19th May 2021

# HIGH-GRADE GOLD ZONE CONTINUES TO EXTEND AT RED MOUNTAIN

- **New assay results define plunging high-grade gold shoot at the Red Mountain gold project in Queensland.**
- **The north-east plunging shoot remains open and will be the subject of follow-up drill testing. New assay results include:**
  - **21m @ 1.9 g/t Au incl. 2.0m @ 10.8 g/t Au, 1.3m @ 5.0 g/t Au (a zone of 9m @ 3.2 g/t Au) and 3m @ 2.4 g/t Au and with further gold mineralised intervals incl. 1m @ 12.5 g/t Au and 11m @ 0.5 g/t Au (ZRMDD042)**
  - **The gold mineralisation has been intersected 80m below the previous intersection of 5m @ 10.4 g/t Au, defining a shoot some 250m long and open.**
- **Diamond drilling at Red Mountain has clear objective of resource definition. The drill rig currently working at the Company's Develin Creek copper-zinc project is planned to return to Red Mountain at the end of this month to commence follow-up testing extensions to the high-grade gold zone.**
- **Mineralisation at Red Mountain is considered by Zenith to be analogous to known gold deposits in Queensland. Evidence includes a zoned system with geochemistry like that documented at third party owned deposits such as Mt Wright which is located 65km east of Charters Towers and the nearby Mount Rawdon Gold Mine (see Figure 1).**

**Commenting on the results announced Chairman Peter Bird said:** *"Another solid high-grade drill intersection at Red Mountain on the north western flank in hole 042 firms up the location of the high-grade gold shoot which is now shown to be plunging to the northeast. The Company has to date only tested the northeast quadrant representing a fraction of the prospective "ring structure" (refer to figure 2). Resource definition will add significant value to the business. Red Mountain is only one of three exciting core projects being advanced by the Company, whilst a fourth – the Earaheedy zinc-lead joint venture provides exciting additional value potential."*

## Significance of these new assay results

Ongoing exploration activity at the 100% owned Red Mountain gold project located in Queensland (Figure 1) is continuing to provide highly encouraging high-grade gold drill assay results. Drilling to date has outlined a sub-vertical, shallow north east plunging, high-grade gold zone to a vertical depth of 200m, with the zone remaining open down plunge and the subject of ongoing drill testing (see Figures 2 - 6).

New gold assay results from 2 diamond core holes have now been received for drill holes ZRMRD042 and 044. The new intersection in hole ZRMRD042 of 21m @ 1.9 g/t Au, including an interval of 9m @ 3.2 g/t Au extends high-grade gold mineralisation 80m below a previous intersection in hole ZRMRC023 of 5m @ 10.4 g/t Au (Refer to Table 1 for a complete listing of both new and previous

ZENITH MINERALS

### Corporate Details

**Zenith Minerals Limited (ASX:ZNC)**
ABN: 96 119 397 938

| | |
|---|---|
| Issued Shares | 294.4M |
| Unlisted options | 16.55M |
| Mkt. Cap. ($0.275) | A$81M |
| Cash (31-Mar-21) | A$3.1M |
| Debt | Nil |

### Directors

| | |
|---|---|
| Peter Bird | Exec Chair |
| Michael Clifford | Director-CEO |
| Stan Macdonald | Non-Exec Director |
| Julian Goldsworthy | Non-Exec Director |
| Graham Riley | Non-Exec Director |
| Nicholas Ong | CFO & Co Sec |

### Major Shareholders

| | |
|---|---|
| Directors | ~7% |
| HSBC Custody. Nom. | 10.4% |
| BNP Paribas. Nom. | 5.0% |
| Granich | 4.6% |
| Citicorp Nom | 4.3% |

### Our Vision

Zenith has a vision to build a gold and base metals business with a team of proven project finders.

Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities using partner funds.

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Zenith gold results). The high-grade gold zone remains open down plunge to the north east and will be the subject of follow-up drill testing (Figures 4 & 6).

Broad interval of gold with associated strong silver mineralisation intersected in drill hole ZRMDD044, including 23m @ 0.4 g/t Au and 30.6 g/t Ag with individual silver assays peaking at 76.5 g/t Ag (Figure 5).

In addition, new very high-grade silver results were received for hole ZRMDD041 with 0.3m @ 4.0 g/t Au and 270 g/t Ag. Gold results were previously reported in ASX Release 13-May-21 including 7.7m @ 4.4 g/t Au with new silver results over that interval returning 11.8 g/t Ag.

These new results are in addition to previously announced near surface high-grade drilling intersections (ASX Releases 3-Aug-20 & 13-Oct-20, 9-Nov-20, 21-Jan-21), including:

- **13m @ 8.0 g/t Au from surface, incl. 6m @ 16.7 g/t Au**
- **15m @ 3.5 g/t Au, incl. 2m @ 22.4 g/t Au**
- **12m @ 4.9 g/t Au, incl. 6m @ 9.4 g/t Au**
- **5m @ 10.4 g/t Au, incl 1m @ 49.9 g/t Au**
- **5m @ 3.5 g/t Au & 54.3 g/t Ag, incl. 2m @ 8.0 g/t Au & 109.4 g/t Ag**
- **10m @ 2.7 g/t Au from surface, incl. 4m @ 4.9 g/t Au**

Strong silver (Ag) grades associated with gold mineralisation, include: 15m @ 0.4 g/t Au with 20.4 g/t Ag and 4m @ 0.5 g/t Au with 82.0 g/t Ag, 5m @ 3.5 g/t Au with 54.3 g/t Ag and a new result of 5m @ 0.3 g/t Au with 30.6 g/t Ag.

High-grade gold mineralisation is associated with a stockwork of base metal (sphalerite-galena) stringer veins in altered diorite, granodiorite and granite on the margin of a rhyolite breccia (Figure 4).

Associated exploration activities aimed at finessing more drill targets are taking shape with results recently received from a detailed drone based aeromagnetic survey and a 3D IP electrical geophysical survey. Detailed interpretation of these large datasets is in progress.


***Figure 1: Red Mountain Gold Project Location Map***

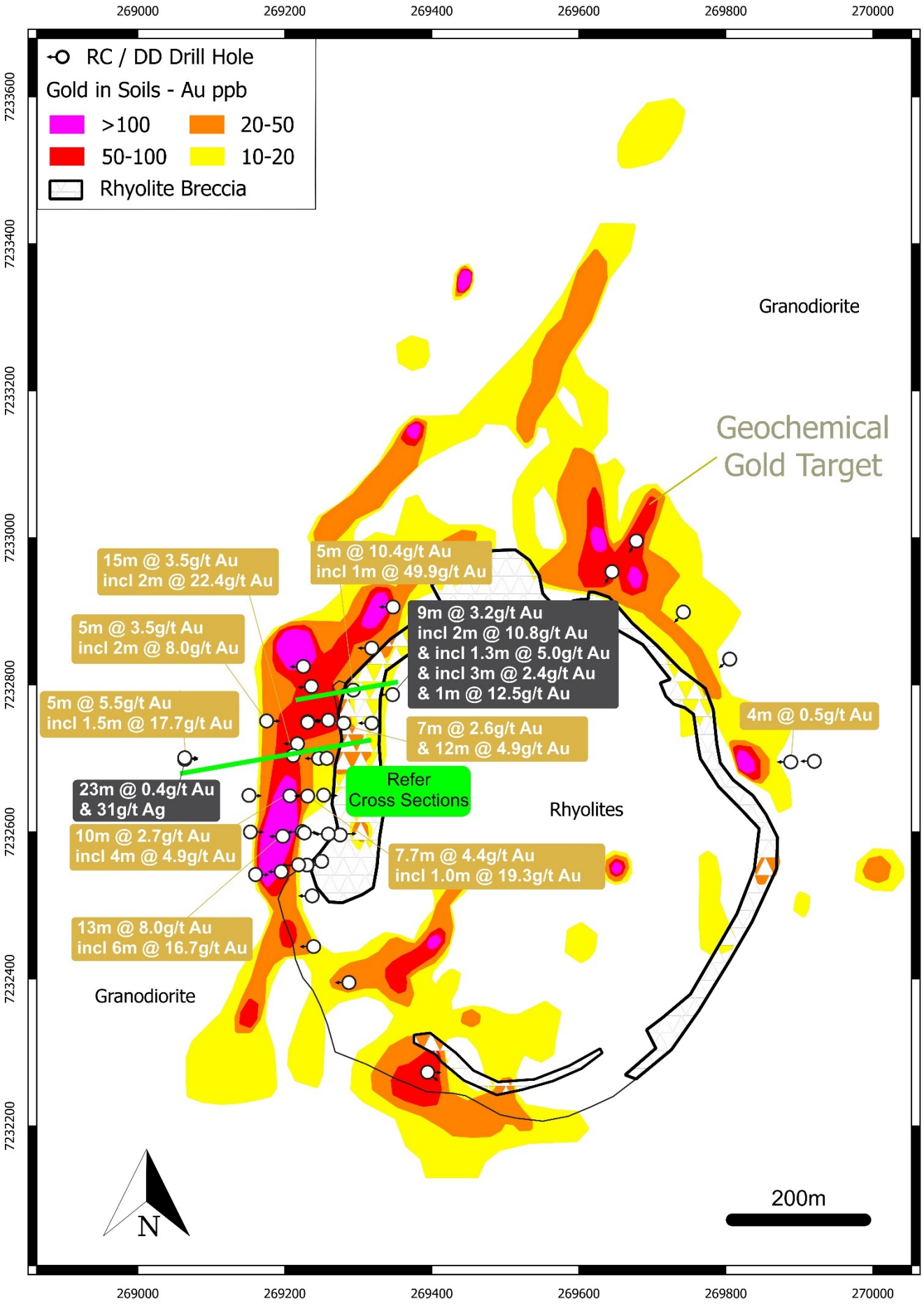



***Figure 2: Red Mountain Breccia Pipe Target Showing Gold Soil Anomalies and Drill Collar Locations with Planned DD Holes (new results in black text box, previous results in gold text box)***

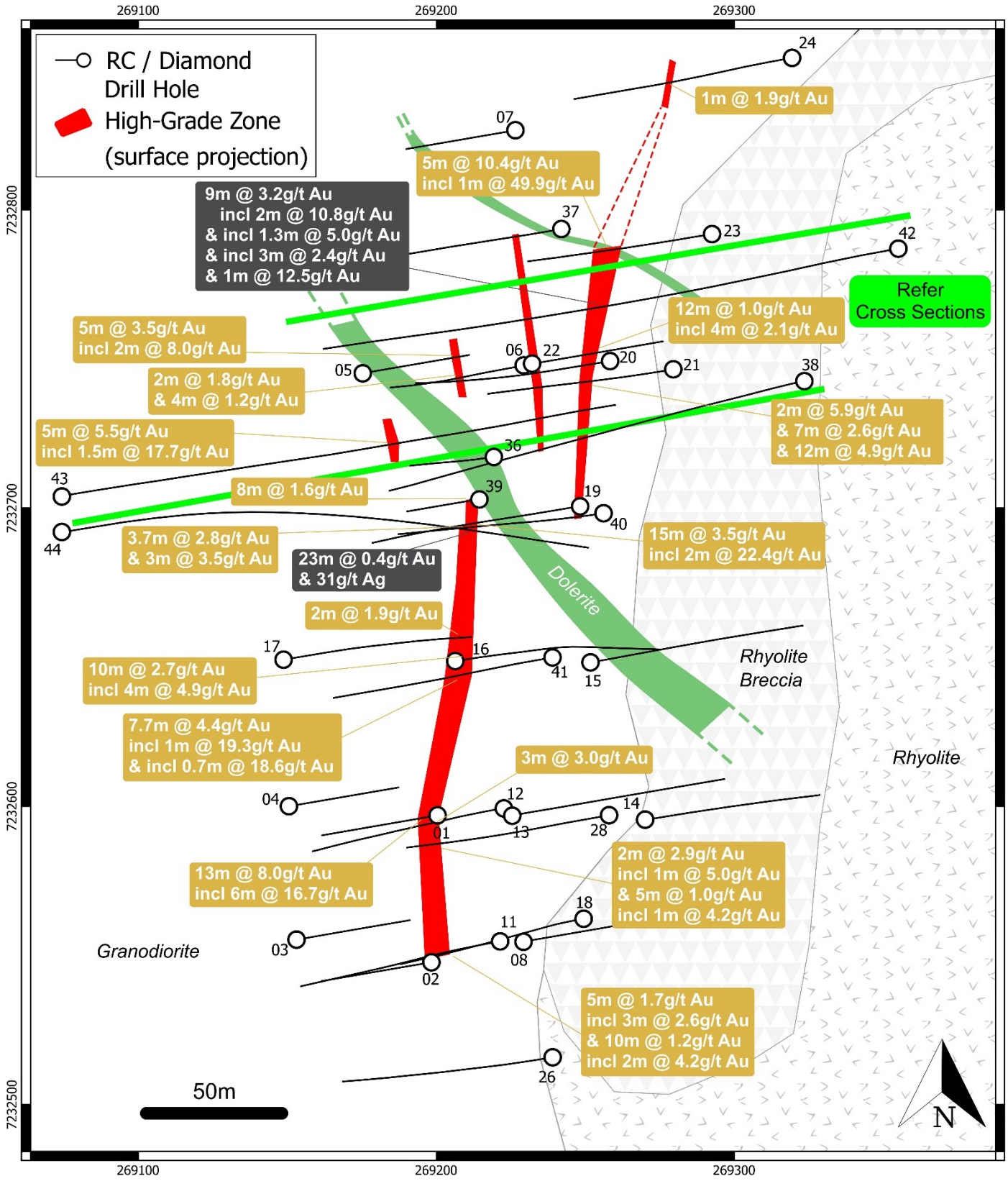



***Figure 3: Red Mountain Plan Showing High-Grade Gold Zone (new results in black text box, previous results in gold text box), note hole azimuths adjusted from previous maps to reflect new adjustments to surveys***

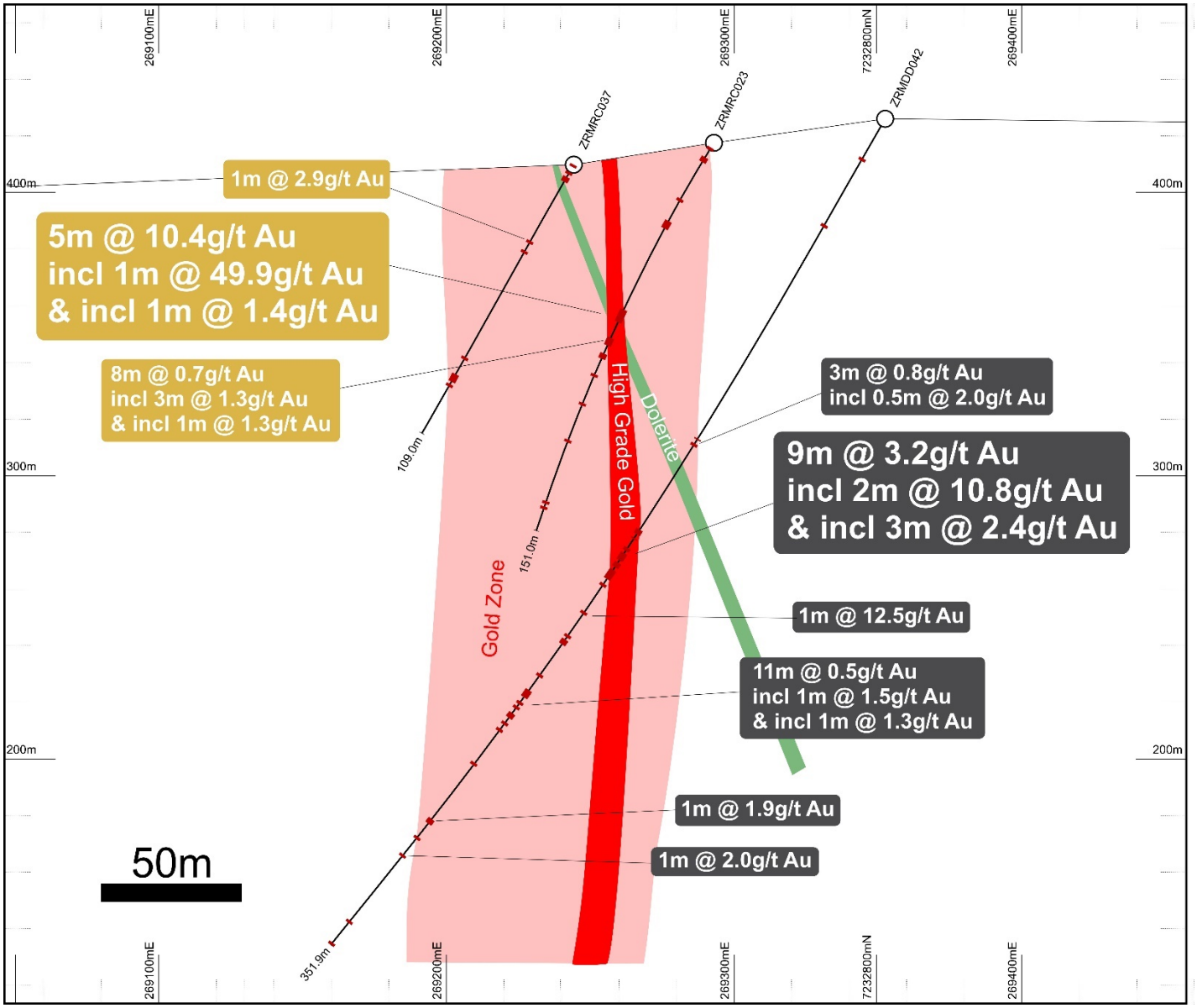



***Figure 4: Cross Section - Red Mountain Western Zone High-Grade Gold Zone with Diamond Hole ZRMDD042***

**Red Mountain - Drill Program Rationale**

Results from drilling to date at the Red Mountain gold project outline a zone of high-grade near surface gold mineralisation in a steep dipping zone hosted by altered granitoid rocks, on the western margin of a sub-vertical felsic volcanic breccia pipe. The project is in south east Queensland, lying about halfway between two gold mines Cracow (ASX:AUR) and Mount Rawdon (ASX:EVN) (Figure 1).

The current drill program has focused on the western part of the prospect area (Figures 2 - 5). This area is part of a larger total target zone extending some 2.2 km around the rim of the breccia pipe (Figure 3).

Mineralisation at Red Mountain is considered by Zenith to be analogous to known gold deposits in Queensland. Evidence includes a zoned system with geochemistry like that documented at third party owned Queensland gold deposits such as Mt Wright which is located 65km east of Charters Towers and the nearby Mount Rawdon Gold Mine (Figure 1).

Gold mineralisation at Mount Wright occurs within both brecciated rhyolite and granite close to the margin of a rhyolite breccia pipe in a geological setting very similar to that at Zenith's Red Mountain gold project. The form and shape of the Mt Wright ore body is that of a sub-vertical pencil like body with mineralisation having a strike length of only 200m but vertical extent of over 1.2km (Figure 6). The Mt Wright gold deposit was exploited by Resolute Mining Limited as an underground operation with combined production and reserves exceeding 0.9Moz Au within total resources of ~1.1Moz Au (Resolute Mining 2014 Annual Report & Information Poster June 2014).

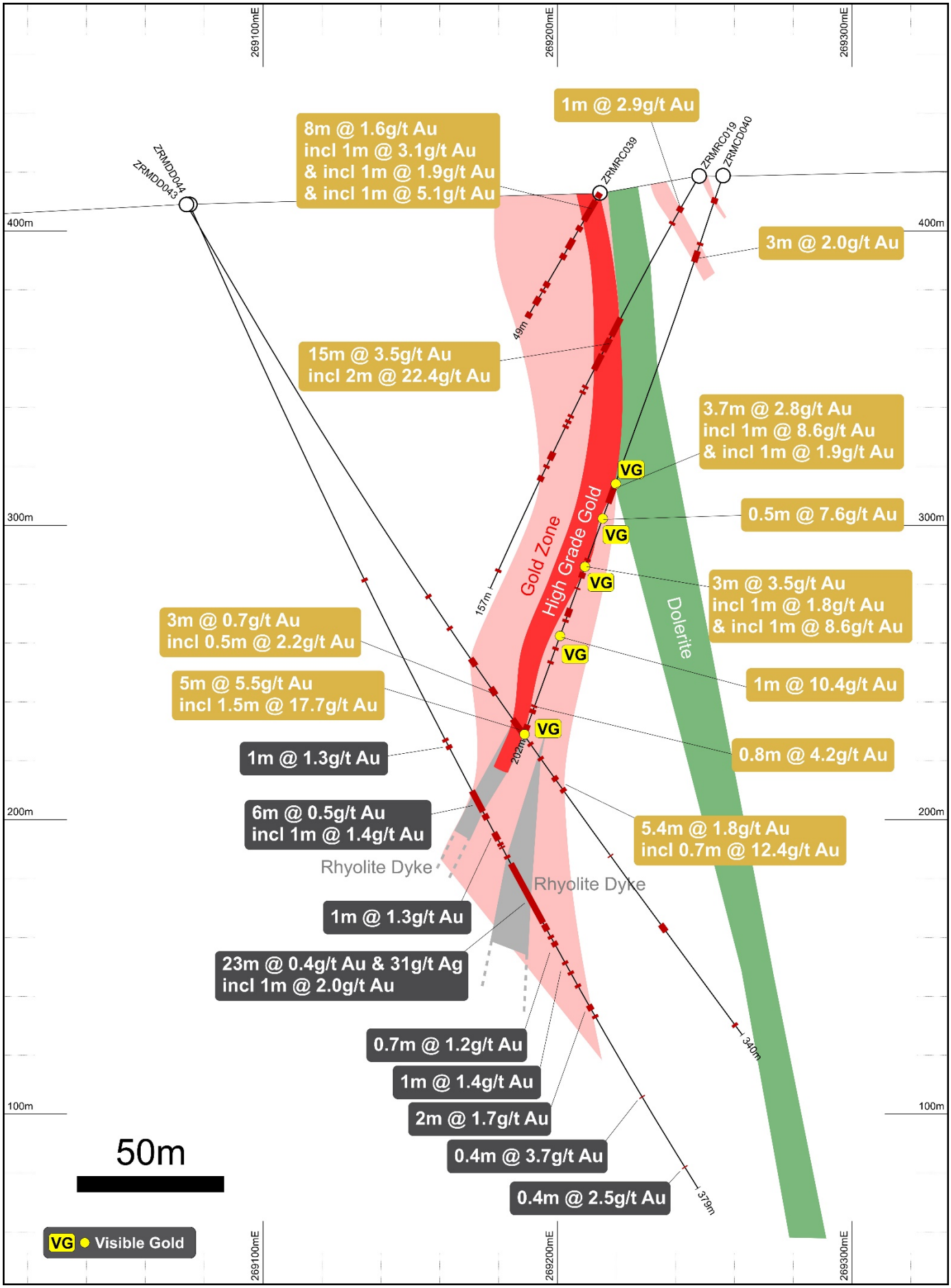
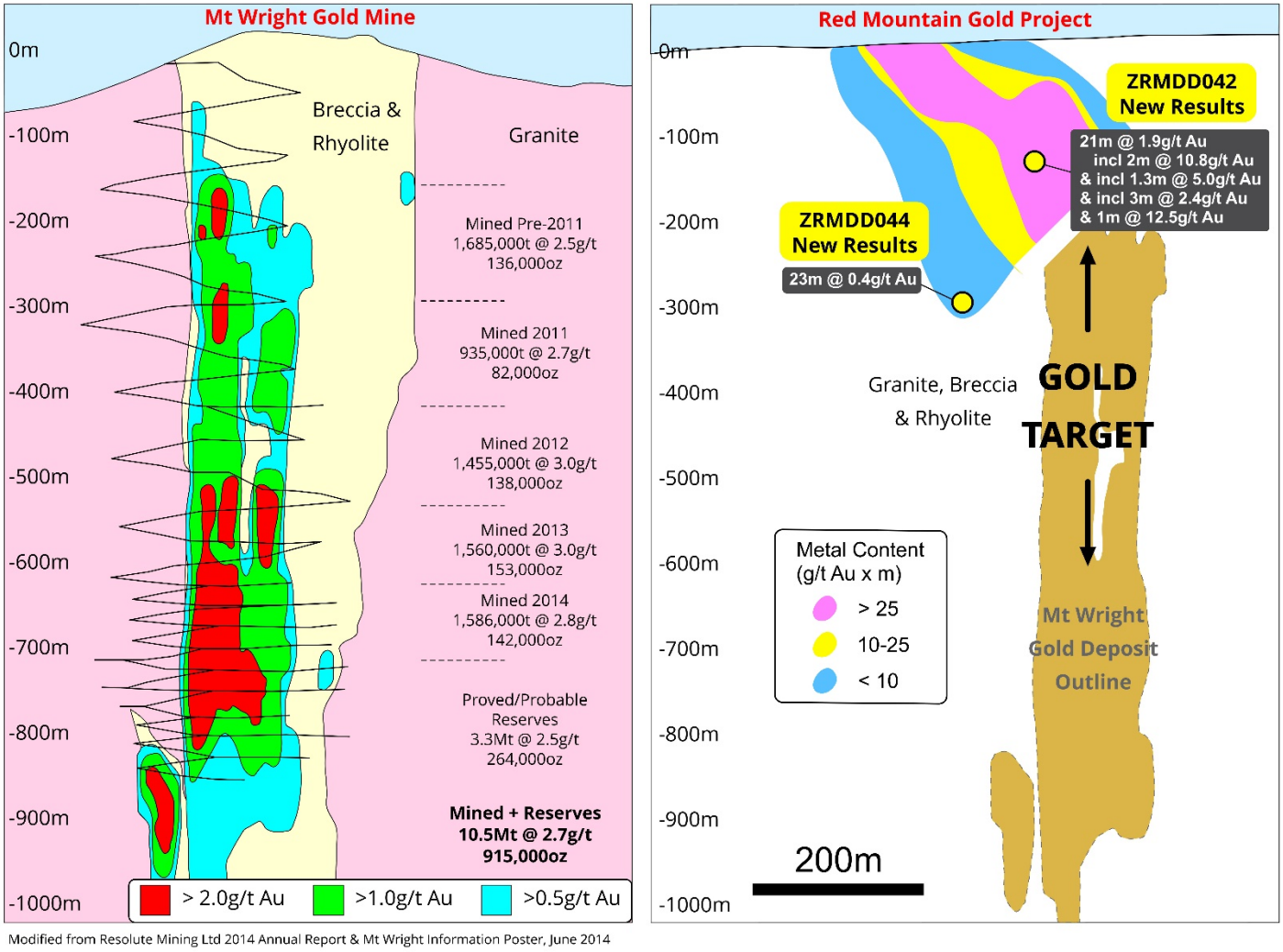



***Figure 5: Cross Section - Red Mountain Western Zone High-Grade Gold Zone with Diamond Holes ZRMDD043 & 44***




Modified from Resolute Mining Ltd 2014 Annual Report & Mt Wright Information Poster, June 2014

***Figure 6: Comparative Cross Sections – Mt Wright Gold Mine (not an asset of the Company) and Red Mountain Gold Project Main Zone Composite Long Section with Location of ZRMDD042 Diamond Drill Results***

**Table 1: Significant Gold Intersections from Red Mountain**

| Hole | 1m Samples | | | | | Comments |
|---|---|---|---|---|---|---|
| | From (m) | To (m) | Interval (m) | Au Grade (g/t) | Ag Grade (g/t) | |
| **ZRMRC001** | 0 | 13 | **13** | **8.0** | **3.5** | |
| incl | 0 | 6 | **6** | **16.7** | **5.3** | |
| **ZRMRC002** | 0 | 2 | 2 | 0.8 | 0.5 | |
| incl | 1 | 2 | **1** | **1.2** | 0.5 | |
| | | | | NSR | | |
| **ZRMRC003** | 67 | 68 | 1 | 0.8 | 10.2 | |
| **ZRMRC004** | | | | NSR | | |
| **ZRMRC005** | 64 | 69 | **5** | **3.5** | **54.3** | |
| incl | 64 | 66 | **2** | **8.0** | **109.4** | |
| **ZRMRC006** | 8 | 14 | **6** | **1.0** | **4.6** | |
| | 12 | 14 | **2** | **2.6** | **7.8** | |
| | 26 | 27 | **1** | **3.1** | **13.6** | |
| | 42 | 54 | **12** | **1.0** | **9.8** | |
| incl | 42 | 44 | **2** | **1.2** | **17.7** | |
| and incl | 47 | 48 | 1 | 0.6 | 13.5 | |
| and incl | 50 | 54 | **4** | **2.1** | **14.2** | |
| incl | 50 | 51 | **1** | **6.0** | **20.2** | |
| and incl | 53 | 54 | **1** | **2.0** | **26.5** | |
| **ZRMRC007** | 36 | 37 | 1 | 0.8 | **45.0** | |
| **ZRMRC008** | 64 | 65 | 1 | 0.4 | **65.1** | |
| **ZRMRC009** | | | | NSR | | **Previous Results** |
| **ZRMRC010** | 43 | 44 | 1 | 0.0 | 51.6 | |
| **ZRMRC011** | 25 | 30 | **5** | **1.7** | **3.5** | |
| incl | 25 | 28 | **3** | **2.6** | **5.5** | |
| | 37 | 47 | **10** | **1.2** | **1.7** | |
| incl | 37 | 41 | **4** | **2.4** | **3.4** | |
| incl | 37 | 39 | **2** | **4.2** | **5.4** | |
| **ZRMRC012** | 15 | 16 | 1 | 0.4 | 0.5 | |
| | 29 | 33 | 4 | 0.8 | 4.8 | |
| incl | 32 | 33 | **1** | **1.5** | **4.3** | |
| | 38 | 44 | **6** | **1.7** | **13.2** | |
| incl | 40 | 43 | **3** | **3.0** | **15.1** | |
| | 77 | 80 | 3 | 0.5 | 1.0 | |
| **ZRMRC013** | | | | NSR | | |
| **ZRMRC014** | | | | NSR | | |
| **ZRMRC015** | | | | NSR | | |
| **ZRMRC016** | 0 | 10 | **10** | **2.7** | **3.4** | |
| incl | 0 | 4 | **4** | **4.9** | **3.4** | |
| incl | 5 | 6 | **1** | **1.4** | **3.3** | |
| incl | 7 | 9 | **2** | **2.4** | **5.2** | |
| **ZRMRC017** | **77** | **78** | **1** | **1.0** | **21.8** | |
| | 86 | 87 | 1 | 0.7 | 5.3 | **Previous Results** |
| | 100 | 109 | 9 | 0.3 | 7.9 | |

| Hole | 1m Samples | | | | | Comments |
|---|---|---|---|---|---|---|
| | From (m) | To (m) | Interval (m) | Au Grade (g/t) | Ag Grade (g/t) | |
| incl | **100** | **101** | **1** | **1.0** | **0.6** | |
| | **116** | **118** | **2** | **1.9** | **11.0** | |
| **ZRMRC018** | 9 | 12 | 3 | 0.5 | 6.1 | |
| | 60 | 61 | 1 | 0.7 | 0.9 | |
| | 76 | 77 | 1 | 0.5 | **33.8** | |
| | 85 | 86 | 1 | 0.8 | 0.5 | |
| **ZRMRC019** | **12** | **13** | **1** | **2.9** | 3.9 | |
| | 18 | 19 | 1 | 0.5 | 7.1 | |
| | **57** | **72** | **15** | **3.5** | 8.8 | |
| incl | **70** | **72** | **2** | **22.4** | **14.2** | |
| | 96 | 97 | 1 | 0.6 | 0.8 | |
| | | | | | **9.2** | |
| **ZRMRC020** | 2 | 3 | 1 | 0.5 | 3.3 | |
| | **39** | **40** | **1** | **1.3** | 1.5 | |
| | **46** | **47** | **1** | **3.2** | 1.7 | |
| | 56 | 71 | 15 | 0.4 | **20.4** | |
| incl | **62** | **63** | **1** | **2.7** | 3.4 | |
| | 86 | 89 | 3 | 0.8 | | |
| incl | **86** | **87** | **1** | **1.2** | 2.4 | |
| | **99** | **100** | **1** | **2.0** | 1.0 | |
| | 114 | 122 | 8 | 0.6 | | |
| incl | 114 | 115 | **1** | **1.0** | **6.3** | |
| and incl | 117 | 118 | **1** | **3.1** | | |
| and incl | 121 | 122 | 1 | 0.5 | | |
| **ZRMRC021** | 40 | 41 | 1 | 0.4 | 4.6 | |
| | **49** | **51** | **2** | **5.9** | **16.5** | |
| | 61 | 69 | **8** | **2.3** | | |
| incl | **61** | **68** | **7** | **2.6** | **11.0** | |
| | 74 | 80 | 6 | 0.5 | 1.1 | |
| incl | **78** | **79** | **1** | **1.2** | 1.1 | |
| | 87 | 89 | 2 | 0.9 | 3.4 | |
| incl | **88** | **89** | **1** | **1.2** | 8.7 | |
| | 102 | 114 | **12** | **4.9** | | |
| incl | 103 | 109 | **6** | **9.4** | 4.4 | |
| | **140** | **141** | **1** | **1.6** | 3.5 | |
| | 146 | 148 | 2 | 0.8 | 2.4 | |
| incl | 147 | 148 | **1** | **1.2** | 2.4 | |
| **ZRMRC022** | 1 | 2 | 1 | 0.6 | 5.0 | |
| | 7 | 9 | 2 | 0.8 | 3.4 | |
| incl | **8** | **9** | **1** | **1.1** | 3.4 | |
| | 20 | 26 | 6 | 0.9 | 7.3 | |
| incl | **20** | **22** | **2** | **1.8** | 7.2 | |
| | **31** | **32** | **1** | **1.6** | 1.4 | |
| | 42 | 52 | 10 | 0.7 | 9.4 | |

| Hole | 1m Samples | | | | | Comments |
|---|---|---|---|---|---|---|
| | From (m) | To (m) | Interval (m) | Au Grade (g/t) | Ag Grade (g/t) | |
| incl | 42 | 43 | **1** | **1.2** | 3.7 | |
| | 48 | 52 | 4 | 1.2 | **14.6** | |
| incl | 48 | 49 | **1** | **1.0** | **26.1** | |
| and incl | 50 | 52 | **2** | **1.5** | 9.4 | |
| | 61 | 62 | **1** | **1.9** | 7.4 | |
| | 69 | 70 | 1 | 0.5 | 1.8 | |
| **ZRMRC023** | 23 | 24 | 1 | 0.7 | 2.5 | |
| | 32 | 33 | 1 | 0.6 | 2.4 | |
| | **67** | **72** | **5** | **10.4** | 3.5 | |
| | **67** | **68** | **1** | **49.9** | 3.5 | |
| | **71** | **72** | **1** | **1.4** | 0.5 | |
| | 78 | 86 | 8 | 0.7 | 1.2 | |
| incl | **78** | **81** | **3** | **1.3** | | |
| incl | **85** | **86** | **1** | **1.3** | 0.6 | |
| | 103 | 104 | 1 | 0.7 | 1.2 | |
| **ZRMRC024** | 14 | 15 | 1 | 0.6 | 1.7 | |
| | **84** | **85** | **1** | **1.9** | **13.2** | |
| **ZRMRC025** | | | | NSR | | |
| **ZRMRC026** | 2 | 3 | 1 | 0.5 | | |
| | 23 | 28 | 5 | 0.2 | | |
| | 53 | 54 | 1 | 0.9 | 0.4 | |
| **ZRMRC027** | | | | NSR | | |
| **ZRMRC028** | 84 | 86 | **2** | **2.9** | 1.8 | |
| incl | 84 | 85 | **1** | **5.0** | 3.1 | |
| | 99 | 100 | **1** | **0.5** | 0.7 | |
| | 105 | 110 | **5** | **1.0** | 3.0 | |
| incl | 109 | 110 | **1** | **4.2** | **12.1** | |
| | 122 | 123 | **1** | **0.8** | 1.4 | |
| **ZRMRC029** | 5 | 7 | 2 | 0.6 | 0.4 | |
| **ZRMRC030** | 24 | 25 | 1 | 0.7 | 5.0 | |
| **ZRMRC031** | 8 | 9 | 1 | 0.9 | 0.6 | |
| **ZRMRC032** | | | | NSR | | |
| **ZRMRC033** | | | | NSR | | |
| **ZRMRC034** | 77 | 78 | 1 | 0.8 | | |
| | 95 | 96 | 1 | 1.3 | | |
| **ZRMRC035** | 96 | 100 | 4 | 0.1 | 10.6 | |
| **ZRMRC036** | 57 | 58 | 1 | 0.9 | 6.7 | |
| | 86 | 87 | 1 | 0.8 | 9.7 | |
| **ZRMRC037** | 5 | 6 | 1 | 0.4 | 2.7 | |
| | **31** | **32** | **1** | **2.9** | **53.7** | |
| | 86 | 87 | 1 | 0.9 | 1.0 | |
| **ZRMCD038** | 95.7 | 96 | 0.3 | 0.6 | 0.6 | |
| | **139.4** | **139.7** | **0.3** | **1.9** | **3.2** | |

| Hole | 1m Samples | | | | | Comments |
|---|---|---|---|---|---|---|
| | From (m) | To (m) | Interval (m) | Au Grade (g/t) | Ag Grade (g/t) | |
| | 158 | 159 | 1 | 0.7 | 4.4 | |
| | **172.5** | **173** | **0.5** | **34.2** | **28.4** | |
| | 222 | 223 | 1 | 0.9 | 26.1 | |
| | 239 | 240 | 1 | 0.5 | 5.1 | |
| **ZRMRC039** | **3** | **11** | **8** | **1.6** | **9.6** | |
| incl | **3** | **4** | **1** | **3.1** | **8.4** | |
| and incl | **5** | **6** | **1** | **1.9** | **8.6** | |
| and incl | **7** | **8** | **1** | **5.1** | **19.2** | |
| **ZRMCD040** | 8 | 9 | 1 | 0.8 | 1.4 | |
| | **27** | **30** | **3** | **2.0** | **6.8** | |
| | **111.3** | **115** | **3.7** | **2.8** | **7.1** | |
| incl | **111.3** | **112.3** | **1** | **8.6*** | **11.8** | |
| and incl | **114** | **115** | **1** | **1.9** | **7.1** | |
| | **123.2** | **123.7** | **0.5** | **7.6*** | **13.3** | |
| | **138** | **141** | **3** | **3.5** | **7.1** | |
| incl | **138** | **139** | **1** | **1.8** | **13.2** | |
| and incl | **140** | **141** | **1** | **8.6*** | **7.8** | |
| | 156 | 161 | 5 | 0.3 | 30.6 | |
| | **165.9** | **166.9** | **1** | **10.4*** | **13.7** | |
| | **191** | **191.8** | **0.8** | **4.2** | **9.4** | |
| | 198 | 201.7 (eoh) | 3.7 | 0.3* | 3.7 | |
| **ZRMCD041** | **23** | **24** | **1** | **7.7** | **8.0** | **New Ag Results** |
| | **52** | **57** | **5** | **1.8** | **8.7** | |
| incl | **52** | **53** | **1** | **2.3** | **24.9** | |
| and incl | **56** | **56.6** | **0.6** | **10.7** | **9.4** | |
| | **63** | **70.7** | **7.7** | **4.4** | **11.8** | |
| incl | **63** | **64** | **1** | **19.3** | **25.6** | |
| and incl | **70** | **70.7** | **0.7** | **18.6** | **19.9** | |
| | 81 | 89.5 | 8.5 | 0.4 | 4.2 | |
| incl | **81** | **81.3** | **0.3** | **2.1** | **3.2** | |
| and incl | **84.7** | **85** | **0.3** | **4.0** | **270.0** | |
| and incl | **89** | **89.5** | **0.5** | **1.1** | **4.6** | |
| **ZRMDD043** | 169 | 170 | 1 | 0.6 | 2.1 | |
| | **183** | **184** | **1** | **1.2** | **1.5** | |
| | 194 | 197 | 3 | 0.7 | 8.0 | |
| incl | **194.5** | **195** | **0.5** | **2.2** | **7.9** | |
| | **209** | **214** | **5** | **5.5** | **18.2** | |
| incl | **209** | **210.5** | **1.5** | **17.7** | **45.1** | |
| | **232** | **237.4** | **5.4** | **1.8** | **3.1** | |
| incl | **232** | **232.7** | **0.7** | **12.4** | **8.8** | |
| | 294 | 295 | 1 | 0.4 | 0.1 | |
| **ZRMDD044** | **205.5** | **206** | **0.5** | **1.3** | **8.8** | **New Au & Ag Results** |
| | 225 | 231 | 6 | 0.5 | 27.8 | |

| Hole | 1m Samples | | | | | Comments |
|---|---|---|---|---|---|---|
| | From (m) | To (m) | Interval (m) | Au Grade (g/t) | Ag Grade (g/t) | |
| incl | **227** | **228** | **1** | **1.4** | **51.2** | |
| | **239** | **240** | **1** | **1.0** | **8.7** | |
| | 248 | 271 | **23** | 0.4 | **30.6** | |
| incl | **269** | **270** | **1** | **2.0** | **76.5** | |
| | **281.3** | **282** | **0.7** | **1.2** | **7.3** | |
| | **289** | **290** | **1** | **1.4** | **7.1** | |
| | **306** | **308** | **2** | **1.7** | **3.2** | |
| | **342** | **342.4** | **0.4** | **3.7** | **5.3** | |
| | **370** | **370.4** | **0.4** | **2.5** | **1.4** | |
| **ZRMDD042** | 131 | 134 | 3 | 0.5 | Ag Results Awaited | **169 to 178m 9m @ 3.2g/t Au, incl up to 3m dilution** **New Au Results** |
| incl | **131** | **131.5** | **0.5** | **2.0** | | |
| | **169** | **190** | **21** | **1.9** | | |
| incl | **169** | **171** | **2** | **10.8** | | |
| incl | **169** | **169.6** | **0.6** | **33.0** | | |
| and incl | **170** | **171** | **1** | **1.5** | | |
| and incl | **172.6** | **173** | **0.4** | **2.3** | | |
| and incl | **176.7** | **178** | **1.3** | **5.0** | | |
| and incl | **180** | **181** | **1** | **1.0** | | |
| and incl | **187** | **190** | **3** | **2.4** | | |
| | **204** | **205** | **1** | **12.5** | | |
| | 239 | 250 | 11 | 0.5 | | |
| incl | **239** | **240** | **1** | **1.5** | | |
| and incl | **249** | **250** | **1** | **1.3** | | |
| | **295** | **296** | **1** | **1.9** | | |
| | 303 | 304 | 1 | 0.6 | | |
| | **310** | **311** | **1** | **2.0** | | |
| | 351 | 351.9 (eoh) | 0.9 | 0.4 | | |

***Visible gold noted in diamond drill core**

High-grade intersections are length weighted average grades with minimum cut -off grade of 1.0g/t Au and no internal dilution (hole ZRMDD042 9m @ 3.2 g/t Au intercept also reported at 1 g/t Au cut-off with up to 3m of consecutive dilution), whilst lower grade intersections are length weighted average grades with minimum cut-off grade of 0.4g/t Au and maximum internal dilution of 4m. High-grade silver with low gold reported above 30 g/t Ag cut-off grade.

**Table 2: Red Mountain Drill Collars**

| Hole_ID | Hole_Type | Easting | Northing | RL | Depth (m) | Azimuth | Dip |
|---|---|---|---|---|---|---|---|
| ZRMRC001 | RC | 269200 | 7232597 | 412 | 79 | 270 | -60 |
| ZRMRC002 | RC | 269198 | 7232548 | 407 | 75 | 270 | -60 |
| ZRMRC003 | RC | 269153 | 7232555 | 408 | 75 | 90 | -60 |
| ZRMRC004 | RC | 269151 | 7232600 | 411 | 75 | 90 | -60 |
| ZRMRC005 | RC | 269175 | 7232745 | 407 | 73 | 90 | -60 |
| ZRMRC006 | RC | 269229 | 7232748 | 413 | 97 | 90 | -60 |
| ZRMRC007 | RC | 269227 | 7232827 | 406 | 73 | 270 | -60 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ZRMRC008 | RC | 269229 | 7232555 | 408 | 79 | 90 | -60 |
| ZRMRC009 | RC | 269395 | 7232270 | 408 | 64 | 130 | -60 |
| ZRMRC010 | RC | 269394 | 7232267 | 408 | 90 | 90 | -60 |
| ZRMRC011 | RC | 269221 | 7232555 | 407 | 151 | 270 | -60 |
| ZRMRC012 | RC | 269223 | 7232599 | 411 | 145 | 270 | -60 |
| ZRMRC013 | RC | 269226 | 7232597 | 411 | 151 | 90 | -60 |
| ZRMRC014 | RC | 269270 | 7232595 | 415 | 127 | 90 | -60 |
| ZRMRC015 | RC | 269252 | 7232648 | 417 | 151 | 90 | -60 |
| ZRMRC016 | RC | 269207 | 7232649 | 414 | 145 | 90 | -60 |
| ZRMRC017 | RC | 269149 | 7232649 | 412 | 127 | 90 | -60 |
| ZRMRC018 | RC | 269249 | 7232562 | 411 | 140 | 270 | -60 |
| ZRMRC019 | RC | 269248 | 7232701 | 419 | 157 | 270 | -60 |
| ZRMRC020 | RC | 269258 | 7232749 | 417 | 151 | 270 | -60 |
| ZRMRC021 | RC | 269279 | 7232747 | 420 | 151 | 270 | -60 |
| ZRMRC022 | RC | 269232 | 7232748 | 413 | 103 | 270 | -58 |
| ZRMRC023 | RC | 269293 | 7232792 | 418 | 151 | 270 | -58 |
| ZRMRC024 | RC | 269319 | 7232851 | 409 | 157 | 270 | -58 |
| ZRMRC025 | RC | 269349 | 7232906 | 400 | 151 | 270 | -58 |
| ZRMRC026 | RC | 269239 | 7232516 | 404 | 157 | 270 | -58 |
| ZRMRC027 | RC | 269238 | 7232447 | 402 | 157 | 270 | -58 |
| ZRMRC028 | RC | 269258 | 7232597 | 415 | 151 | 270 | -58 |
| ZRMRC029 | RC | 269286 | 7232402 | 403 | 109 | 270 | -58 |
| ZRMRC030 | RC | 269644 | 7232953 | 410 | 151 | 210 | -63 |
| ZRMRC031 | RC | 269679 | 7232996 | 405 | 157 | 210 | -63 |
| ZRMRC032 | RC | 269741 | 7232897 | 413 | 157 | 220 | -60 |
| ZRMRC033 | RC | 269802 | 7232833 | 408 | 151 | 230 | -60 |
| ZRMRC034 | RC | 269888 | 7232694 | 418 | 151 | 270 | -60 |
| ZRMRC035 | RC | 269918 | 7232696 | 414 | 151 | 270 | -60 |
| ZRMRC036 | RC | 269219 | 7232717 | 412 | 103 | 270 | -75 |
| ZRMRC037 | RC | 269242 | 7232794 | 410 | 109 | 270 | -60 |
| ZRMCD038 | RC/DD | 269323 | 7232743 | 426 | 272.2 | 270 | -60 |
| ZRMRC039 | RC | 269214 | 7232703 | 413 | 49 | 270 | -60 |
| ZRMCD040 | RC/DD | 269256 | 7232698 | 419 | 201.7 | 270 | -70 |
| ZRMRC041 | DD | 269239 | 7232650 | 416 | 144.7 | 270 | -60 |
| ZRMCD042 | DD | 269355 | 7232787 | 426 | 351.9 | 270 | -60 |
| ZRMRC043 | DD | 269074 | 7232704 | 409 | 339.6 | 90 | -65 |
| ZRMCD044 | DD | 269075 | 7232692 | 409 | 378.7 | 90 | -66 |

For further information please refer to the Company's website or contact the Company directly.

**Authorised for release by the Zenith Minerals Limited Board of Directors – 19 May 2021**

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**Competent Persons Statement**

*The information in this report that relates to Exploration Results is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford has sufficient experience which is 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 Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**Material ASX Releases Previously Released**

*The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for the Company's Projects on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of this ASX release and that the material assumptions and technical parameters remain unchanged.*

**About Zenith**

Zenith has a vision to build a gold and base metals business with a team of proven project finders. Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities using third party funds.

Zenith is continuing to focus on its core Australian gold and copper projects including:

- **Red Mountain Gold Project** in Queensland (100% owned) where ongoing drilling is following-up the high-grade near surface gold and silver intersected in the maiden & subsequent drill programs (ASX Releases 3-Aug-20 & 13-Oct-20, 9-Nov-20, 21-Jan-21), including:
  - 13m @ 8.0 g/t Au & 3.2 g/t Ag from surface
  - 15m @ 3.5 g/t Au, incl. 2m @ 22.4 g/t Au
  - 5m @ 10.4 g/t Au, and
  - 12m @ 4.9 g/t Au

- **Split Rocks Gold Project** in Western Australia (100% owned), where recent drilling returned, high-grade near surface gold mineralisation at multiple targets (ASX Release 5-Aug-20, 2-Sep-20, 19-Oct-20, 28-Oct-20), including:
  - Dulcie North: 32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au.
  - Dulcie Laterite Pit:
    - 2m @ 14.5 g/t Au, incl. 1m @ 20.8 g/t Au,
    - 18m @ 2.0 g/t Au (EOH) incl. 1m @ 23.7 g/t Au &
    - 14m @ 3.5 g/t Au
  - Estrela Prospect: 2m @ 9.8 g/t Au (open to north & south)
  - Dulcie Far North: 5m @ 5.6 g/t Au incl. 4m @ 6.8 g/t Au
  - Water Bore: 3m @ 6.6 g/t Au

- **Develin Creek Copper-Zinc Project** in Queensland (100% owned) – maiden drill test of the new Snook copper target located 30km south of Zenith's JORC resources discovers massive copper-zinc sulphides (ASX Release 17-Dec-20).

- **Jackadgery Gold Project** in New South Wales (option to earn initial 90%), historic trenching returned 160m @ 1.2 g/t Au. No drilling to date. Zenith planning maiden drill test (ASX Release 10-Sep-20).

- **Earaheedy Zinc Project** in Western Australia (25% free carry to end BFS). New major zinc discovery to be fast tracked with extensive accelerated exploration program underpinned by a recent $40M capital raising by partner Rumble Resources Limited (ASX:RTR) (ASX Release 28-Apr-21).

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Sampling techniques* | *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.* | Assays received for 40 reverse circulation drill holes, 2 diamond core tails and 4 diamond drill holes. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | 1m drill samples collected via a cyclone were split through riffle splitter. Routine sampling on 4m composites via spear sampling of the 1m riffle split samples. Selected 1m intervals were assayed as 1m samples based on visual logging of alteration and sulphide content.<br><br>Diamond core was routinely sampled on 1m intervals with selected intervals sampled based on geological observations at intervals no less than 0.3m. |
| | *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.* | Reverse circulation drilling was used to obtain 1 m to 4m samples from which 2 to 3 kg was pulverised to produce a 30 g charge for fire assay.<br><br>Diamond core drilling was used to obtain samples ranging from 0.3m to 1.7m. After cutting with a diamond saw, ½ core samples produced 3 to 5 kg which was pulverised to produce a 30 g charge for fire assay |
| *Drilling techniques* | *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.).* | Reverse circulation and HQ diamond tails on holes ZRMCD038 and ZRMCD040.<br><br>ZRMCD038 pre-collar to 90m and DD tail to 272.2m<br>ZRMCD040 pre-collar to 70m and DD tail to 201.7m<br><br>Dimond drilling from surface for holes ZRMDD041-044 |
| *Drill sample recovery* | *Method of recording and assessing core and chip sample recoveries and results assessed.* | Diamond core was orientated whilst RC drill chips were sieved and logged by a qualified geologist on site, data recorded in field on paper logs and transferred to digital database |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | RC drilling produced generally dry samples with excellent recoveries, all 1m samples were riffle split on site and selected interval were 4m composite sampled using a spear from the 1m riffle splits to ensure a representative sample was collected for assay.<br><br>Diamond core was cut on site and ½ core was submitted for analysis. |

| | | |
|---|---|---|
| | *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | No indications of sample bias based on results to date.<br><br>Screen fire assays of intervals with visible gold are pending. |
| *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.* | Drill core and drill chips were sieved and logged by a qualified geologist on site. No reporting of resources. |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* | Drill chips logging is qualitative. Representative chip samples collected and stored in 20 compartment plastic chip trays and photographed.<br><br>Drill core logging is qualitative, all core has bene photographed. |
| | *The total length and percentage of the relevant intersections logged.* | All intervals logged and sampled |
| *Sub-sampling techniques and sample preparation* | *If core, whether cut or sawn and whether quarter, half or all core taken.* | Core is ½ core, core is cut by diamond saw |
| | *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* | Samples riffle split |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | Samples were analysed at ALS Laboratories in Brisbane, the samples were crushed, pulverised and assayed by gold using fire assay and silver by ICP-AES. |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | ~2 to 3kg of drill sample was crushed and pulverised and a sub-sample was taken in the laboratory and analysed. |
| *Sub-sampling techniques and sample preparation - continued* | *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.* | RC drilling results incorporates 1m resamples of 4m composite intervals. No field duplicates yet taken for diamond core |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | Each sample was 2kg to 5kg in weight which is appropriate to test for the grain size of material.<br><br>Visible gold was logged to 1mm in size was logged in drill core. On receipt and reconciliation of assay results these observations were confirmed to be true. The presence of visible gold indicates that coarse gold is present within the Red Mountain mineralised system.<br><br>Screen fire assays have been submitted for analysis of intervals that were logged as obtaining visible gold – assay results are pending. |
| *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.* | The samples were crushed and assayed for gold using fire assay, which is considered a near total technique |
| | *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* | No geophysical tools used this sampling program |

| | | |
|---|---|---|
| | *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.* | Certified reference material and blanks was included in each sample batch and appropriate levels of precision and accuracy. |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.* | Company personnel have observed the assayed samples |
| | *The use of twinned holes.* | No twinning |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Field data were all recorded in field laptops and sample record books and then entered into a database |
| | *Discuss any adjustment to assay data.* | No adjustments were made. |
| *Location of data points* | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | Collar locations up to hole 040 are based on Trimble R10-2 GNSS Rover DGPS coordinates +/-25mm accuracy. Holes 040 onwards GPS +/-5m accuracy. DGSP surveying planned. |
| | *Specification of the grid system used.* | The grid system used to compile data was MGA94 Zone 56 |
| *Location of data points - continued* | *Quality and adequacy of topographic control.* | Topography control is +/- 25mm. |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.* | Drill holes shown in Figures 2 to 6 and Tables 1 & 2. |
| | *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.* | The data alone will not be used to estimate mineral resource or ore reserve |
| | *Whether sample compositing has been applied.* | Results are reported as length weighted average composites at a minimum cut-off grade of 0.4 g/t Au or if silver only 30g/t Ag (refer to Table 1). Over range >100g/t Ag re-assayed using a 4-acid digest ICP-AES. |
| *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.* | Orientation of mineralisation based on 2 x orientated drill holes, indicates two main mineralised veins sets: moderate to steep southwest and shallow south dipping. The shallow dipping veins were less frequently measured in orientated drill core (~7 veins) versus >30 steep veins, this may be due to an orientation bias. Further drilling is required to confirm that drilling achieves unbiased sampling. Drill hole ZRMDD043 indicates gold mineralisation dip is rolling from step east to steep west. |
| | *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.* | As above |
| *Sample security* | *The measures taken to ensure sample security.* | Samples were kept in numbered and secured bags until delivered to the laboratory |

| | | |
|---|---|---|
| *Audits or reviews* | *The results of any audits or reviews of sampling techniques and data.* | Sampling techniques are consistent with industry standards |

## 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* | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* | The Red Mountain Project is located within the 100% Zenith owned exploration permit for minerals EPM 26384.<br><br>The project is located within private grazing properties. |
| | *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | All tenements are 100% held by Zenith and are in good standing with no known impediment to future granting of a mining lease. |
| *Exploration done by other parties* | *Acknowledgment and appraisal of exploration by other parties.* | South Pine Mines Pty Ltd undertook regional scale reconnaissance rock chip sampling and a systematic stream sediment sampling program focused around the Rossmore silver occurrence from 1981 to 1982. Several companies held the ground in the following decades focusing on the porphyry copper / epithermal potential of the area with Archer Resources Limited the only company to have reported on ground exploration activity on the area of interest being reported herewith by Zenith. Anomalous silver and gold in soils was reported by Archer Resources Limited which has subsequently been confirmed by Zenith. |
| *Geology* | *Deposit type, geological setting and style of mineralisation.* | Based on the initial site visit and preliminary evidence the geological setting and geochemical association at Red Mountain is indicative of an epizonal intrusion related gold deposit like the Mt Rawdon gold mine. |
| *Drill hole Information* | *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* | Refer to Tables 1 & 2 |
| | *o easting and northing of the drill hole collar* | |
| | *o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* | |
| | *o dip and azimuth of the hole* | |
| | *o down hole length and interception depth* | |
| | *o hole length.* | |
| | *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | |
| *Data aggregation methods* | *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* | No high-grade cutting |
| | *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.* | High-grade intersections are length weighted average grades with minimum cut -off grade of 1.0g/t Au and no internal dilution, whilst lower grade intersections are length weighted average grades with minimum cut-off grade of 0.4g/t Au and maximum internal dilution of 4m. |

| | | |
|---|---|---|
| *Data aggregation methods - continued* | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | No metal equivalents used. |
| *Relationship between mineralisation widths and intercept lengths* | *These relationships are particularly important in the reporting of Exploration Results.* | Refer below |
| | *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* | Orientation of mineralisation based on 4 x orientated drill holes, indicates two main mineralised veins sets: moderate to steep southwest and shallow south dipping. The shallow dipping veins were less frequently measured in orientated drill core (~7 veins) versus >30 steep veins, this may be due to an orientation bias. Further drilling is required to confirm that drilling achieves unbiased sampling.<br><br>Overall gold mineralised envelops are interpreted as north-south with steep east dips near surface rolling to steep west with depth. |
| | *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').* | As above |
| *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.* | Refer to descriptions and diagrams in body of text of this report. |
| *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.* | Refer to descriptions and diagrams in body of text |
| *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 other meaningful or material exploration data to be reported at this stage |
| *Further work* | *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* | Follow-up drill planning in progress. Detailed drone mag (40m line spacing) survey results awaited. 3DIP electrical geophysical survey planned to commence this month. Soil geochemical coverage currently being extended. |
| | *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | Refer to figures in body of report. |