chalcopyrite. This new intersection (TLRC0004) is located approximately 135 metres along strike to the south-west from the massive sulphide mineralisation intersection reported in TLDD0005 and approximately 200 metres along strike from the high-grade intersection in TLDD0004A (see Figure 2).

TLRC0004 was completed to a final depth of 306 metres and will provide an optimal platform for Sandfire to undertake down-hole EM (DHEM) surveys.

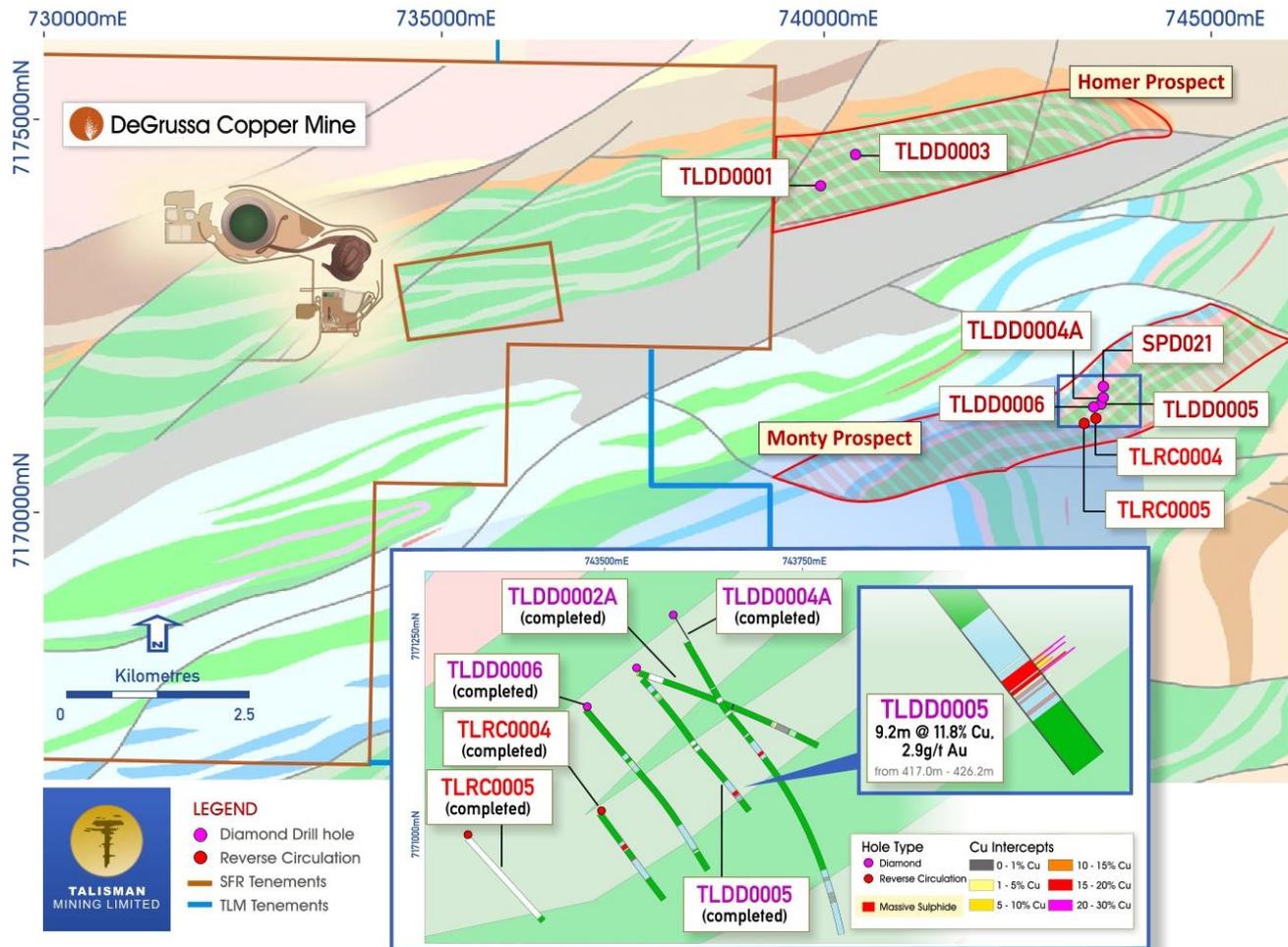
It is important to note that, while the new intersections have increased the known footprint of mineralisation, the continuity with the mineralisation seen in holes TLDD0004A, TLDD0005 and TLRC0004 is not known. Further drilling will be undertaken by Sandfire to determine the geological setting.

Step-out diamond hole TLDD0006, which was collared to intersect the interpreted strike extension of the previously intersected high-grade mineralisation 80m further to the south-west from hole TLDD0005, was also completed subsequent to the end of the June quarter to a final depth of 553.9 metres.

The hole intersected a potentially significant fault zone and an extension of what is interpreted by Sandfire to be the sedimentary host horizon to the intercepts seen in TLDD0004A and TLDD0005. The fault zone was intersected between 407.2 metres and 445.6 metres down-hole with a thick sedimentary sequence of 80 metres observed from 422.5 metres to 502.2 metres down-hole. Sandfire have advised that this sedimentary sequence is similar to that observed on the margins of the massive sulphide mineralisation at DeGrussa.

While no massive sulphides have been recorded in TLDD0006, the hole provides valuable geological and stratigraphic information to guide ongoing drilling to test the extent and orientation of the high-grade copper-gold mineralisation intersected in the previous three holes. (TLDD0004A, TLDD0005 and TLRC0004).

The significance of this fault zone, including sense of movement and potential offsets, is not yet known. This includes the relationship of the fault zone to the mineralisation intersected in TLDD0004A and TLDD0005 and the shallower massive sulphide zone intersected in step-out hole TLRC0004. Additional drilling will be required to inform and enhance the growing understanding of the local geological context of the Monty Prospect. As at the date of this report assay results are awaited for TLRC0004.



**Figure 2** Plan view of recent Monty and Homer exploration diamond and RC drilling relative to the DeGrussa Copper Mine.

Drilling is continuing and the next diamond drill-hole (TLDD0007) is targeted approximately 80m down-dip of the mineralisation seen in TLDD0004A. The hole is being drilled as a diamond tail, off an existing Reverse Circulation (RC) pre-collar that was drilled to a depth of 186m.

Sandfire have advised Talisman that scout drill hole TLRC0005 was completed subsequent to the end of the June quarter without intersecting economic mineralisation and that the Reverse Circulation (RC) drill rig will continue both, scout drilling to define the location of the prospective horizon and drilling pre-collars for the diamond drill rig.

Sandfire will continue to explore the area to determine the potential extents of the mineralisation and to develop further understanding of the broader geological context. A multi-faceted approach to the exploration in the area will include collating information from ongoing down-hole EM surveys, structural geological reviews, geochemical vectoring and stratigraphic analysis.

## Homer Prospect

TLDD0001 was the first diamond hole drilled by Sandfire on the Springfield Project and was completed in August 2014 to a final depth of 1,099m. The hole was designed to target a modelled conductor at a vertical depth of 400m below surface which was interpreted to sit within the extension of the prospective DeGrussa stratigraphic horizon, approximately 5km to the east of DeGrussa. The conductor resulted from the analysis of high-powered FLEM and DHEM surveys in six drill holes previously drilled by Talisman.



TLDD0001 intersected a 37m package of rocks from 931.10m to 967.97m which Sandfire have interpreted as being potentially analogous to the DeGrussa host horizon. The package consisted of siliciclastic rocks with variable haematite alteration, ranging from unaltered to pervasively altered. Sporadic jasper clasts were observed throughout the package. Within the most altered component of the package, a narrow zone of strong silicification, banded magnetite and fine sulphides was intersected from 957.08m to 957.50m.

The VMS stratigraphic package (including trace disseminated Cu mineralisation) identified in TLDD0001 is interpreted to be indicative of a proximal VMS environment.

During the June 2015 quarter, Sandfire drilled TLDD0003 at the Homer Prospect (see *Figure 2 and Table 2*) designed to test the eastern strike extension of the interpreted C5 host horizon roughly 450m ENE of the TLDD0001 intersection.

The location of the drill collar coincided with a recently completed seismic line to facilitate stratigraphic interpretation. The drill-hole intersected haematitic exhalite with jasper clasts, which is interpreted by Sandfire to be the C5 target horizon. This horizon returned weakly anomalous base metal and trace elements.

The hole confirms the continuation of the C5 host horizon and supports additional work by Sandfire in the area heading further east along strike.

### **Drill-hole Information Summary**

The aggregate exploration metres drilled by Sandfire at the Springfield Project, as part of the Doolgunna Joint venture, along with hole information, and co-ordinates of drill holes are in *Table 1* and *Table 2* at the end of this announcement.



## Sinclair Nickel Project

The Sinclair Nickel Project is located in the prolific Agnew-Wiluna Greenstone Belt in WA's North-eastern Goldfields, one of the world's premier nickel provinces with over 9 million tonnes of reported contained nickel metal. The Sinclair nickel deposit was discovered by the former highly successful nickel miner and explorer, Jubilee Mines NL, in October 2005. It was developed and commissioned in 2008 by Xstrata and operated successfully before being placed on care-and-maintenance in August 2013, having produced approximately 38,500 tonnes of nickel at an average life-of-mine head grade of 2.44% Ni.

## Transaction Update

With the completion of the acquisition in February 2015 and payment of stamp duty in April 2015, the registration of all Sinclair Nickel Project tenement titles to Talisman Nickel Pty Ltd was completed during the June quarter.

## Sinclair Nickel Project – Regional Targeting

During the quarter Talisman commenced a project-wide exploration targeting review that has already identified numerous high priority exploration target areas across the Sinclair Nickel Project.

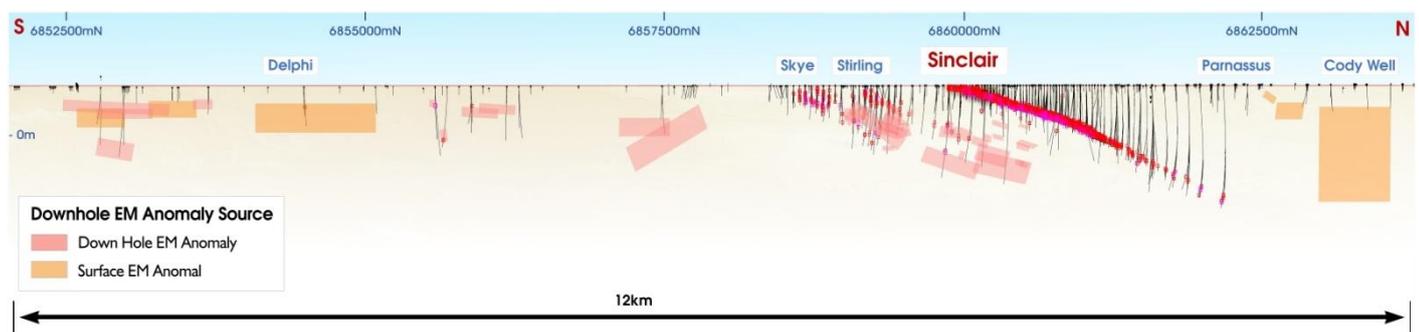
The compilation and critical assessment of existing and historic data across the project has highlighted the significant exploration potential of this largely under explored region to host significant nickel sulphide mineralisation with a number of high priority target areas emerging during the early stages of the regional targeting review.

### *Delphi Prospect*

The Delphi Prospect area, located between 4 to 10 kilometres south of the Sinclair mine (see Figure 4), has delivered historic high grade nickel sulphide intersections in sparse historic drilling including:

- 0.44 metres at 5.43% Ni; and,
- 0.32 metres at 2.99% Ni.

(See ASX announcement 16 February 2015 for further details)



**Figure 4** Long section looking west extending from Delphi prospect in the south to Cody Well in the North. Priority surface and down-hole geophysical EM anomalies shown.

Reinterpretation of the geology extending south of Sinclair through the Delphi Prospect area has shown similarities in the ultramafic rock units to those seen at Sinclair. In addition, historic geophysical EM anomalies are now interpreted to lie in favourable stratigraphic positions and are interpreted by Talisman to be indicative of possible accumulations of nickel sulphide mineralisation.

Talisman believes that similarities at Delphi to Sinclair are indicative of greater potential for massive sulphide deposits than previously interpreted.

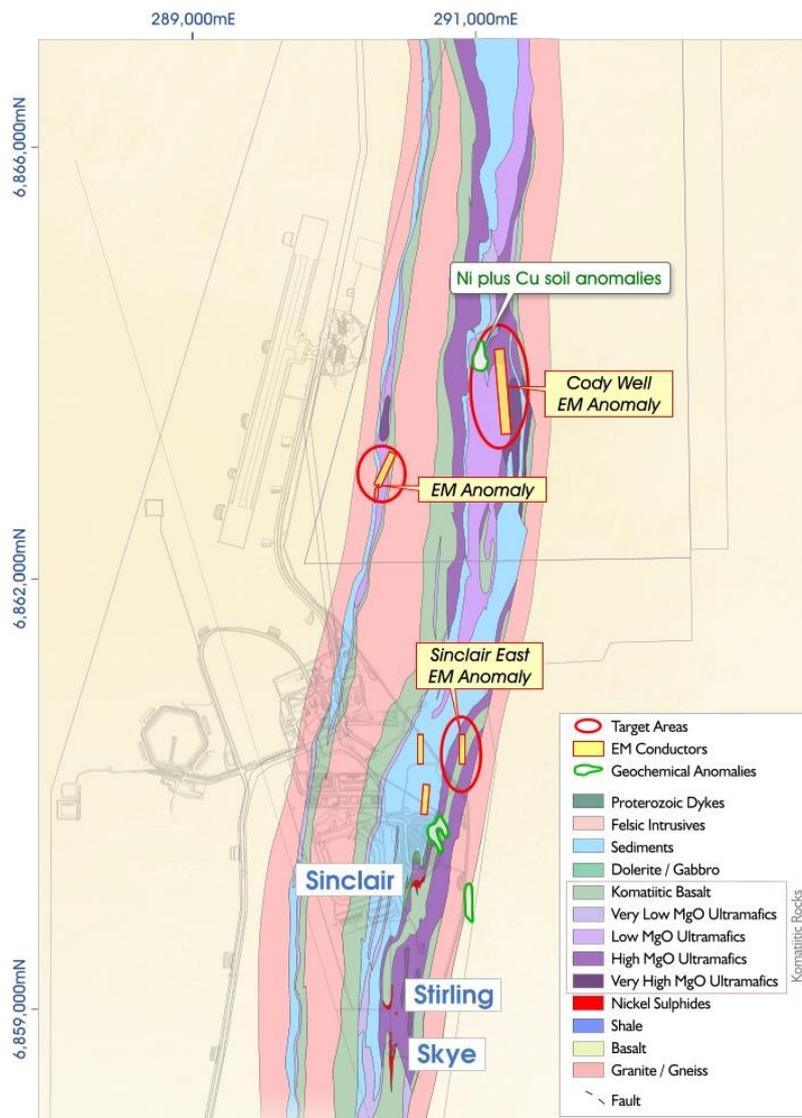


As such the Delphi prospect is considered to be the highest priority target and will be covered by a program of geophysical surveys which are scheduled to commence in the first half August 2015. It is anticipated that targeted exploration drilling will follow shortly thereafter, subject to assessment and review of the results.

**Cody Well**

A similar, detailed review of Cody Well, approximately 3km north of Sinclair (see Figure 5), has revealed three prospective targets, interpreted to lie in favourable stratigraphic positions coincident with geophysical EM targets and geochemical anomalies that have not previously been tested by drilling.

The historic EM surveys at Cody Well were reprocessed, interpreted and verified by Newexco geophysical consultants during the quarter and Talisman will extend this process into the forthcoming quarter with other EM targets in the area as well as conducting an ongoing review of geological and geochemical datasets in order to develop future drill targets.

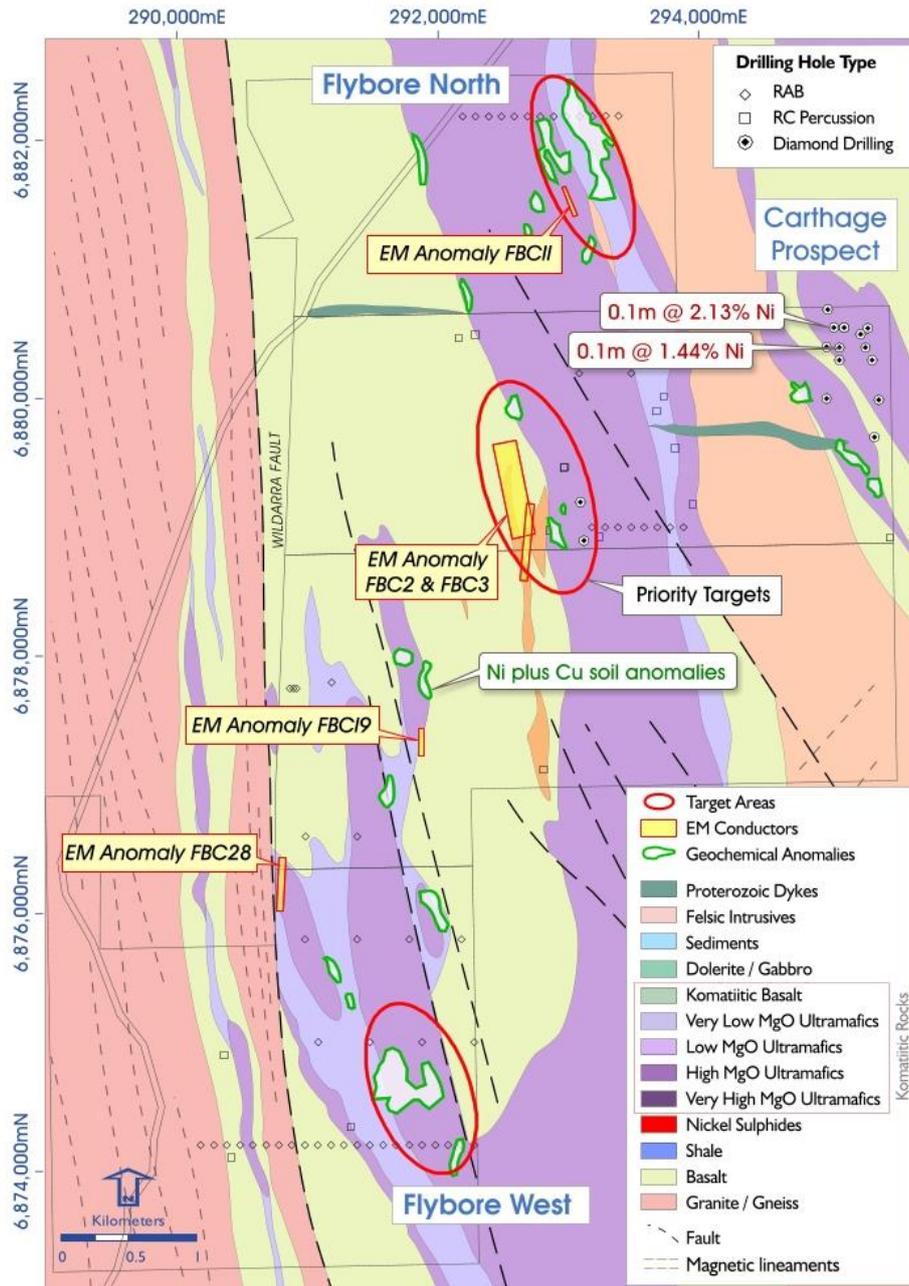


**Figure 5:** Plan showing geological interpretation extending north of Sinclair to Cody Well, geophysical plates and geochemical anomalies shown.



## Fly Bore

The Fly Bore Prospect is located approximately 15 kilometres north of Sinclair (see *Appendix 2*). Fly Bore represents a significant exploration opportunity with very sparse historic drilling over an area in excess of 10 strike kilometres of ultramafic stratigraphy (see *Figure 6*). A number of historic geochemical and geophysical anomalies are untested by drilling and have not been subject to any modern exploration activities.



**Figure 6. Fly Bore interpreted geology with historic EM and geochemical anomalism shown**

Talisman, in conjunction with Newexco geophysical consultants, will review, re-process and reinterpret the historic geophysical data in the forthcoming quarter with a view to confirming the validity of the historic surveying and possibly developing targeted modern geophysics programs with the aim of developing high priority drill targets.



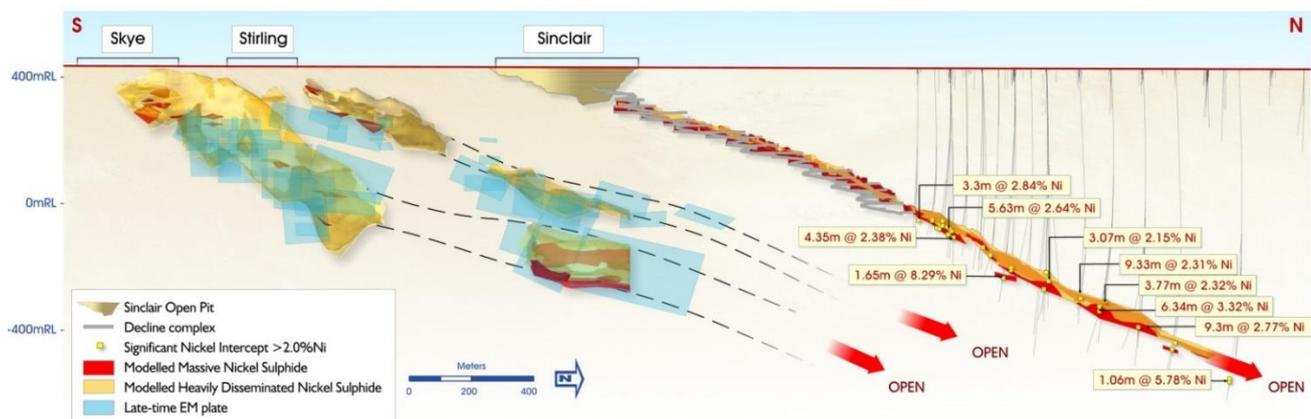
## Sinclair Nickel Deposit – Geological Modelling & Studies

The Sinclair deposit comprises an elongated body of massive and heavily disseminated sulphide mineralisation with a shallow plunge of around 20 degrees to the north (see *Figure 7*). The underground development and stoping extended to 445m below surface and provides a near-mine nickel sulphide exploration opportunity within the down-plunge extensions of the Sinclair ore body as well as the possibility for extraction of remnant mineralisation adjacent to the existing stopes.

Talisman continued work on a geological model of the entire Sinclair deposit during the quarter. The intent of this work is to improve understanding of the deposit, provide target vectors for drill programs and to be a pre-cursor to any potential resource estimate for the Sinclair deposit.

Scenario planning for the recommencement of the Sinclair Nickel Project continued during the quarter. This work focused on improving Talisman's understanding of issues including:

- the regulatory approvals process particular to the Sinclair Project;
- the dewatering and rehabilitation requirements for re-entering the existing underground mine; and
- understanding the practicalities of mining any potential remnant mineralisation.



*Figure 7: Sinclair Nickel deposit longitudinal projection with mine development showing mineralised Ni drill intercepts greater than 2% Ni beyond the limit of existing mine development as well as targets at Skye and Stirling*

## Stirling and Skye Prospects – Near-Mine Exploration Potential

The Stirling and Skye Prospects comprise two mineralised ultramafic channels parallel to, and beneath the main Sinclair orebody, proximal to the Sinclair underground mine development.

Stirling and Skye show strong similarities to the Sinclair orebody, with massive nickel sulphides associated with at least two positions at the base of a complexly folded ultramafic sequence. Both prospects have returned significant nickel intersections at their near-surface positions, but are largely untested down-plunge beneath Sinclair (see *Figure 7*).

Talisman continued to integrate the new 3D geological and electromagnetic models during the June quarter, together with historical drill-hole data. The Company anticipates evaluating potential drill programs to test the highest priority EM drill targets in optimal geological positions along the Stirling and Skye mineralised channels during the forthcoming quarter.



## **Care and Maintenance**

The annual Groundwater Monitoring Summaries for the Marshall Creek and Sinclair Ground Water Licences were submitted during the June quarter.

Applications to transfer the titles of the Department of Environment Regulation (DER) Licence, Registration and Works Approval associated with Sinclair were lodged during the previous quarter and ongoing dialog with the DER to progress these applications was undertaken during the June quarter. Final approval by the DER is expected shortly.

## **Murchison Exploration Projects**

### **Livingstone Project (TLM 80%) and Muddawerrie Gold Project (TLM 80%)**

Talisman completed the withdrawal from the Livingstone and Muddawerrie Joint Ventures and the surrender of the accompanying tenement areas following notification to its Joint venture party (Zebina Minerals Pty Ltd) of its intention to withdraw from the Joint Venture in the March 2015 quarter.

## **Corporate**

At the end of the quarter Talisman had cash reserves of \$4.7 million.

On 10 July 2015, subsequent to the end of the June quarter Talisman announced that it had successfully raised a total of \$8.0 million (before costs) through a share placement of approximately 17 million shares at 47 cents.

The placement was exceptionally well supported by both existing and new shareholders despite extremely volatile and challenging global equity market conditions. On 17 July 2015 Talisman issued 17,021,277 Fully Paid Ordinary Shares to strategic, professional and sophisticated investors within its 15% placement capacity in accordance with ASX Listing Rule 7.1.

The funds raised will provide support for any potential future requirements for Talisman to contribute to joint venture funding at the Doolgunna copper-gold joint venture with Sandfire Resources NL, including the recent high-grade Monty discovery, to progress the growth strategy at the Sinclair Nickel Project and for working capital purposes.

**ENDS**

For further information, please contact:  
Gary Lethridge – Managing Director  
on +61 8 9380 4230

For media inquiries, please contact:  
Nicholas Read – Read Corporate  
on +61 419 929 046



## Competent Persons' Statement

Information in this report 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: Aggregate exploration metres drilled by Sandfire at the Springfield Project as part of the Doolgunna Cu-Au Exploration Farm-in Joint venture**

Aggregate exploration metres drilled by Sandfire at the Springfield Project during the June quarter:

Aircore/RAB Drilling	RC Drilling	Diamond Drilling	Total
30,929 metres	60 metres	2,256 metres	33,245 metres

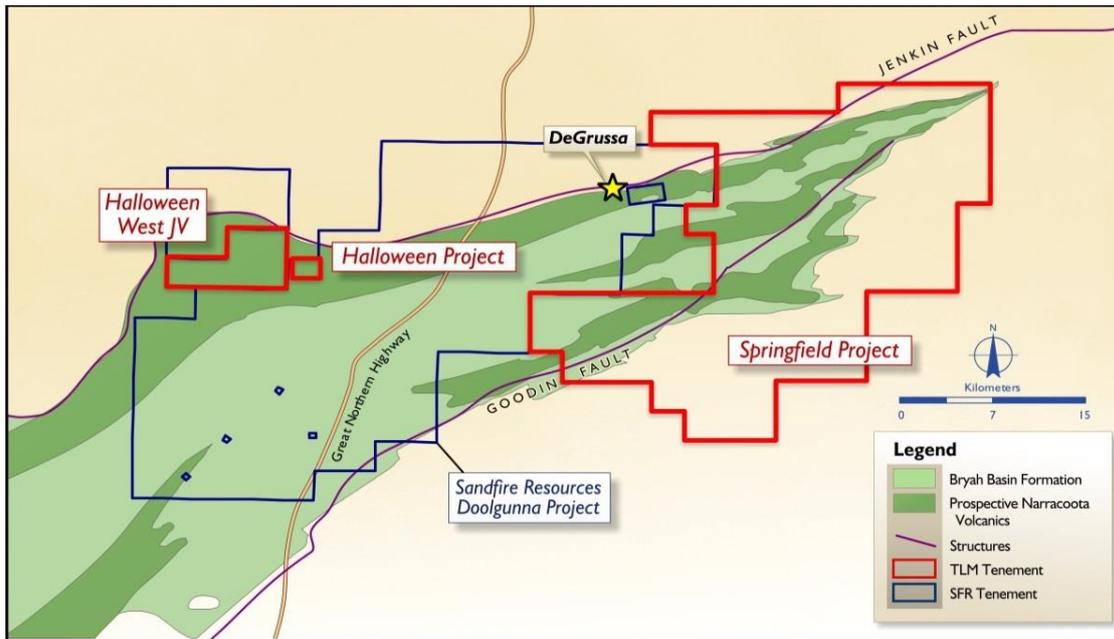
**Table 2: Drill-hole Information Summary, Springfield Project**

Details and co-ordinates of the historical drill-hole SPD021 and recent drill holes completed by Sandfire at the Springfield Project, TLDD0001, TLDD0002A, TLDD0003 and TLDD0004A, together with details of step-out drill-holes TLDD0005 and TLDD0006, the new diamond drill hole TLDD0007 and RC holes TLRC0004 and TLRC0005 are provided below:

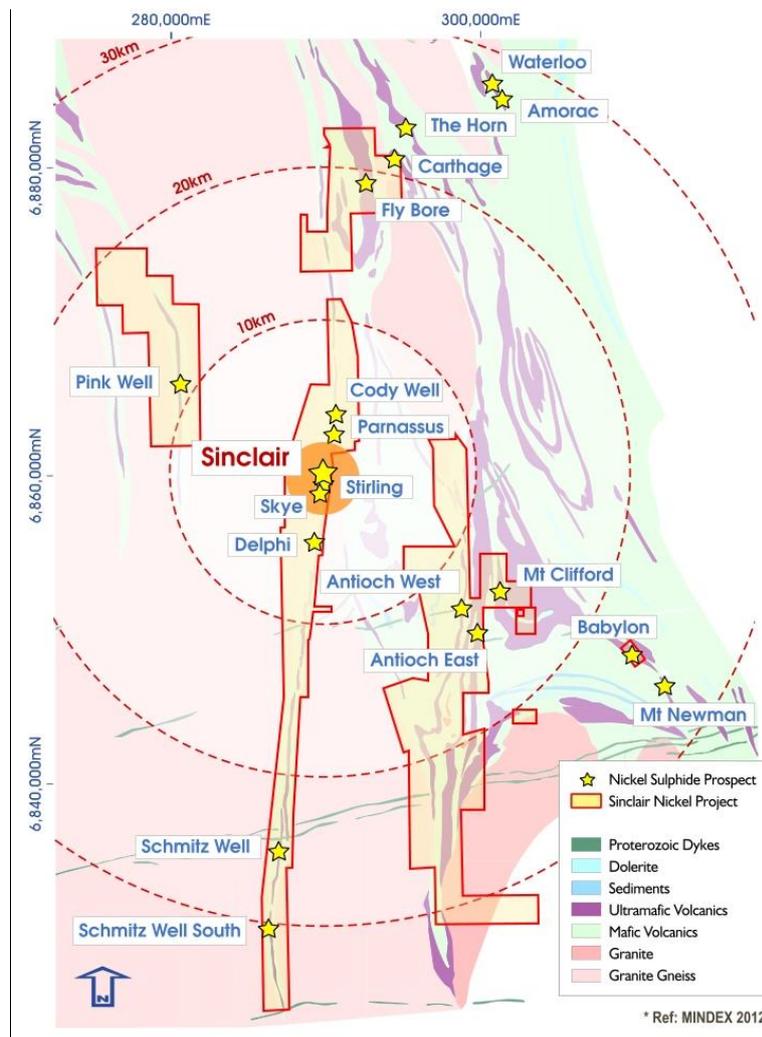
Hole ID	Depth	Dip	Azimuth	Grid_ID	East	North	RL	Lease ID	Hole Status
SPD021	553	-60°	180°	MGA94_50	743598	7171437	598	E52/2282	Complete
TLDD0001	1099	-62°	357°	MGA94_50	740146	7174149	589	E52/2313	Complete
TLDD0002A	463	-61°	110°	MGA94_50	743544	7171211	602	E52/2282	Complete
TLDD0003	658	-62°	355°	MGA94_50	740596	7174550	589	E52/2313	Complete
TLDD0004A	817	-60°	148°	MGA94_50	743588	7171281	601	E52/2282	Complete
TLDD0005	478	-62°	139°	MGA94_50	743544	7171211	602	E52/2282	Complete
TLDD0006	554	-62°	138°	MGA94_50	743479	7171160	602	E52/2282	Complete
TLRC0004	306	-62°	143°	MGA94_50	743497	7171025	605	E52/2282	Complete
TLRC0005	306	-62°	138°	MGA94_50	743321	7170993	602	E52/2282	Complete
TLDD0007	Ongoing	-62°	138°	MGA94_50	743505	7171271	602	E52/2282	In Progress



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



**Appendix 2: Plan showing Talisman tenement holding at the Sinclair Nickel Project and selected prospect names**





*Appendix 3 – Talisman Mining Tenement Schedule as at 30 June 2015*

Project/Tenement	Location and blocks (Area)	Interest at Beginning Quarter	Interest at End Quarter	Acquired during Quarter	Surrendered during Quarter	Joint Venture Partner/Farm-In Party
<b>LIVINGSTONE</b>	W.Australia					
E52/2565	15	80%	0%	-	80%	
E52/2566	31	80%	0%	-	80%	
E52/2593	24	80%	0%	-	80%	
P52/1423	(195 HA)	100%	0%	-	100%	
E52/2931	2	100%	0%	-	100%	
<b>MUDDAWERRIE</b>	W.Australia					
E51/1447	17	80%	0%	-	80%	
<b>HALLOWEEN WEST</b>	W.Australia					JV and Farm-in - Sandfire Resources Ltd
E52/2275	6	63%	63%	-	-	
<b>HALLOWEEN</b>	W.Australia					JV and Farm-in - Sandfire Resources Ltd
P52/1241	(200 HA)	100%	100%	-	-	
<b>SPRINGFIELD</b>	W.Australia					JV and Farm-in - Sandfire Resources Ltd
E52/2282	70	100%	100%	-	-	
E52/2313	14	100%	100%	-	-	
E52/2466	14	100%	100%	-	-	
<b>SINCLAIR NICKEL PROJECT</b>	W.Australia					
E37/538	6	100%	0%	-	100%	
E37/903	13	100%	100%	-	-	
E37/1012	5	100%	100%	-	-	
E37/1231*	3	0%	0%*	*		
L36/198	(103.10 HA)	100%	100%	-	-	
L37/175	(83.90 HA)	100%	100%	-	-	
M36/444	(568 HA)	100%	100%	-	-	
M36/445	(973 HA)	100%	100%	-	-	
M36/446	(843 HA)	100%	100%	-	-	
M37/362	(981.50 HA)	100%	100%	-	-	
M37/383	(841.75 HA)	100%	100%	-	-	
M37/384	(536.70 HA)	100%	100%	-	-	
M37/385	(926.85 HA)	100%	100%	-	-	
M37/386	(983.80 HA)	100%	100%	-	-	
M37/424	(891 HA)	100%	100%	-	-	
M37/426	(505 HA)	100%	100%	-	-	
M37/427	(821 HA)	100%	100%	-	-	
M37/590	(120.05 HA)	100%	100%	-	-	
M37/692	(136 HA)	100%	100%	-	-	
M37/735	(959 HA)	100%	100%	-	-	



*Appendix 3 – Talisman Mining Tenement Schedule as at 30 June 2015 (Continued)*

Project/Tenement	Location and blocks (Area)	Interest at Beginning Quarter	Interest at End Quarter	Acquired during Quarter	Surrendered during Quarter	Joint Venture Partner/Farm-In Party
<b>SINCLAIR NICKEL PROJECT</b>	W.Australia					
M37/816	(818.40 HA)	100%	100%	-	-	
M37/818	(806.50 HA)	100%	100%	-	-	
M37/819	(380.18 HA)	100%	100%	-	-	
M37/1063	(604 HA)	100%	100%	-	-	
M37/1089	(574 HA)	100%	100%	-	-	
M37/1090	(478 HA)	100%	100%	-	-	
M37/1126	(603 HA)	100%	100%	-	-	
M37/1127	(603 HA)	100%	100%	-	-	
M37/1136	(986 HA)	100%	100%	-	-	
M37/1137	(850 HA)	100%	100%	-	-	
M37/1148	(44.78 HA)	100%	100%	-	-	
M37/1168	(190 HA)	100%	100%	-	-	
M37/1223	(675 HA)	100%	100%	-	-	
M37/1275	(1,961 HA)	100%	100%	-	-	
P37/7228	(61.57 HA)	100%	100%	-	-	
P37/7233	(116.01 HA)	100%	100%	-	-	
<i>-Intentionally Blank-</i>						

\* EL37/1231 Exploration licence application lodged 16 June 2015



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>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>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 (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.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling techniques employed at the Sinclair project include saw cut diamond drill core (DD) samples and reverse circulation (RC) rock chip samples.</li> <li>Diamond core is HQ and NQ2 size, and was sampled on geological intervals (0.2 m to 2 m), cut into half (NQ2) or quarter (HQ) core to give sample weights under 3 kg. RC drill samples were collected using a cone or riffle splitter for each metre drilled. Composite samples were taken on occasion via a second sampling chute and collected into calico bags.</li> <li>Sampling was guided by Xstrata Nickel Australasia (XNAO) and QAQC procedures as per industry standard.</li> <li>All drill samples were crushed, dried and pulverised (total prep) to produce a sub-sample for analysis by four acid digest with an ICP-MS or AAS finish.</li> <li>All drilling referenced in this report were drilled by XNAO between 2005 and 2012.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>Sampling techniques employed by Sandfire on the Doolgunna Project include half core sampling of NQ2 diamond drill (DD) core, Reverse Circulation (RC) drilling samples collected by a cone splitter for single metre samples or sampling spear for composite samples, and Air Core (AC) sample collected using spear techniques for both composite and single metre samples</li> <li>Sampling is guided by Sandfire DeGrussa protocols and QAQC procedures as per industry standard.</li> <li>RC and AC sample size reduction is completed through a Boyd crusher to -10mm and pulverised via LM5 to nominal -75µm. Pulp size checks are completed.</li> <li>Diamond core size reduction is through a Jaques jaw crusher to -10mm and all samples Boyd crushed to -4mm and pulverised via LM5 to nominal 90% passing -75µm 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>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).</li> </ul>	<ul style="list-style-type: none"> <li>Surface diamond drilling (DD) on the Sinclair project employed both HQ and NQ2 diameter holes using conventional wireline, wedging and directional drilling techniques as appropriate.</li> <li>All drill core was routinely orientated where possible at nominal 6m intervals using an EzyMark core orientation system</li> <li>Reverse Circulation (RC) drilling at Sinclair utilised face sampling configurations with a nominal hole diameter of 5 3/8"</li> </ul> <hr/> <ul style="list-style-type: none"> <li>Sandfire Air Core (AC) drilling is completed using industry standard practices with a blade bit, RC drilling with a face sampling hammer of nominal 140mm size and diamond drilling is completed using NQ2 size coring equipment.</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>



Drill sample recovery	<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>• XNAO diamond core and RC sample recoveries were logged and recorded in the Sinclair Dashed database. Core photography shows overall recoveries &gt;95</li><li>• XNAO Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths were checked against the depth given on the core blocks and rod counts were routinely carried out by the drillers.</li><li>• For RC drilling the volume of sample material collected is routinely inspected and recorded on a metre by metre basis, and indicates approximate sample recovery. Actual sample weights are routinely recorded at the laboratory and stored in the XNAO database.</li></ul> <hr/> <ul style="list-style-type: none"><li>• Sandfire core is meter marked and orientated to check against the driller's blocks, ensuring that all core loss is taken into account. Diamond core recovery is logged and captured into the database with weighted average core recoveries of approximately 99%.</li><li>• Surface RC sampling is good with almost no wet sampling in the project area. AC drilling recovery is good with sample quality captured in the database.</li><li>• Samples are routinely weighed and captured into a central secured database.</li><li>• No indication of sample bias with respect to recovery has been established</li></ul>
Logging	<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>• XNAO logging of drill samples records lithology, mineralogy, mineralisation, alteration, structure, weathering, colour and other primary features of the rock samples.</li><li>• Logging both qualitative and quantitative depending on the field being logged</li><li>• All drill holes are logged in full to end of hole.</li><li>• DD core is routinely photographed digitally.</li></ul> <hr/> <ul style="list-style-type: none"><li>• Sandfire geological logging is completed for all holes and is representative across the ore body. The lithology, alteration, and structural characteristics of drill samples are logged directly to a digital format following standard procedures and using Sandfire DeGrussa geological codes. Data is imported into the central database after validation in LogChief™.</li><li>• Logging is both qualitative and quantitative depending on field being logged.</li><li>• All drill holes are logged in full. All cores are digitally photographed and stored.</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>• XNAO diamond core is HQ and NQ2 size, sampled on geological intervals (0.2 m to 2 m), sawn in half (NQ2) or quarter (HQ) core to give sample weights under 3 kg.</li><li>• XNAO RC drill samples were collected using a cone or riffle splitter for each metre drilled. Composite samples were taken on occasion via a second sampling chute and collected into calico bags. The majority of RC samples were dry.</li><li>• XNAO samples were submitted to ALS Chemex for preparation. The sample preparation follows industry best practice where all drill samples are crushed and split to 1kg then dried, pulverized and (&gt;85%) sieved through 75 microns to produce a 25g/30g charge for 4-acid digest with an ICP-MS or AAS finish.</li><li>• Field duplicates are routinely taken for both DD core and RC chip samples. XNAO procedures include a minimum of one duplicate per 25 samples</li><li>• Sample size is appropriate for nickel mineralisation.</li></ul> <hr/> <ul style="list-style-type: none"><li>• Sandfire DD Core orientation is completed where possible and core is marked prior to sampling. Half core samples are produced using Almonte Core Saw. Samples are weighed and recorded.</li><li>• 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.</li><li>• Sandfire AC samples consist of 5m composite spear samples produced from 1m drilling and weights average approximately 3kg. In certain locations after composite samples are received additional sampling at 1m intervals may be completed.</li><li>• Sandfire sample preparation at UltraTrace in Perth involves the original samples being dried at 80° for up to 24 hours and weighed. DD Samples are then crushed through Jaques crusher to nominal -10mm. Second stage crushing uses Boyd crusher to nominal -4mm.. Pulverising is completed using LM5 mill to 90% passing 75µm.</li><li>• Sandfire has protocols that cover auditing of sample preparation at the laboratories and the collection and assessment of data to ensure accurate steps in producing representative samples for the analytical process. Key performance indices include contamination index of 90% (that is 90% blanks pass); Crush Size index of P95-10mm; Grind Size index of P90-75µm and Check Samples returning at worse 20% precision at 95% confidence interval and bias of 5% or better.</li><li>• Duplicate analysis is routinely completed.</li><li>• The sample size is appropriate for the VHMS and Gold mineralisation styles.</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>• All XNAO drill samples were submitted to ALS Laboratories in Perth for multi-element analysis using a 25g charge with a 4-acid digest and ICP-MS or AAS finish (OG62). Analytes include Al, Fe, Mg, Mn, S, Ti, Ag, As, Co, Cr, Cu, Ni, Pb, V, Zn, Zr</li><li>• XNAO QAQC protocols for all drill sampling involved the use of Certified Reference Material (CRM) as assay standards. The insertion ratio of CRM standards was 1 in 25 with a minimum of 2 per batch. OREAS and Geostats standards were selected on their grade range and mineralogical properties.</li><li>• All drill assays were required to conform to the XNAO procedural QAQC guidelines as well as routine laboratory QAQC guidelines.</li><li>• All QAQC controls and measures were routinely reviewed and reported on a monthly, quarterly and annual basis. Historic results for all standards and duplicates indicate most performing well within the 2 standard deviation limit.</li><li>• Lab checks (repeats) occurred at a frequency of 1 in 25. These alternate between both the pulp and crush stages.</li><li>• 5% of all pulps were routinely submitted monthly to Genalysis Laboratories in Perth for Umpire Sampling.</li></ul> <hr/> <ul style="list-style-type: none"><li>• Sandfire samples submitted to Ultra Trace in Perth are assayed using Mixed 4 Acid Digest (MAD) 0.3g charge and MAD Hotbox 0.15g charge methods with ICPOES or ICPMS. The samples are digested and refluxed with a mixture of acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric acids and conducted for multi elements including Cu, Pb, Zn, Ag, As, Fe, S, Sb, Bi, Mo, Re, Mn, Co, Cd, Cr, Ni, Se, Te, Ti, Zr, V, Sn, W and Ba. The MAD Hotbox method is an extended digest method that approaches a total digest for many elements however some refractory minerals are not completely attacked. The elements S, Cu, Zn, Co, Fe, Ca, Mg, Mn, Ni, Cr, Ti, K, Na, V are determined by ICPOES, and Ag, Pb, As, Sb, Bi, Cd, Se, Te, Mo, Re, Zr, Ba, Sn, W are determined by ICPMS. Samples are analysed for Au, Pd and Pt by firing a 40g of sample with ICP AES/MS finish. Lower sample weights are employed where samples have very high S contents. This is a classical FA process and results in total separation of Au, Pt and Pd in the samples.</li><li>• Sandfire DeGrussa QAQC protocol is considered industry standard with standard reference material (SRM) submitted on regular basis with routine samples.</li><li>• Sandfire insert SRMs and blanks at a minimum of 5% frequency rate. A minimum of 2% of assays are routinely re-submitted as Check Assays and Check Samples through blind submittals to external and primary laboratories respectively. Adhoc umpire checks are completed annually.</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>• No significant drilling intersections are reported in this report.</li> <li>• No twinned holes are being drilled as part of this programme.</li> <li>• XNAO logging and sampling Data was captured and imported using Maxwell's LogChief or Micromine Field Marshall software.</li> <li>• All XNAO drillhole, sampling and assay data is stored in a SQL server (Datashed) database. Assay data is reviewed via DataShed, QAQCR and other customised software and databases. Datashed software has numerous validation checks which were completed at regular time intervals.</li> <li>• All assay QAQC controls were checked on a monthly, quarterly and annual period, identifying any longer term trends or patterns.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Significant intersections have been verified by alternative Sandfire company personnel.</li> <li>• There are no twinned holes.</li> <li>• Sandfire primary data is captured on field tough book 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>• XNAO drillholes were initially located by hand held GPS or mine surveyors. All hole collars were surveyed using RTK-GPS on completion.</li> <li>• The majority of XNAO drilling has been down hole surveyed using industry standard north seeking gyro techniques. Where a gyro survey has not been completed, down hole surveys have been taken at nominal 30m intervals using Eastman and electronic single shot cameras.</li> <li>• For the Sinclair project the Coordinate system used is the Australian Geodetic Datum (AGD84). Coordinates are in the Australian Map Grid (AMG84) Zone 51.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Sandfire DeGrussa Survey team undertakes survey works under the guidelines of best industry practice. All surface drilling is located using RTK-GPS.</li> <li>• All drill collars are accurately surveyed using RTK GPS system within +/-50mm of accuracy (X, Y, Z).</li> <li>• For the Springfield project MGA94 Zone 50 grid coordinate system is used.</li> <li>• Topographic control was established from aerial photography using a series of 33 surveyed control points.</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>• XNAO drilling on the Sinclair deposit has been conducted on a nominal 50m x 20m spacing, stepping out to 100m/200m line spacing north of 6861750N. Drill spacing at Stirling, Skye and Delphi prospects ranges from 50m to 200m line spacing in localised areas as appropriate.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Sandfire AC drilling across the Homer / Degrussa trend is spaced on a nominal 250m x 100m pattern, and a nominal 800m x 100m pattern across the Southern Volcanics trend.</li> <li>• Diamond and RC drill spacing at the Monty prospect is based on nominal 80m sections. It is not possible to make any conclusion regarding sample spacing and distribution at this time.</li> <li>• No sample compositing has been applied</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>• The orientation of XNAO drilling was designed to intersect either geophysical targets or geological contacts at high angle in order to reflect the true width of stratigraphy.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• DD holes are oriented to intersect a modelled EM plate and / or interpreted stratigraphy. The drill holes may not necessarily be perpendicular to the orientation of the intersected mineralisation. All reported intervals are downhole intervals, not true widths.</li> <li>• No known orientation-based sampling bias has been identified</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>• XNAO samples were stored at the Sinclair Nickel Mine Site prior to submission under the supervision of senior staff. Samples were transported to ALS Perth by an accredited courier service.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Sandfire samples are prepared onsite under the supervision of Sandfire Geological staff.</li> <li>• Sandfire samples are transported to the Perth Ultra Trace laboratory by Toll IPEC or Nexus transport companies in sealed bulka bags, or to the onsite laboratory by company personnel.</li> <li>• The laboratories receipt 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>• XNAO database was audited annually by an external consultant to ensure compliance.</li> </ul> <hr/> <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 listed in the preceding section also apply to this section.)

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> <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>The XNAO diamond and RC drilling is located within tenements M37/1275, M37/818, M37/1223 and M37/818.</li> <li>The acquisition of the Sinclair Nickel Project and a 100% interest in associated tenements from Xstrata Nickel Australasia Operations completed on 4 February 2015.</li> <li>As at the end of April 2015 transfer of title of the majority of tenements had completed.</li> <li>There are no known Native Title Claims over the Sinclair Nickel Project.</li> <li>All tenements are in good standing and there are no existing known impediments to exploration or mining.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>Exploration 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>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>M37/1275 hosts the Sinclair Nickel Mine which was operated by XNAO from 2007-2013 and produced approximately 38,500 tonnes of contained nickel metal.</li> <li>The Sinclair Nickel Deposit was discovered in 2005 by Jubilee Mines NL drill testing a ground EM anomaly.</li> <li>Exploration work on has included diamond, RC and Aircore drilling, ground and downhole EM surveys, soil sampling, geological interpretation and other geophysics (magnetics, gravity).</li> </ul> <hr/> <ul style="list-style-type: none"> <li>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	<p>Deposit type, geological setting and style of mineralisation.</p>	<ul style="list-style-type: none"> <li>The Sinclair project lies within the Archean aged Norseman-Wiluna Greenstone Belt.</li> <li>The Sinclair Nickel Deposit is an example of an Archaean-aged komatiite-hosted nickel deposit, with massive nickel-iron sulphides hosted at or near the basal contact of high-MgO ultramafic lava channels with footwall basaltic volcanic and sedimentary rocks.</li> </ul> <hr/> <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> </ul>



<p>Drill hole Information</p>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:             <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul> </li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Table 2 of this document – Drill Hole Information Summary, Springfield Project.</li> </ul>
<p>Data aggregation methods</p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</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>• Reported intersections are based on a regular sample interval of 1m or 5m composites in regular drilling subject to location of geological boundaries.</li> <li>• Minimum and maximum sample intervals used for intersection calculation are 0.3m and 1.2m respectively.</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>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<ul style="list-style-type: none"> <li>• Downhole intercepts of mineralisation reported in this release are from drill holes orientated perpendicular to a modelled EM plate. The drill holes may not necessarily be perpendicular to the mineralised zone. All widths reported are downhole intervals.</li> <li>• The geometry of the mineralisation, relative to the drill holes, is unknown at this stage.</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>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate maps with scale are included within the body of the accompanying document.</li> </ul>



Balanced reporting	<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>
Other substantive exploration data	<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>
Further work	<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>• Exploration drilling will continue to target projected lateral and depth extensions of known mineralisation. Additionally regional anomalism will be investigated as required to determine the opportunity to identify economic mineralisation.</li></ul>