TODD RIVER RESOURCES

**ASX Announcement**
21 January 2019

# TODD RIVER GEARS UP FOR MAJOR NEW EXPLORATION PROGRAM AT MT HARDY PROJECT, NT

*Drilling set to resume in early February to follow up successful 2018 work programs, extend high-grade base metal mineralisation defined to date and test multiple new geophysical targets*

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- All outstanding assays received for 2018 Mt Hardy drilling program
- New down-hole geophysics targets identified
- Mineralisation remains open
- Several new targets identified by Moving Loop EM (MLEM) program – data processing ongoing
- Drilling and geophysics to re-commence in early February

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Todd River Resources Limited (ASX: TRT; "Todd River" or "the Company") is pleased to advise that it is preparing to commence a major new exploration program early next month at its 100%-owned **Mt Hardy Copper-Zinc Project** in the Northern Territory (Figure 1).

The program, which will include extensive drilling and geophysics, will build on the Company's successful 2018 program – which resulted in the discovery of a significant zone of high-grade base metal mineralisation at the EM1 prospect.

As previously announced, the Company has been expanding the EM1 mineralisation both along strike and at depth since drilling re-commenced in September, pausing mid December for the Christmas break. Drilling will resume in early February 2019.

All remaining laboratory assays have been received in the last week, and are reported here. In addition, Down-hole TEM (DHTEM) and Moving Loop TEM (MLTEM) geophysical programs were completed in December. Assessment of the data is ongoing and will be reported shortly.

Commenting on the planned activities for 2019, Todd River's Managing Director, Will Dix, said:

> *"We are really looking forward to resumption of drilling at Mt Hardy after what was a breakthrough year for us in 2018 with the discovery of a significant zone of high-grade base metal mineralisation at the EM1 prospect. We have high hopes for what this area can deliver in the very active months ahead.*
>
> *"The ongoing drilling and geophysics programs are designed both to continue to expand the mineralisation at EM1 and also to begin testing the high-priority targets we are generating close to EM1 and, in particular, in the area under cover between EM1 and Browns."*

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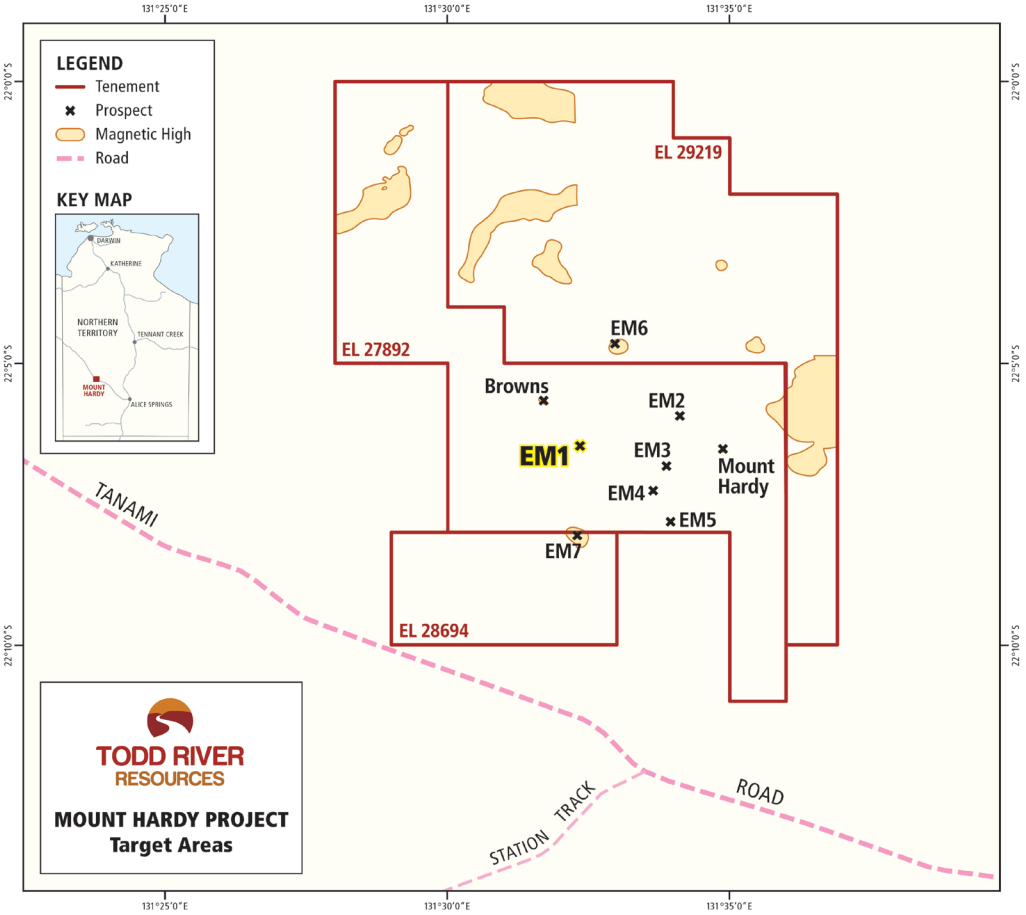


**Figure 1 – Mt Hardy Project showing the location of the main drill target area, EM1 and additional prospects in the project area.**

**EM1 Prospect**

**Drilling**

A total of 12 holes have been completed at EM1 since September, using a drill rig capable of both RC (Reverse Circulation) and diamond drilling techniques (Table 1). Shallower holes were RC drilled, while deeper (>250m) holes had RC pre-collars drilled and diamond tails completed.

In total 4,256m were drilled with 1,829m of RC chips and 2,427m of core.

All holes intersected mineralisation, with hole MHDD0043 recording the best intersection (**35.54m @ 14.7% Zn, 2.92% Pb and 0.91% Cu**, see ASX Announcement – 7 November 2018).

The deepest hole drilled (MHDD0042) intersected a thick zone of sulphides at 600m below surface, expanding the extent of the EM1 mineralisation to over 600m down-dip.

**Table 1. Holes drilled since early October at Mount Hardy.**

| HOLE_ID | TYPE | DEPTH | EASTING | NORTHING | COMMENCED |
|---|---|---|---|---|---|
| MHDD0041 | RCDDH | 398.25 | 761892 | 7553038 | 02-Oct-18 |
| MHDD0042 | RCDDH | 679.00 | 761888 | 7553041 | 04-Oct-18 |
| MHDD0043 | RCDDH | 519.51 | 761919 | 7553066 | 05-Oct-18 |
| MHDD0044 | RCDDH | 361.01 | 761901 | 7552988 | 06-Oct-18 |
| MHDD0045W1 | DDH | 448.84 | 761896 | 7552992 | 21-Nov-18 |
| MHDD0046 | DDH | 314.50 | 761906 | 7552944 | 28-Nov-18 |
| MHDD0047 | RCDDH | 350.00 | 761897 | 7552986 | 30-Nov-18 |
| MHRC0048 | RC | 188.00 | 762071 | 7553092 | 02-Dec-18 |
| MHRC0049 | RC | 138.00 | 762079 | 7552982 | 03-Dec-18 |
| MHRC0050 | RC | 92.00 | 762088 | 7552934 | 04-Dec-18 |
| MHRC0051 | RC | 136.00 | 762067 | 7552946 | 05-Dec-18 |
| MHDD0052 | RCDDH | 454.76 | 761922 | 7553061 | 07-Dec-18 |

***Note: The original hole MHDD0045 was abandoned due to ground conditions and then wedged to achieve target.***

Analytical results from all drill-holes have now been received and are summarised in Table 2, with all significant results listed in Table 3. Figure 2 shows the distribution of mineralisation in oblique long projection. Holes with noteworthy results are discussed below.

Hole **MHDD0042** is the deepest hole to date at EM1, intersecting mineralisation at over 600m below surface, and 180m below/down-dip of the nearest hole (MHDD0043). It returned a significant width of brecciated mineralisation with a length weighted average of **24.54m @ 0.68% Cu, 0.29% Pb and 4.86% Zn** from 619m down-hole. This intersection is **open in all directions**, but geophysical modelling suggests better grades could be mainly to the north. Within this interval is a high grade portion, using a 5% cut-off, of **12.68m @ 1.19% Cu, 0.47% Pb and 8.21% Zn from 629.62m**.

Hole **MHDD0045** returned an interval of **4.41m @ 1.28% Cu, 6.14% Pb and 10.98% Zn from 388.07m**. This zone is to the south of hole MHDD0021A, extending the good thickness and high grade mineralisation at around 300m RL (350m depth below ground level). The sulphides observed in this hole are similar to those encountered elsewhere at EM1.

Hole **MHDD0044** returned **3.73m @ 2.68% Cu, 4.57% Pb and 12.04% Zn from 307.35m**. Hole **MHDD0041**, located some 40m to the north of MHDD0044, returned a similar thickness but lower grade zone of **3.11m @ 1.58% Cu, 0.88% Pb, and 2.06% Zn from 322.89m**.

Hole **MHDD0047** returned **9.42m @ 0.65% Cu, 1.95% Pb and 3.69% Zn from 268m**.

Shallow RC holes **MHDD0049, 0050, and 0051** were drilled just north of the outcropping gossan. None of these holes returned significant mineralisation. In February, further shallow RC holes will be drilled to the south of these.

Hole **MHDD0048** was drilled on a separate EM conductor target over 200m to the north of EM1 and returned no significant results.

**Table 2.** **Significant Laboratory Results from recent drilling at EM1**
***(>1% combined base metals – Cu+Pb+Zn%)***

| HOLE_ID | FROM | TO | INTERVAL | Cu_% | Pb_% | Zn_% | Ag_g/t |
|---|---|---|---|---|---|---|---|
| MHDD0041 | 322.89 | 326.00 | 3.11 | 1.58 | 0.88 | 2.06 | 28 |
| MHDD0042 | 557.60 | 558.40 | 0.80 | 0.82 | 1.30 | 1.25 | 18 |
| MHDD0042 | 571.00 | 573.61 | 2.61 | 0.59 | 2.82 | 7.18 | 46 |
| MHDD0042 | 578.00 | 579.00 | 1.00 | 0.04 | 0.37 | 0.69 | 5 |
| MHDD0042 | 580.00 | 581.00 | 1.00 | 0.55 | 2.39 | 2.17 | 39 |
| MHDD0042 | 587.20 | 588.30 | 1.10 | 0.26 | 0.83 | 1.25 | 21 |
| MHDD0042 | 592.00 | 593.00 | 1.00 | 0.17 | 0.87 | 1.77 | 18 |
| MHDD0042 | 599.79 | 601.00 | 1.21 | 0.11 | 0.26 | 1.00 | 13 |
| MHDD0042 | 619.00 | 643.54 | 24.54 | 0.68 | 0.29 | 4.86 | 14 |
| MHDD0043 | 204.55 | 206.60 | 2.05 | 0.62 | 1.27 | 1.26 | 13 |
| MHDD0043 | 337.00 | 338.00 | 1.00 | 0.06 | 0.50 | 1.03 | 20 |
| MHDD0043 | 357.70 | 358.70 | 1.00 | 1.46 | 0.87 | 2.42 | 23 |
| MHDD0043 | 409.00 | 412.80 | 3.80 | 0.29 | 2.41 | 6.23 | 57 |
| MHDD0043 | 420.00 | 421.00 | 1.00 | 0.02 | 0.13 | 0.92 | 3 |
| MHDD0043 | 423.20 | 424.40 | 1.20 | 0.39 | 1.13 | 8.69 | 36 |
| MHDD0043 | 428.50 | 429.60 | 1.10 | 0.15 | 1.04 | 2.08 | 26 |
| MHDD0043 | 431.54 | 467.08 | 35.54 | 0.91 | 2.92 | 14.69 | 59 |
| MHDD0043 | 468.62 | 470.00 | 1.38 | 0.25 | 1.30 | 1.03 | 30 |
| MHDD0044 | 165.00 | 166.00 | 1.00 | 0.95 | 0.05 | 0.08 | 3 |
| MHDD0044 | 269.34 | 270.09 | 0.75 | 1.32 | 1.78 | 4.26 | 34 |
| MHDD0044 | 307.35 | 311.08 | 3.73 | 2.68 | 4.57 | 12.04 | 72 |
| MHDD0045 | 215.40 | 217.65 | 2.25 | 0.53 | 0.16 | 0.62 | 4 |
| MHDD0045 | 334.06 | 338.36 | 4.30 | 0.49 | 0.95 | 1.74 | 13 |
| MHDD0045 | 340.25 | 344.54 | 4.29 | 0.33 | 1.00 | 3.86 | 18 |
| MHDD0045 | 388.07 | 392.48 | 4.41 | 1.28 | 6.14 | 10.98 | 112 |
| MHDD0045W1 | 388.70 | 394.93 | 6.23 | 0.78 | 1.78 | 5.44 | 37 |
| MHDD0046 | 246.19 | 247.00 | 0.81 | 0.20 | 0.74 | 1.73 | 14 |
| MHDD0046 | 252.50 | 262.00 | 9.50 | 0.38 | 0.88 | 3.39 | 15 |
| MHDD0047 | 153.00 | 154.00 | 1.00 | 0.42 | 0.11 | 0.91 | 3 |
| MHDD0047 | 158.61 | 161.40 | 2.79 | 0.28 | 0.22 | 0.53 | 2 |
| MHDD0047 | 164.00 | 168.70 | 4.70 | 1.16 | 0.27 | 0.51 | 6 |
| MHDD0047 | 234.00 | 235.00 | 1.00 | 1.53 | 1.99 | 3.01 | 40 |
| MHDD0047 | 268.00 | 277.42 | 9.42 | 0.65 | 1.95 | 3.69 | 31 |
| MHDD0048 | NSA | | | | | | |
| MHDD0049 | NSA | | | | | | |
| MHDD0050 | NSA | | | | | | |
| MHDD0051 | NSA | | | | | | |
| MHDD0052 | 144.00 | 145.00 | 1.00 | 0.16 | 0.24 | 1.21 | 12 |
| MHDD0052 | 185.00 | 186.00 | 1.00 | 0.11 | 0.74 | 0.73 | 3 |
| MHDD0052 | 395.00 | 396.00 | 1.00 | 0.06 | 1.09 | 1.41 | 5 |
| MHDD0052 | 402.41 | 403.15 | 0.74 | 1.24 | 0.49 | 0.32 | 16 |
| MHDD0052 | 416.77 | 418.00 | 1.23 | 0.11 | 0.44 | 0.47 | 3 |
| MHDD0052 | 430.40 | 431.30 | 0.90 | 0.05 | 0.98 | 2.23 | 7 |

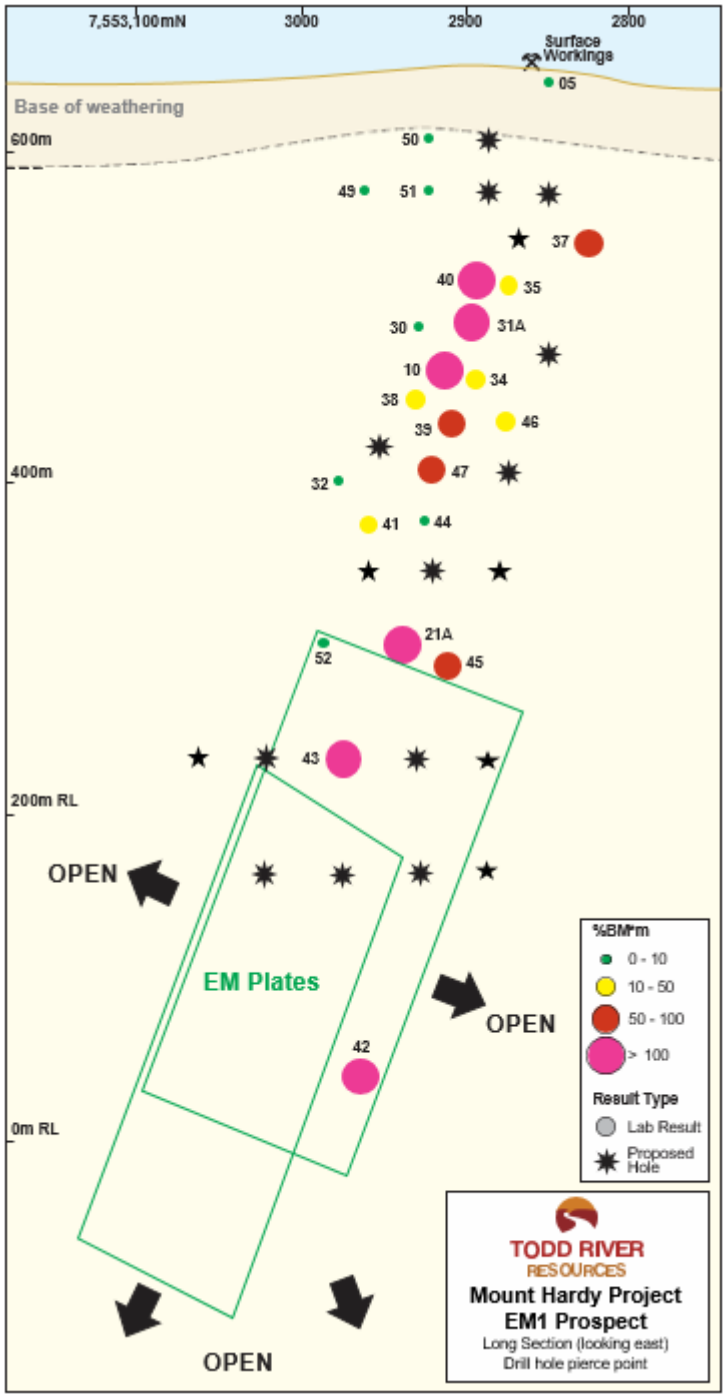


**Figure 2 – Mt Hardy Project, EM1 Prospect area oblique long projection and planned holes for the initial campaign of 2019.**

**Down-hole Geophysical Surveying**

Down-hole EM surveying of key holes including MHDD0042, MHDD0043 and MHDD0052 was completed during December. The data has been processed, modelled, and preliminary interpretation completed.

The geophysical modelling is incorporating the DHEM data acquired earlier in the year and also other datasets as set out in the Company's announcements of September 3rd and 29th November 2018.

There are now 29 plates modelled and further work is underway to build a 3D geological model to integrate with the interpreted EM plates to better define constraints on mineralisation and expose new targets.

Preliminary results of this work indicate that the deep mineralisation is not closed off in any direction. There are two significant deep plates (represented in Figure 2) modelled from the data that encourage further drilling, particularly above and to the north of MHDD0042.

**Moving-Loop Geophysics Surveying**

An initial MLEM survey was completed in mid-December focussing on a four square kilometre area centred on EM1 (Figure 4).

The data generated in this survey is currently being interpreted following the completion of work on the down-hole EM data. It is expected that modelling and drill target generation will be completed by the end of January with initial drill holes planned north and south of EM1 for late in the March Quarter.

The survey area will be expanded over the next few months (Figure 3), Initially covering the Browns prospect to allow better targeting for drill testing at Browns during the June Quarter.

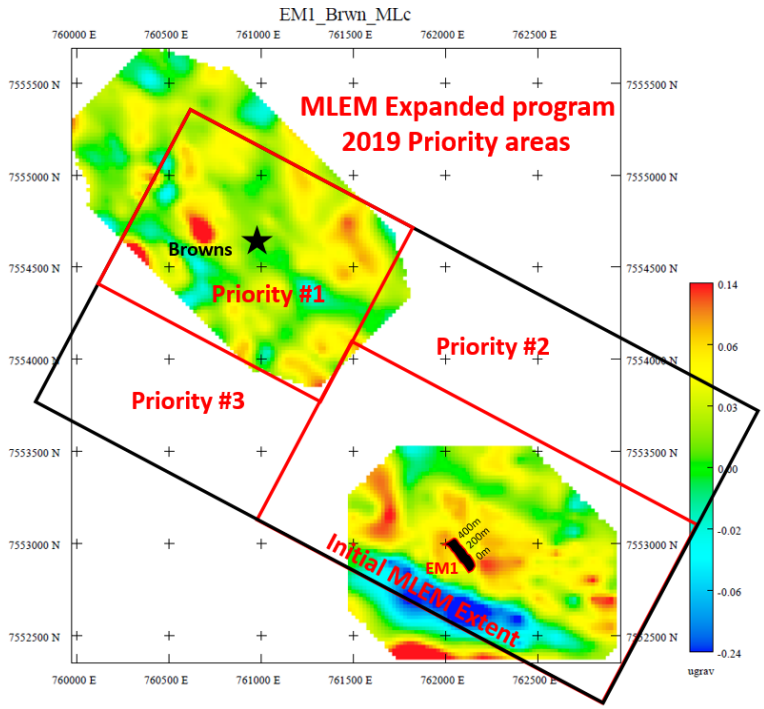


**Figure 3 – Mt Hardy Moving Loop EM survey area.2018 completed area – lower right. 2019 planned coverage (#1, 2, 3)**

**2019 Work Program**

A substantial drilling program will commence in early February to better assess the potential at EM1. Holes will focus on outlining the size/extent of high grade zinc and copper zones, particularly in the shallower (0-300m) sections. Several holes will also be focused on the deeper positions outlined by the DHEM modelled plates.

A contractor has been selected, and will aim to mobilise during the second week of February. This program is expected to continue well into the June Quarter.

Geophysical programs will also continue shortly. A geophysical crew will expand the MLEM coverage to the north and west to and beyond the Brown Prospect area. DHEM crews will be mobilised regularly to provide guidance for drill targeting.

Work on other targets, beyond EM1, at Mount Hardy will continue in the June Quarter. Drilling will further assess the Browns Prospect, and the newly identified MLEM modelled drill targets.

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**Competent Person Statements**

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Exploration Manager Mr Kim Grey B.Sc. and M. Econ. Geol. Mr Grey is a member of the Australian Institute of Geoscientists, and an employee of Todd River Resources Limited. Mr Grey has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Grey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**About Todd River Resources**

Todd River Resources (ASX: TRT) is an Australian-based resources company that has recently announced a zinc-copper discovery, EM1, at its 100% owned Mt Hardy Project, located 300km north west of Alice Springs.

With a strong management team, tight capital structure and fully funded for exploration in 2019, Todd River is well placed to pursue additional base metal mineralisation at Mt Hardy and progress exploration activities across its exploration portfolio.

While Todd River's main focus is at Mt Hardy, the Company holds an extensive precious and base metal project portfolio which includes the Rover gold project, the McArthur Copper-Zinc project and the large Manbarrum Zinc resource.

**Table 3. Laboratory results for significant holes at EM1**

| HOLE_ID | FROM | TO | INTERVAL | SAMPLE NO | Ag (g/t) | Cu (%) | Pb (%) | Zn (%) |
|---|---|---|---|---|---|---|---|---|
| MHDD0041 | 311.82 | 312.60 | 0.78 | MH182992 | X | 8 | 27 | 75 |
| MHDD0041 | 321.00 | 322.00 | 1.00 | MH182993 | X | 37 | 52 | 86 |
| MHDD0041 | 322.00 | 322.89 | 0.89 | MH182994 | 2 | 563 | 498 | 1781 |
| MHDD0041 | 322.00 | 322.89 | 0.89 | MH182994 | 1.9 | 555 | 488 | 1764 |
| MHDD0041 | 322.89 | 324.10 | 1.21 | MH182995 | 30.4 | 9663 | 4903 | 21370 |
| MHDD0041 | 324.10 | 325.10 | 1.00 | MH182996 | 33.4 | 31941 | 7733 | 29446 |
| MHDD0041 | 325.10 | 326.00 | 0.90 | MH182997 | 19.1 | 6283 | 15303 | 9839 |
| MHDD0041 | 326.00 | 326.59 | 0.59 | MH182998 | 1 | 1231 | 504 | 1045 |
| MHDD0041 | 332.00 | 333.00 | 1.00 | MH182999 | 1.7 | 1213 | 1925 | 1921 |
| MHDD0041 | 338.50 | 339.50 | 1.00 | MH183001 | X | 79 | 47 | 292 |
| MHDD0041 | 339.50 | 340.50 | 1.00 | MH183002 | 4.8 | 1296 | 1136 | 513 |
| MHDD0041 | 340.50 | 341.50 | 1.00 | MH183003 | 1.3 | 771 | 553 | 443 |
| MHDD0041 | 341.50 | 342.50 | 1.00 | MH183004 | 0.7 | 326 | 330 | 293 |
| MHDD0041 | 345.50 | 346.25 | 0.75 | MH183005 | X | 10 | 74 | 94 |
| MHDD0042 | 555.00 | 556.00 | 1.00 | MH183163 | X | 66 | 171 | 172 |
| MHDD0042 | 556.00 | 556.70 | 0.70 | MH183164 | X | 5 | 93 | 153 |
| MHDD0042 | 556.70 | 557.60 | 0.90 | MH183165 | X | 125 | 156 | 568 |
| MHDD0042 | 557.60 | 558.40 | 0.80 | MH183166 | 17.9 | 8212 | 12991 | 12532 |
| MHDD0042 | 557.60 | 558.40 | 0.80 | MH183166 | 18.8 | 8292 | >10000 | 12623 |
| MHDD0042 | 558.40 | 559.20 | 0.80 | MH183167 | X | 32 | 172 | 299 |
| MHDD0042 | 559.20 | 560.00 | 0.80 | MH183168 | X | 20 | 121 | 281 |
| MHDD0042 | 560.00 | 561.00 | 1.00 | MH183169 | X | 57 | 346 | 127 |
| MHDD0042 | 561.00 | 561.83 | 0.83 | MH183170 | 1.1 | 1141 | 511 | 467 |
| MHDD0042 | 561.83 | 563.00 | 1.17 | MH183171 | 2.9 | 1866 | 1591 | 1637 |
| MHDD0042 | 563.00 | 564.00 | 1.00 | MH183172 | 1.5 | 532 | 1241 | 1025 |
| MHDD0042 | 564.00 | 565.00 | 1.00 | MH183173 | 1.3 | 304 | 1047 | 3417 |
| MHDD0042 | 565.00 | 566.00 | 1.00 | MH183174 | 8.1 | 815 | 4437 | 3146 |
| MHDD0042 | 566.00 | 567.00 | 1.00 | MH183176 | 2.3 | 375 | 1341 | 1440 |
| MHDD0042 | 567.00 | 568.00 | 1.00 | MH183177 | 6 | 359 | 2419 | 2847 |
| MHDD0042 | 568.00 | 569.15 | 1.15 | MH183178 | 5 | 1635 | 1423 | 2052 |
| MHDD0042 | 569.15 | 570.00 | 0.85 | MH183179 | X | 8 | 371 | 230 |
| MHDD0042 | 570.00 | 571.00 | 1.00 | MH183180 | X | 15 | 230 | 258 |
| MHDD0042 | 571.00 | 572.39 | 1.39 | MH183181 | 16.7 | 3684 | 7866 | 27680 |
| MHDD0042 | 572.39 | 573.61 | 1.22 | MH183182 | 79.5 | 8465 | 51286 | 122020 |
| MHDD0042 | 573.61 | 574.38 | 0.77 | MH183183 | 4.8 | 858 | 2902 | 5797 |
| MHDD0042 | 574.38 | 575.30 | 0.92 | MH183184 | X | 60 | 289 | 540 |
| MHDD0042 | 575.30 | 576.00 | 0.70 | MH183185 | X | 3 | 204 | 179 |
| MHDD0042 | 576.00 | 577.00 | 1.00 | MH183186 | X | 63 | 344 | 2379 |
| MHDD0042 | 577.00 | 578.00 | 1.00 | MH183187 | 2.5 | 123 | 2304 | 2132 |
| MHDD0042 | 578.00 | 579.00 | 1.00 | MH183188 | 5.4 | 406 | 3713 | 6881 |
| MHDD0042 | 579.00 | 580.00 | 1.00 | MH183189 | 2.3 | 999 | 1720 | 1832 |
| MHDD0042 | 580.00 | 581.00 | 1.00 | MH183190 | 39 | 5455 | 23857 | 21667 |
| MHDD0042 | 581.00 | 582.00 | 1.00 | MH183191 | 1.2 | 590 | 1118 | 3416 |
| MHDD0042 | 582.00 | 583.00 | 1.00 | MH183192 | X | 274 | 468 | 1963 |
| MHDD0042 | 583.00 | 584.00 | 1.00 | MH183193 | X | 2 | 420 | 131 |
| MHDD0042 | 584.00 | 585.00 | 1.00 | MH183194 | 5.5 | 706 | 3642 | 1736 |
| MHDD0042 | 585.00 | 586.00 | 1.00 | MH183195 | 1.7 | 273 | 1075 | 1602 |
| MHDD0042 | 586.00 | 587.20 | 1.20 | MH183196 | 0.8 | 21 | 483 | 509 |
| MHDD0042 | 587.20 | 588.30 | 1.10 | MH183197 | 21.1 | 2647 | 8313 | 12535 |
| MHDD0042 | 588.30 | 589.00 | 0.70 | MH183198 | 0.5 | 205 | 583 | 3449 |
| MHDD0042 | 589.00 | 590.00 | 1.00 | MH183199 | X | 5 | 201 | 158 |
| MHDD0042 | 590.00 | 591.00 | 1.00 | MH183201 | X | 4 | 116 | 133 |
| MHDD0042 | 591.00 | 592.00 | 1.00 | MH183202 | 0.7 | 121 | 497 | 791 |
| MHDD0042 | 592.00 | 593.00 | 1.00 | MH183203 | 18.4 | 1732 | 8726 | 17677 |
| MHDD0042 | 593.00 | 594.00 | 1.00 | MH183204 | X | 3 | 226 | 176 |
| MHDD0042 | 598.00 | 599.00 | 1.00 | MH183205 | X | 7 | 140 | 89 |
| MHDD0042 | 599.00 | 599.79 | 0.79 | MH183206 | X | X | 123 | 94 |
| MHDD0042 | 599.79 | 601.00 | 1.21 | MH183207 | 12.5 | 1082 | 2606 | 10017 |

| HOLE_ID | FROM | TO | INTERVAL | SAMPLE NO | Ag (g/t) | Cu (%) | Pb (%) | Zn (%) |
|---|---|---|---|---|---|---|---|---|
| MHDD0042 | 601.00 | 602.00 | 1.00 | MH183208 | X | X | 87 | 232 |
| MHDD0042 | 602.00 | 603.00 | 1.00 | MH183209 | X | X | 93 | 148 |
| MHDD0042 | 602.00 | 603.00 | 1.00 | MH183209 | X | X | 94 | 149 |
| MHDD0042 | 603.00 | 604.00 | 1.00 | MH183210 | X | X | 127 | 208 |
| MHDD0042 | 604.00 | 605.00 | 1.00 | MH183211 | 2.6 | 395 | 518 | 546 |
| MHDD0042 | 605.00 | 606.00 | 1.00 | MH183212 | 0.8 | 114 | 211 | 152 |
| MHDD0042 | 606.00 | 607.00 | 1.00 | MH183213 | X | 11 | 90 | 107 |
| MHDD0042 | 607.00 | 608.00 | 1.00 | MH183214 | X | 6 | 73 | 102 |
| MHDD0042 | 608.00 | 609.00 | 1.00 | MH183215 | X | X | 37 | 151 |
| MHDD0042 | 609.00 | 610.00 | 1.00 | MH183216 | X | 5 | 90 | 139 |
| MHDD0042 | 610.00 | 611.00 | 1.00 | MH183217 | X | 1 | 89 | 102 |
| MHDD0042 | 611.00 | 612.00 | 1.00 | MH183218 | X | 2 | 57 | 149 |
| MHDD0042 | 612.00 | 613.00 | 1.00 | MH183219 | X | X | 59 | 122 |
| MHDD0042 | 613.00 | 614.00 | 1.00 | MH183220 | X | 2 | 58 | 176 |
| MHDD0042 | 614.00 | 615.00 | 1.00 | MH183221 | 0.7 | 358 | 115 | 8295 |
| MHDD0042 | 615.00 | 616.00 | 1.00 | MH183222 | X | 4 | 63 | 133 |
| MHDD0042 | | | | MH182125 | X | 38 | 33 | 60 |
| MHDD0044 | 305.40 | 306.50 | 1.10 | MH183078 | X | 516 | 110 | 206 |
| MHDD0044 | 306.50 | 307.35 | 0.85 | MH183079 | X | 428 | 153 | 182 |
| MHDD0044 | 307.35 | 308.35 | 1.00 | MH183080 | 6.1 | 2714 | 1288 | 12304 |
| MHDD0044 | 308.35 | 309.07 | 0.72 | MH183081 | 6.3 | 5496 | 4040 | 7578 |
| MHDD0044 | 309.07 | 310.07 | 1.00 | MH183082 | 104.8 | 49474 | 83754 | 224038 |
| MHDD0044 | 310.07 | 311.08 | 1.01 | MH183083 | 150 | 43247 | 81628 | 205424 |
| MHDD0044 | 311.08 | 312.00 | 0.92 | MH183084 | 10.2 | 322 | 507 | 912 |
| MHDD0044 | 312.00 | 313.00 | 1.00 | MH183085 | X | 147 | 391 | 729 |
| MHDD0044 | 313.00 | 314.00 | 1.00 | MH183086 | X | 100 | 288 | 466 |
| MHDD0045 | 330.41 | 331.08 | 0.67 | MH182940 | X | 1 | 28 | 117 |
| MHDD0045 | 331.08 | 332.12 | 1.04 | MH182941 | X | 25 | 55 | 138 |
| MHDD0045 | 332.12 | 333.00 | 0.88 | MH182942 | X | 128 | 117 | 170 |
| MHDD0045 | 333.00 | 334.06 | 1.06 | MH182943 | 1.3 | 925 | 622 | 1555 |
| MHDD0045 | 334.06 | 334.84 | 0.78 | MH182944 | 6.6 | 2619 | 3132 | 8812 |
| MHDD0045 | 334.84 | 335.79 | 0.95 | MH182945 | 30.8 | 16184 | 21607 | 50712 |
| MHDD0045 | 335.79 | 336.40 | 0.61 | MH182946 | X | 93 | 187 | 274 |
| MHDD0045 | 336.40 | 337.61 | 1.21 | MH182947 | 9.1 | 1733 | 7325 | 9155 |
| MHDD0045 | 337.61 | 338.36 | 0.75 | MH182948 | 13.9 | 1938 | 11889 | 11200 |
| MHDD0045 | 338.36 | 339.38 | 1.02 | MH182949 | X | 17 | 195 | 152 |
| MHDD0045 | 339.38 | 340.25 | 0.87 | MH182951 | X | 15 | 193 | 246 |
| MHDD0045 | 340.25 | 341.30 | 1.05 | MH182952 | 43.8 | 9687 | 26633 | 96881 |
| MHDD0045 | 341.30 | 341.90 | 0.60 | MH182953 | 5.8 | 750 | 3289 | 8716 |
| MHDD0045 | 341.90 | 342.94 | 1.04 | MH182954 | X | 107 | 313 | 322 |
| MHDD0045 | 342.94 | 343.85 | 0.91 | MH182955 | 21 | 1796 | 9075 | 26945 |
| MHDD0045 | 343.85 | 344.54 | 0.69 | MH182956 | 12.1 | 2862 | 6559 | 48848 |
| MHDD0045 | 344.54 | 345.49 | 0.95 | MH182957 | X | 58 | 596 | 1072 |
| MHDD0045 | 345.49 | 346.50 | 1.01 | MH182958 | X | 7 | 170 | 137 |
| MHDD0045 | 346.50 | 347.50 | 1.00 | MH182959 | 2.8 | 4 | 89 | 94 |
| MHDD0045 | 385.00 | 386.00 | 1.00 | MH182970 | X | 108 | 57 | 135 |
| MHDD0045 | 386.00 | 387.00 | 1.00 | MH182971 | X | 1196 | 332 | 427 |
| MHDD0045 | 387.00 | 388.07 | 1.07 | MH182972 | 2.2 | 2119 | 1755 | 2336 |
| MHDD0045 | 388.07 | 389.27 | 1.20 | MH182973 | 145.6 | 12372 | 88963 | 140938 |
| MHDD0045 | 389.27 | 389.85 | 0.58 | MH182974 | 165 | 17029 | 87749 | 148737 |
| MHDD0045 | 389.85 | 390.93 | 1.08 | MH182976 | 56.3 | 6615 | 32571 | 74085 |
| MHDD0045 | 390.93 | 391.48 | 0.55 | MH182977 | 146.6 | 13313 | 72186 | 83145 |
| MHDD0045 | 391.48 | 391.98 | 0.50 | MH182978 | 44.2 | 3490 | 23498 | 19477 |
| MHDD0045 | 391.98 | 392.48 | 0.50 | MH182979 | 120.3 | 31291 | 53261 | 186310 |
| MHDD0045 | 392.48 | 393.52 | 1.04 | MH182980 | 5.7 | 753 | 1976 | 318 |
| MHDD0045W1 | 385.00 | 386.00 | 1.00 | MH183262 | X | 120 | 138 | 246 |
| MHDD0045W1 | 386.00 | 387.00 | 1.00 | MH183263 | X | 927 | 465 | 546 |
| MHDD0045W1 | 387.00 | 388.00 | 1.00 | MH183264 | 0.6 | 805 | 1617 | 1190 |
| MHDD0045W1 | 388.00 | 388.70 | 0.70 | MH183265 | 1.8 | 751 | 1472 | 2309 |
| MHDD0045W1 | 388.70 | 389.60 | 0.90 | MH183266 | 75.2 | 10860 | 44283 | 90263 |
| MHDD0045W1 | 389.60 | 390.50 | 0.90 | MH183267 | 11.8 | 1986 | 5632 | 23038 |
| MHDD0045W1 | 390.50 | 391.05 | 0.55 | MH183268 | 3.7 | 1595 | 1099 | 50536 |
| MHDD0045W1 | 391.05 | 391.59 | 0.54 | MH183269 | 92.6 | 9139 | 43133 | 196443 |
| MHDD0045W1 | 391.59 | 392.59 | 1.00 | MH183270 | 47.7 | 4928 | 22094 | 36894 |
| MHDD0045W1 | 392.59 | 393.31 | 0.72 | MH183271 | 18.3 | 2897 | 9406 | 24612 |
| MHDD0045W1 | 393.31 | 393.81 | 0.50 | MH183272 | 50.5 | 8938 | 21049 | 71404 |
| MHDD0045W1 | 393.81 | 394.93 | 1.12 | MH183273 | 14.2 | 17438 | 2191 | 11459 |
| MHDD0045W1 | 394.93 | 396.00 | 1.07 | MH183274 | X | 106 | 69 | 185 |

## Appendix One JORC Table One – Section One. Sampling Techniques and Data
## Mount Hardy Drilling – Diamond Drilling – pXRF Results

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| Sampling techniques | Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.<br>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.<br>Aspects of the determination of mineralisation that are Material to the Public Report. | Reverse Circulation (RC) drill samples were taken from the rotary splitter mounted on the rig cyclone.<br>Diamond drill samples were half core cut and sampled on 1m intervals.<br>All samples from 2018 drilling have been submitted to Genalysis/Intertek Laboratories for industry standard preparation (whole sample crushed to >85% <75um) and analysis by both ICP for base metals and Fire Assay for precious metals.<br>Portable XRF results reported here are taken from whole core analyses at 0.25 and 0.5m intervals. |
| Drilling techniques | Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). | Reverse Circulation (RC) drilling of pre-collars with NQ sized diamond drill tails.<br>Most intervals has been oriented, except where broken ground in encountered. |
| Drill sample recovery | Method of recording and assessing core and chip sample recoveries and results assessed.<br>Measures taken to maximise sample recovery and ensure representative nature of the samples.<br>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. | Average of >90% recovery in all intervals.<br>No issues of fines loss were observed. No issues relating to preferential loss/gain of grade material have been noted. |
| Logging | Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.<br>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.<br>The total length and percentage of the relevant intersections logged. | RC chips and core was geologically logged for lithology, mineralogy, colour, weathering, alteration, structure and mineralisation.<br>All holes were logged in full. |
| Sub-sampling techniques and sample preparation | If core, whether cut or sawn and whether quarter, half or all core taken.<br>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.<br>For all sample types, the nature, quality and appropriateness of the sample preparation technique.<br>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.<br>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.<br>Whether sample sizes are appropriate to the grain size of the material being sampled. | Portable XRF analyses reported here are taken with CRM Standard samples and Blanks samples inserted into the sequence at 1 in 25 and 1 in 50 samples respectively.<br>Results reported here are averages of multiple pXRF analyses to give a reasonable representative result. |
| Quality of assay data and laboratory tests | The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.<br>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.<br>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether | Portable XRF results reported here are taken with an Olympus Delta Pro unit (2014) with a 60 second read time (30 seconds beam 1 and 30 seconds beam 2) in GEOCHEM mode.<br>Three certified base metal standards and a certified blank sample were analysed during pXRF sampling, at a rate of 1 in 25 samples.<br>Standards were GBM399-7, GBM399-2, and GBM908-10 – low, medium and high grade for base metal respectively. Blank GLG312-2 was |

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| | acceptable levels of accuracy (ie lack of bias) and precision have been established. | used. pXRF results for the standards and the blank were acceptable, and no calibration factors have been applied.<br>Given the above QA/QC work the pXRF data is considered to be a total result for the base metals reported (Cu, Pb, Zn), and to have acceptable levels of accuracy and precision.<br>Results from drilling/sampling earlier this year indicate the pXRF analyses underestimate the high grade (>5%) base metal intervals by around 50%, and so laboratory ICP results would be expected to exceed these reported pXRF values. |
| Verification of sampling and assaying | The verification of significant intersections by either independent or alternative company personnel.<br>The use of twinned holes.<br>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.<br>Discuss any adjustment to assay data. | Sampling was conducted by the field geologist and verified by the Exploration Manager on site prior to cutting/dispatch.<br>All data was entered into standardized spreadsheets on field laptops and uploaded into the company database.<br>No adjustments have been made to the primary assay data |
| Locations of data points | Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.<br>Specification of the grid system used.<br>Quality and adequacy of topographic control. | All drilling collars were located up using a standard GPS unit with accuracy of ca. 5m for Easting, Northing and RL<br>All coordinate data for the Mount Hardy project are in MGA_GDA94 Zone 52. |
| Data spacing and distribution | Data spacing for reporting of Exploration Results.<br>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.<br>Whether sample compositing has been applied. | At this early stage of exploration hole spacings vary as dictated by target size and position.<br>No compositing has been applied to the exploration results.<br>Sampling was of an exploratory and reconnaissance nature and spacings are insufficient to establish continuity or define Resources. |
| Orientation of data in relation to geological structure | Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.<br>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. | Drilling intersections at Mount Hardy vary in the relationship to the mineralisation orientation. All holes were designed to give the best possible (as close to perpendicular) intersection, however most drilled prospects only have a few holes and so the orientation is not well defined. In practise the intersections are at worst oriented at 45 degrees to the plane of the mineralisation (when it is known). |
| Sample security | The measures taken to ensure sample security. | All core and samples were under company supervision at all times prior to delivering to Genalysis/Intertek laboratories in Alice Springs |
| Audits or reviews | The results of any audits or reviews of sampling techniques and data. | No sampling audits have been conducted at Mount Hardy |

## Section 2 Reporting of Exploration Results

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| Mineral tenement and land tenure status | Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.<br>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. | The Mount Hardy prospects are located on tenements EL 27892, EL 28694 and EL 29219 held by Todd River Metals Pty Ltd, which is wholly-owned by Todd River Resources Limited.<br>All tenements are in good standing with no know impediments |
| Exploration done by other parties | Acknowledgment and appraisal of exploration by other parties. | Between 2012 and 2016 significant work was conducted by TNG Limited, and has been reported to the ASX in several ASX Releases.. In 2017 through September 2018 Todd River |

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| | | completed two drilling programs and has reported results in several ASX releases (such as 26 April and 7 November 2018). |
| Geology | Deposit type, geological setting and style of mineralisation. | Exploration at Mount Hardy conducted by Todd River Resources has aimed to identify structurally controlled base metal mineralisation, similar to that already outlined at Mount Hardy and elsewhere in the Arunta at Jervois or Barrow Creek. Both areas are underlain by the Paleoproterozoic Lander Rock Beds schists and gneisses and have been intruded by Mesoproterozoic granites and are cut be major shear zones. |
| Drill hole Information | A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:<br>o Easting and northing of the drill collar<br>o Elevation of RL (Reduced Level – elevation above sea level in metres) of the drill collar<br>o Dip and azimuth of the hole<br>o Down hole length and interception depth<br>o Hole length | Hole location details are shown in Table 1.<br>Interval and grade values reported here have been determined from averages of multiple portable XRF results and so approach a representative result.<br>Laboratory analyses will be reported as available. |
| Data aggregation methods | In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.<br>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.<br>The assumptions used for any reporting of metal equivalent values should be clearly stated. | All results are length weighted averages.<br>No maximum or minimum cuts applied. |
| Relationship between mineralisation widths and intercept lengths | These relationships are particularly important in the reporting of Exploration Results.<br>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.<br>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). | Orientation not well defined. Expected true thickness ca. 60-80% or drill/intercept interval. |
| Diagrams | Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. | See Figures 3 and 4. |
| Balanced reporting | Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. | Portable XRF results are reported here.<br>All data used is included in Appendix 1. |
| Other substantive exploration data | Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. | No substantial new information is available other than that reported above. |
| Further work | The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).<br>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | Samples from this drilling will be submitted for analysis and will be reported when available.<br>Drilling will continue at EM1 at Mount Hardy until mid-December 2018, with sample submission and analytical results reported as available. |