31 August 2023

# High-grade mineralisation at the Masa Olivo zone and extensions to the San Pedro zone, MATSA

Continued near-mine exploration success at MATSA with a significant new zone of VMS copper-zinc-silver mineralisation confirmed at the Masa Olivo zone, along strike from the Magdalena Mine. Step-out drilling at San Pedro, adjacent to the Aguas Teñidas Mine, has now been extended to 600m.

## Highlights

- New zone of high-grade VMS copper-zinc-silver mineralisation identified at Masa Olivo approximately 50m south of the Masa 2 Deposit and ~100m from existing underground development.
- Mineralisation at the Masa Olivo zone has been intersected over 250m along strike and 200m down dip and is open to the west.
- The zone comprises of massive sulphide and disseminated mineralisation, with significant assay results including:
    - 10.1m @ 3.9% Cu, 5.2% Zn, 0.9% Pb and 35ppm Ag from 164.0m (MGI-1236)
    - 30.7m @ 3.2% Cu, 3.5% Zn, 1.2% Pb and 50ppm Ag from 155.9m (MAG-X-199)
    - 2.3m @ 1.3% Cu, 3.1% Zn, 1.2%Pb and 63ppm Ag from 288.4m (MAG-X-209).
- Masa Olivo is the second near-mine discovery made at MATSA based on improved orebody knowledge resulting from the recently completed geological review and re-interpretation of the MATSA orebodies.
- First pass downhole Electro Magnetic (EM) surveys have identified further target areas down plunge to the west of Masa Olivo.
- Continued success at San Pedro with step-out drilling extending known strike length to 600m.
- Early drill results from the San Pedro zone have been partially included in the Aguas Teñidas Mineral Resource update[1].
- Infill and extensional drilling continues at Masa Olivo and a staged 12,000m drill program will test the full 2km strike length of the San Pedro structure.

Sandfire Resources Ltd (**Sandfire** or **the Company**) is pleased to advise that recent underground drilling at MATSA in south-western Spain has delineated a new zone of volcanogenic massive sulphide (VMS) copper-zinc-silver mineralisation, known as the Masa Olivo zone, at the Magdelena mine, and has continued to deliver success at San Pedro.

### Masa Olivo Zone Overview

The newly identified Masa Olivo Zone is located 50m south of the Masa 2 Deposit and is located at the western end of the Magdelena mine. Drilling to date has delineated VMS mineralisation over 250m of strike and 200m down dip.

[1] Refer to Sandfire's ASX announcement titled 'MATSA Mineral Resource and Ore Reserve Update' released on 31 August 2023 for details.

The zone has drilled down to a spacing of 50m x 50m. Assay results from the zone include:

- **MGI-1236**: 10.1m @ 3.9% Cu, 5.2% Zn, 0.9% Pb and 35ppm Ag from 164.0m
- **MAG-X-199**: 30.7m @ 3.2% Cu, 3.5% Zn, 1.2% Pb and 50ppm Ag from 155.9m
- **MAG-X-209**: 2.3m @ 1.3% Cu, 3.1% Zn, 1.2%Pb and 63ppm Ag from 288.4m
- **MGI-1235**: 9m @ 0.8% Cu, 1.0% Zn, 0.3% Pb and 23g/t Ag from 149.0m.
- **MAG-X-207**: 18.2m @ 1.2% Cu and 7g/t Ag from 228.8m.

All assay composite results are reported as down-hole thicknesses.

See Appendix 1 for details of the underground drill holes completed within the Masa Olivo zone.

**Masa Olivo zone geology**

The Masa Olivo zone is a massive sulphide lens that bifurcates from the main Masa 2 Deposit and is hosted within the same acidic volcanic rocks. The onsite geological team have completed a full re-interpretation of the Magdalena Deposit. It was during this review the team identified an area deemed prospective for mineralisation and subsequently drilled two successful holes (MGI-1235 and MGI-1236).

To date, nineteen drill holes have targeted the Masa Olivo zone, nine drill holes intersected massive sulphide mineralisation, four drill holes intersected disseminated sulphide and four drill holes failed to intersect mineralisation. Two drill holes are ongoing.

A geological cross-section is shown in Figure 1.

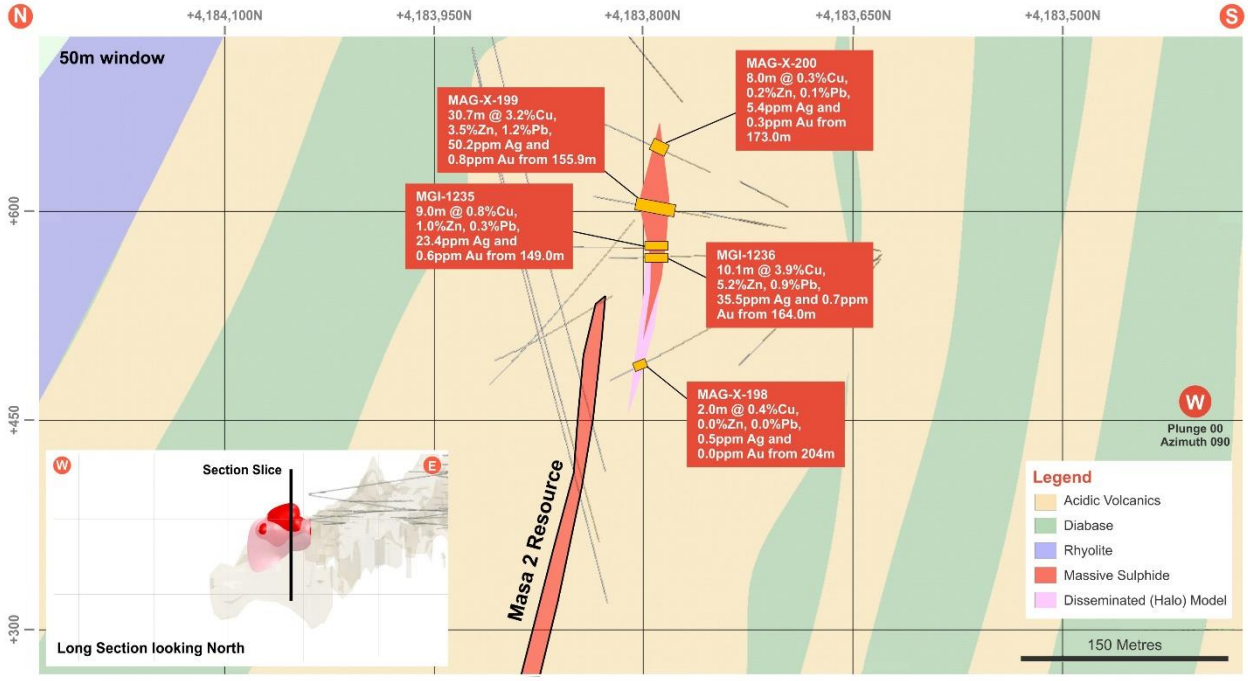


Figure 1 Cross-section showing Masa Olivo Zone.

**Masa Olivo zone mineralisation**

Mineralisation at Masa Olivo has so far been defined over a strike length of 250m, with the potential to be extended further as it remains open to the west.

The zone has both massive and disseminated sulphides and can be described as copper dominated in the west, while zinc is dominant in the east. The Masa Olivo zone is interpreted as typical VMS style mineralisation of the Iberian Pyrite Belt. Figure 2 shows a long section of the mineralisation with selected significant intercepts highlighted.

Appendix 2 presents all composite assays available to date based on a 0.1% Cu cut-off grade.

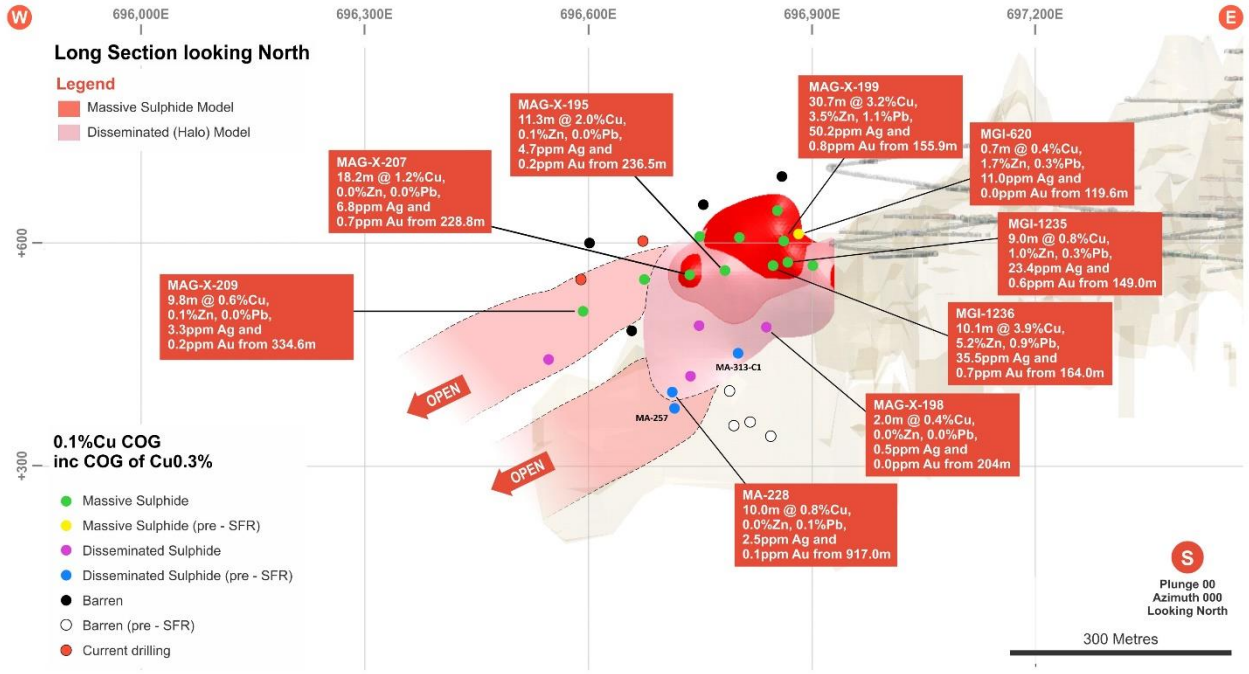


**Figure 2 Long-section showing Masa Olivo Zone.**

## Next Steps

Infill drilling will be undertaken to increase drilling density and extensional drilling will continue to define the limits of the mineralisation area. Testing the western extension may require surface drilling due to the limited availability of underground drilling positions.

## San Pedro Update

The San Pedro Zone was first identified in the December Quarter of FY2023 during the initial phase of Sandfire's geological review and reinterpretation program. The zone is located less than 100m from, and is likely connected, to the Aguas Teñidas Deposit (Figure 3).

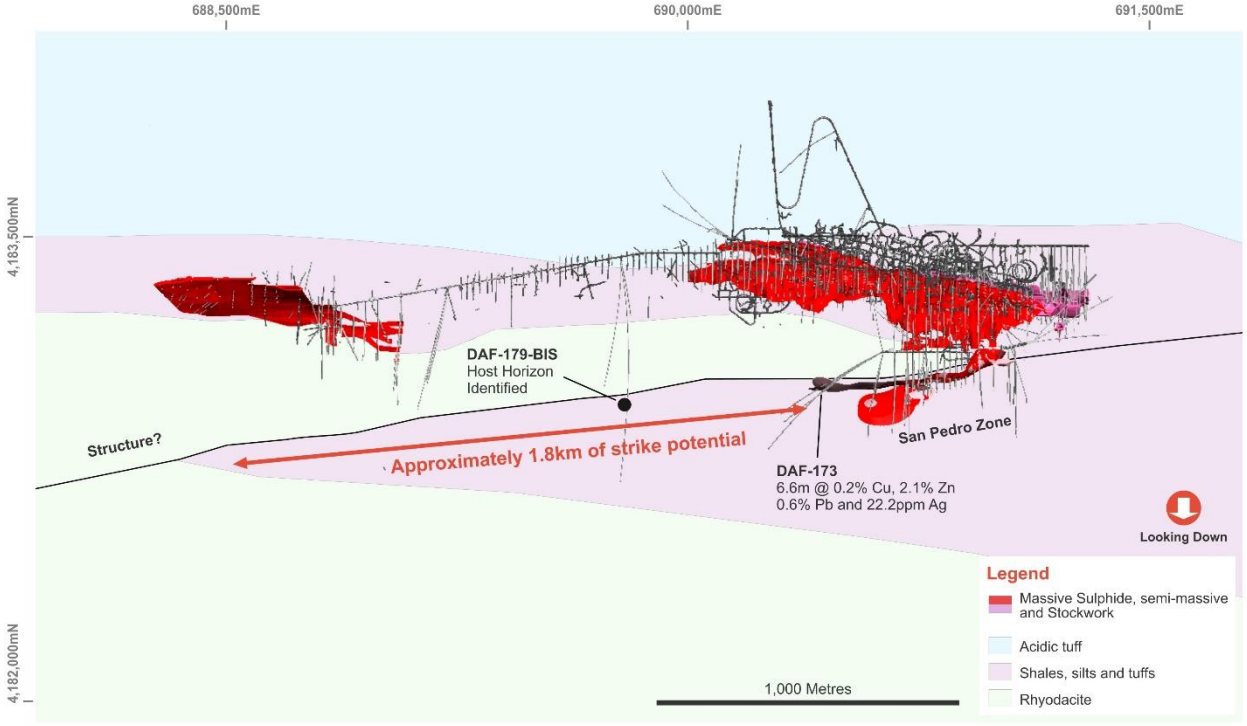


**Figure 3: Plan of the Aguas Teñidas Mine and San Pedro zone.**

Initial drilling delineated VMS mineralisation within the San Pedro zone over a strike of 400m, with closer spaced drilling on a 20m x 20m pattern completed over a 300m strike. Step-out drilling has successfully identified further massive sulphide mineralisation and extended the known strike length to ~600m (see Figure 4).

Assays intervals from step out holes included:

- **DAF-171**: 0.9m @ 0.5% Cu, 10.7% Zn, 2.5% Pb and 55ppm Ag from 364.4m
- **DAF-173**: 6.6m @ 0.2% Cu, 2.1% Zn, 0.6% Pb and 22ppm Ag from 217.4m
- **DAF-173**: 2.4m @ 0.2% Cu, 2.4% Zn, 0.6% Pb and 18ppm Ag from 248.1m.

Given the current drill density in the eastern portion of San Pedro, it is anticipated that this will be included in future resource estimation.

Previous drilling[2] at San Pedro returned significant assays including:

- **DAF-92**: 6.9m @ 0.4% Cu, 3.8% Zn, 1.1% Pb and 33.9ppm Ag from 90.2m
- **DAF-93**: 7.7m @ 0.5%Cu, 4.1% Zn, 1.2% Pb and 46.9ppm Ag from 90.2m
- **DAF-98**: 4.2m @ 0.6% Cu, 7.2% Zn, 5.5% Pb and 95.7ppm Ag from 87.4m
- **DAF-109**: 7.1m @ 1.8% Cu, 1.8% Zn, 0.5% Pb and 23.9ppm Ag from 33.4m
- **DAF-168**: 15.9m @ 2.2% Cu, 1.7% Zn, 0.5% Pb and 27.4ppm Ag from 177.3m and 8.4m @ 1.1% Cu, 4.0% Zn, 1.5% Pb and 53.6ppm Ag from 202.2m
- **DAF-151**: 13.4m @ 1.5% Cu, 4.1% Zn, 2.2% Pb and 81.5ppm Ag from 126.6m.

All assay composite results are reported as down-hole thickness.

[2] Refer to Sandfire's ASX announcement titled 'Near-mine Exploration Success at MATSA' released on 24 January 2023 for details.

Sandfire will undertake a wide spaced (initially 800m), staged 12,000m drill program to test the full 2km strike length of the San Pedro structure.

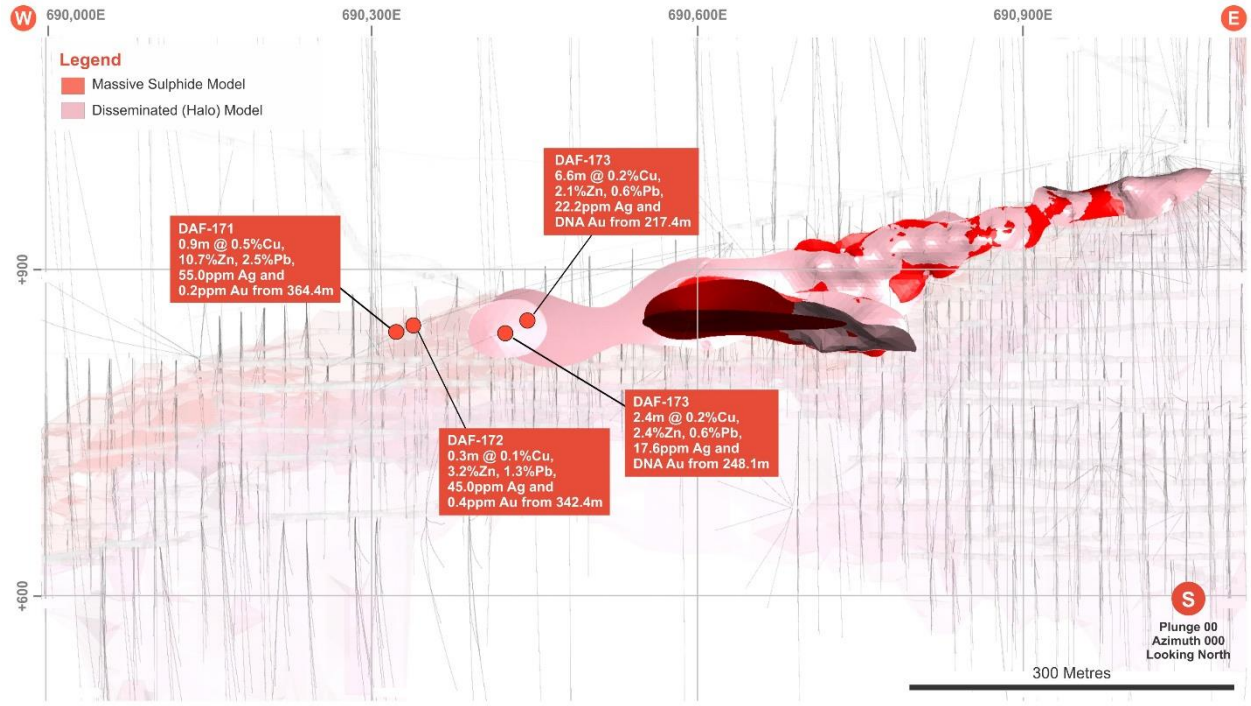


**Figure 4 Long-section showing San Pedro zone.**

**- ENDS -**

**For further information, please contact:**
Sandfire Resources Ltd
Ben Crowley – Head of Investor Relations
Office: +61 8 6430 3800

**Media Inquiries:**
Cannings Purple
Peter Kermode
Mobile: +61 411 209 459

**This announcement is authorised for release by Sandfire's Managing Director and CEO, Brendan Harris.**

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

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

**Forward-Looking Statements**

Certain statements made during or in connection with this release contain or comprise certain forward-looking statements regarding Sandfire's Mineral Resources and Reserves, exploration and project development operations, production rates, life of mine, projected cash flow, capital expenditure, operating costs and other economic performance and financial condition as well as general market outlook. Although Sandfire believes that the expectations reflected in such forward-looking statements are reasonable, such expectations are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward-looking statements and no assurance can be given that such expectations will prove to have been correct. No representation, express or implied, is made as to the accuracy, likelihood of achievement or reasonableness of any forecasts, prospects, returns or statements in relation to future matters contained in this announcement.

Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, delays or changes in project development, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in metals prices and exchange rates and business and operational risk management.

Except for statutory liability which cannot be excluded, each of Sandfire, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in these forward-looking statements and excludes all liability

whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in forward-looking statements or any error or omission. Sandfire undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly, you should not place undue reliance on any forward-looking statement.

## Appendix 1: Drill Collar Information

| Hole ID | Depth | Dip | Azimuth | Grid_ID | Easting | Northing | RL | Hole Status |
|---|---|---|---|---|---|---|---|---|
| MA-228 | 1013 | -86 | 183 | ED50-UTM29N | 696681.85 | 4183947.06 | 1306.52 | complete |
| MA-238 | 986 | -82 | 190 | ED50-UTM29N | 696837.95 | 4184030.24 | 1283.08 | complete |
| MA-257 | 990 | -81 | 193 | ED50-UTM29N | 696688.98 | 4184020.94 | 1321.43 | complete |
| MA-258 | 994.5 | -80 | 200 | ED50-UTM29N | 696922.98 | 4184089.63 | 1273.42 | complete |
| MA-313 | 1010 | -79 | 190 | ED50-UTM29N | 696756.11 | 4184148.62 | 1296.62 | complete |
| MA-313-C1 | 971.2 | -79 | 190 | ED50-UTM29N | 696756.11 | 4184148.62 | 1296.62 | complete |
| MA-89 | 1178 | -90 | 180 | ED50-UTM29N | 696686 | 4184101.53 | 1343.33 | complete |
| MGI-620 | 309.1 | -49.68 | 320.11 | ED50-UTM29N | 696927.42 | 4183725.29 | 701.16 | complete |
| MGI-1235 | 300 | -2.89 | 325.33 | ED50-UTM29N | 696949.89 | 4183655.24 | 578.37 | complete |
| MGI-1236 | 320 | -6.29 | 317.43 | ED50-UTM29N | 696949.04 | 4183655.04 | 578.18 | complete |
| MAG-X-195 | 401.8 | -5.6 | 300.57 | ED50-UTM29N | 696947.71 | 4183651.48 | 577.99 | complete |
| MAG-X-198 | 320 | -27.44 | 321.44 | ED50-UTM29N | 696947.84 | 4183652.66 | 576.86 | complete |
| MAG-X-199 | 280 | 7.14 | 319.49 | ED50-UTM29N | 696947.5 | 4183653.20 | 579.95 | complete |
| MAG-X-200 | 260 | 21.58 | 320.28 | ED50-UTM29N | 696947.46 | 4183653.27 | 580.13 | complete |
| MAG-X-211 | 450 | 4.1 | 288.23 | ED50-UTM29N | 696885.17 | 4183626.88 | 570.92 | complete |
| MAG-X-203 | 250 | -34.4 | 317.97 | ED50-UTM29N | 696948.87 | 4183722.89 | 611.45 | complete |
| MAG-X-205 | 310 | 6.94 | 300.67 | ED50-UTM29N | 696947.64 | 4183651.43 | 578.69 | complete |
| MAG-X-204 | 341.7 | -20.53 | 300.67 | ED50-UTM29N | 696947.81 | 4183651.30 | 577.59 | complete |
| MAG-X-212 | 196.7 | 34.52 | 300.71 | ED50-UTM29N | 696950.18 | 4183722.69 | 614.71 | complete |
| MAG-X-209 | 500 | -12.59 | 289.75 | ED50-UTM29N | 696885.47 | 4183626.94 | 570.12 | complete |
| MAG-X-207 | 350 | -8.9 | 302.78 | ED50-UTM29N | 696909.42 | 4183633.50 | 573.36 | complete |
| MAG-X-213 | 400 | -30.73 | 300.85 | ED50-UTM29N | 696947.68 | 4183651.41 | 577.00 | complete |
| MAG-X-214 | 380 | -22.39 | 295.37 | ED50-UTM29N | 696909.11 | 4183633.24 | 572.87 | complete |
| MAG-X-215 | 480 | -21.03 | 288.37 | ED50-UTM29N | 696885.61 | 4183626.79 | 569.70 | complete |
| MAG-X-217 | 300 | 6.33 | 306.62 | ED50-UTM29N | 696947.7 | 4183651.77 | 578.61 | complete |
| MAG-X-206 | 405.7 | -10.05 | 292.79 | ED50-UTM29N | 696908.68 | 4183633.25 | 573.11 | complete |
| MAG-X-218 | 320 | 13.09 | 299.26 | ED50-UTM29N | 696947.49 | 4183651.43 | 579.25 | complete |
| MAG-X-210 | Ongoing | -7.4 | 287.81 | ED50-UTM29N | 696885.33 | 4183626.89 | 570.26 | Ongoing |
| MAG-X-208 | Ongoing | 3.42 | 293 | ED50-UTM29N | 696908.63 | 4183633.27 | 573.88 | Ongoing |
| DAF-171 | 500 | -7.63 | 243.98 | ED50-UTM29N | 690626.5 | 4183124.74 | 924.29 | complete |
| DAF-172 | 400 | -12.35 | 239.95 | ED50-UTM29N | 690626.4 | 4183124.59 | 924.08 | complete |
| DAF-173 | 406.7 | -18.93 | 244.73 | ED50-UTM29N | 690626.4 | 4183124.80 | 923.75 | complete |
| DAF-178 | 412.9 | -8.2 | 180.6 | ED50-UTM29N | 689780 | 4183419.00 | 820 | complete |
| DAF-179-BIS | 714 | -0.8 | 171.52 | ED50-UTM29N | 689779.5 | 4183418.85 | 821.98 | complete |
| DAF-204-BIS | 786.4 | -18.9 | 166.9 | ED50-UTM29N | 689780.4 | 4183418.89 | 821.43 | complete |
| DAF-205 | Ongoing | -11.53 | 167.78 | ED50-UTM29N | 689780.2 | 4183419.70 | 821.74 | Ongoing |

## Appendix 2: Assay results

(0.1% Cu cut-off, 3m maximum consecutive internal dilution)

| Hole ID | From (m) | To (m) | Downhole (m) | Cu (%) | Zn (%) | Pb (%) | Ag (ppm) | Au (g/t) | Mineralisation Style (Poly or Cup) |
|---|---|---|---|---|---|---|---|---|---|
| DAF-171 | 364.4 | 365.3 | 0.9 | 0.46 | 10.68 | 2.50 | 55.00 | 0.15 | Polymetallic |
| DAF-172 | 342.4 | 342.7 | 0.3 | 0.14 | 3.16 | 1.30 | 45.00 | 0.35 | Polymetallic |
| DAF-172 | 367.7 | 368.3 | 0.6 | 0.27 | 1.44 | 0.43 | 10.50 | 0.09 | Polymetallic |
| DAF-173 | 209.4 | 209.8 | 0.4 | 0.14 | 1.72 | 0.46 | 16.00 | 0.00 | Polymetallic |
| DAF-173 | 217.4 | 224 | 6.6 | 0.19 | 2.07 | 0.62 | 22.17 | 0.00 | Polymetallic |
| DAF-173 | 248.1 | 250.5 | 2.4 | 0.18 | 2.39 | 0.60 | 17.58 | 0.00 | Polymetallic |
| MA-228 | 917 | 927 | 10 | 0.82 | 0.02 | 0.05 | 2.50 | 0.08 | Cupriferous |
| MA-257 | 958.9 | 960.9 | 2 | 0.10 | 0.00 | 0.00 | 0.50 | 0.00 | Cupriferous |
| MA-257 | 984.9 | 990 | 5.1 | 0.47 | 0.00 | 0.01 | 0.80 | 0.00 | Cupriferous |
| MA-313-C1 | 914.2 | 918.2 | 4 | 0.46 | 0.01 | 0.00 | 2.00 | 0.00 | Cupriferous |
| MA-313-C1 | 922.2 | 924.2 | 2 | 0.12 | 0.00 | 0.00 | 1.00 | 0.00 | Cupriferous |
| MA-313-C1 | 936.2 | 938.7 | 2.5 | 0.24 | 0.01 | 0.01 | 0.70 | 0.06 | Cupriferous |
| MGI-620 | 119.55 | 120.25 | 0.7 | 0.42 | 1.70 | 0.16 | 11.00 | 0.05 | Polymetallic |
| MGI-1235 | 149 | 158 | 9 | 0.79 | 1.04 | 0.28 | 23.42 | 0.61 | Polymetallic |
| MGI-1236 | 164 | 174.1 | 10.1 | 3.92 | 5.24 | 0.93 | 35.48 | 0.69 | Polymetallic |
| MAG-X-195 | 208.2 | 209.5 | 1.3 | 0.42 | 3.11 | 0.67 | 25.31 | 0.05 | Polymetallic |
| MAG-X-195 | 217.3 | 219 | 1.7 | 0.86 | 0.13 | 0.04 | 10.00 | 0.24 | Cupriferous |
| MAG-X-195 | 225 | 230 | 5 | 0.42 | 0.03 | 0.03 | 3.83 | 0.44 | Cupriferous |
| MAG-X-195 | 236.5 | 247.75 | 11.25 | 2.00 | 0.14 | 0.04 | 4.72 | 0.21 | Cupriferous |
| MAG-X-195 | 251.4 | 252 | 0.6 | 0.13 | 0.00 | 0.00 | 1.00 | 0.00 | Cupriferous |
| MAG-X-198 | 189 | 191 | 2 | 0.11 | 0.01 | 0.00 | 0.50 | 0.00 | Cupriferous |
| MAG-X-198 | 193 | 195 | 2 | 0.18 | 0.01 | 0.00 | 0.50 | 0.00 | Cupriferous |
| MAG-X-198 | 204 | 206 | 2 | 0.38 | 0.02 | 0.01 | 0.50 | 0.00 | Cupriferous |
| MAG-X-199 | 155.9 | 186.6 | 30.7 | 3.16 | 3.48 | 1.15 | 50.20 | 0.83 | Polymetallic |
| MAG-X-200 | 173 | 181 | 8 | 0.27 | 0.22 | 0.06 | 5.36 | 0.34 | Polymetallic |
| MAG-X-203 | 67 | 74.2 | 7.2 | 0.23 | 0.03 | 0.01 | 1.38 | 0.34 | Cupriferous |
| MAG-X-203 | 82 | 92 | 10 | 0.33 | 0.02 | 0.01 | 0.84 | 0.14 | Cupriferous |
| MAG-X-205 | 245.95 | 246.6 | 0.65 | 8.42 | 0.07 | 0.07 | 7.00 | 1.28 | Cupriferous |
| MAG-X-204 | 258.3 | 264 | 5.7 | 0.53 | 0.00 | 0.00 | 0.82 | 0.00 | Cupriferous |
| MAG-X-204 | 274 | 276 | 2 | 0.32 | 0.01 | 0.00 | 1.00 | 0.00 | Cupriferous |
| MAG-X-209 | 288.4 | 290.7 | 2.3 | 1.33 | 3.13 | 1.19 | 63.00 | 0.78 | Polymetallic |
| MAG-X-209 | 334.6 | 344.4 | 9.8 | 0.59 | 0.12 | 0.02 | 3.30 | 0.25 | Cupriferous |
| MAG-X-207 | 218.15 | 219.4 | 1.25 | 0.18 | 1.03 | 0.53 | 22.00 | 0.22 | Polymetallic |
| MAG-X-207 | 228.8 | 247 | 18.2 | 1.16 | 0.03 | 0.04 | 6.82 | 0.71 | Cupriferous |
| MAG-X-213 | 272 | 276 | 4 | 0.20 | 0.00 | 0.00 | 0.50 | 0.00 | Cupriferous |
| MAG-X-213 | 286 | 288 | 2 | 0.15 | 0.01 | 0.00 | 1.00 | 0.00 | Cupriferous |
| MAG-X-213 | 302 | 306 | 4 | 0.35 | 0.01 | 0.01 | 1.00 | 0.00 | Cupriferous |
| MAG-X-215 | 389 | 392.45 | 3.45 | 0.19 | 0.03 | 0.01 | 2.00 | 0.00 | Cupriferous |
| MAG-X-217 | 196.5 | 217.5 | 21 | 0.42 | 0.14 | 0.16 | 15.14 | 0.54 | Cupriferous |
| MAG-X-206 | 272.3 | 275.25 | 2.95 | 0.79 | 0.06 | 0.09 | 8.24 | 0.00 | Cupriferous |

## APPENDIX 3: JORC 2012 TABLE 1

| JORC Code Assessment Criteria | Comment |
|---|---|
| **Section 1 Sampling Techniques and Data** | |
| **Sampling Techniques**<br><br>*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 downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*<br><br>*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br><br>*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.* | • Drilling undertaken by MATSA conforms to industry best practices and the resultant sampling pattern is sufficiently dense to interpret the geometry, boundaries, and different styles of the sulphide mineralisation at the three mines with a high level of confidence within well drilled areas.<br>• All samples were taken from diamond drill cores drilled from both, surface and underground. Samples were cut longitudinally in half using an auto-feeding diamond core saw, or whole core, depending on the purpose of the drill hole and the core diameter.<br>• Sampling intervals are then marked, typically at 2m intervals, although this is reduced depending on the geology and mineralisation in the core. The most common sample lengths in the assay database are 1m and 2m.<br>• Diamond drill holes were generally sampled through intervals of visual mineralisation and into visually barren material. |
| **Drilling Techniques**<br><br>*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, facesampling bit or other type, whether core is oriented and if so, by what method, etc.).* | • All drilling conducted has been diamond drilling ("DDH") – from underground and surface collar locations.<br>• A select number of holes were orientated.<br>• Coring sizes vary with surface drillholes progressing from PQ to HQ, and then NQ. The underground exploration drillholes can start in HQ and can be reduced to NQ size. |
| **Drill Sample Recovery**<br><br>*Method of recording and assessing core and chip sample recoveries and results assessed.* | • The drill core is transported from the drilling rigs to the core shed where it is sorted and stored before being processed. Core intervals are measured against the drillers recorded measurements and then the core recovery is determined by MATSA field technicians. Diamond core recovery is logged and captured in the database.<br>• No sample recovery issues are believed to have impacted on potential sample bias |

| JORC Code Assessment Criteria | Comment |
|---|---|
| *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.* | |
| **Logging**<br>*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.* | • Geological logging is completed for all holes. The drill core is laid out on an angled logging rack with dedicated lights and water supply. The logging data recorded consists of the dominant lithology (colour, texture), alteration (style), mineralisation (mineralogy, type and texture) and fault rocks (type and style). Core is photographed and catalogued appropriately.<br>• Logging is both qualitative and quantitative in nature<br>• Longitudinally cut half core samples are produced using a core saw. |
| **Sub-Sampling Techniques and Sample Preparation**<br>*If core, whether cut or sawn and whether quarter, half or all core taken.*<br>*If noncore, 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 subsampling 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.* | • For all intersections with logged presence of sulphides and adjacent waste zones, cores are marked for sampling and cut into two equal halves. The core is placed in a v-rail prior to being placed in the core cutting machine, the core is then cut. One half of the core is selected for sample preparation and assay analysis, whilst the other is retained as a reference sample.<br>• Core sample preparation at the laboratory was completed as follows:<br>▪ Weight.<br>▪ Oven dry, each sample is stored in a metal tray on a rack and dried at 105°C for at least two hours.<br>▪ The entire dried sample is first crushed using a jaw crusher.<br>▪ The sample is then run through a cone crusher which reduces 90% of the particles to less than 2 mm in size.<br>▪ Each sample is then placed on a large plastic sheet and rolled (mixed) 20 times to homogenise the sample.<br>▪ After homogenisation, sample is split using an automatic riffle splitter resulting in a 500g sample, the sample must be at least 400-g in weight and no more than 800g.<br>▪ The 500 g sample is milled using a ring mill for seven minutes resulting in the sample particles passing through a 75 µm sieve.<br>▪ The pulverised sample is then placed on a large plastic sheet, and it is mixed (rolled) 20 times to homogenise the sample. The pulp sample is then dip sampled to obtain a 150-g sub--sample.<br>▪ Any external check samples, which require pulp material, are also taken during this process (external umpire and MATA reference samples). This 150-g sample is then placed in a small plastic or paper bag with the sample number printed on it.<br>• Coarse blanks and twin duplicates are inserted at the laboratory at the start of the sample preparation process.<br>• Duplicate analysis of pulp samples has been completed and identified no issues with sampling representatively with assays showing a high level of correlation.<br>• The sample size is considered appropriate for the mineralisation style. |

| JORC Code Assessment Criteria | Comment |
|---|---|
| **Quality of Assay Data and Laboratory Tests**<br><br>*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br><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><br>*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.* | • Samples are assayed using ICP-OES, with aqua regia digest at the Internal MATSA laboratory. Samples are also fire-assayed for Au. The elements (Cu, Zn, Pb, Ag, Au, As, Sb, Bi, Cd, Ni, Se, Mn and Co, Hg, Fe and S) that are analysed at the MATSA laboratory, along with the minimum detection limits of the assaying equipment (ICP- OES).<br>• The historical Aguas Teñidas core was assayed for the current MATSA suite of element in most cases (when the mine was active), typically by ICP and XRF.<br>• No geophysical tools were used to analyse the drilling products.<br>• QAQC samples (blanks, certified reference material and duplicates) are inserted by MATSA staff into the sample stream prior to these being sent to the laboratory for assay analysis. MATSA also employs ALS (previously OMAC Laboratories Ltd) and ALS Chemex (Global) as its external reference laboratories used to undertake check (umpire) assay analysis.<br>• Blank samples used by MATSA comprise silica material and have been included in the sample stream for Aguas Teñidas since 2009. In reviewing the blanks analysis data, Matsa has applied a 4X detection limit threshold, specific for each element. Samples which plot above this threshold are determined as failed samples is typically due to contamination or a mix up of samples (incorrect labelling). The results of the blank analysis demonstrate that the sample preparation process employed at MATSA limit contamination to a reasonable level.<br>• Twin duplicate samples used by MATSA are quarter core field duplicate samples which have been included in the sample stream at Aguas Teñidas and Magdalena since 2016, and at the other deposits since 2017. As expected, these duplicate results show a wider range of variation than the other duplicate types inserted into the sample stream by MATSA but still show reasonably good repeatability as well as good correlation between the original and duplicate sample. The twin duplicates report correlation coefficients typically more than 0.85 (most above 0.9).<br>• Coarse duplicate samples used by MATSA are collected after the second split following crushing. The results for the coarse duplicates show a high degree of repeatability and a very high degree correlation between the original and duplicate sample, with a correlation coefficient typically more than 0.97.<br>• Internal pulp duplicates sample used by MATSA are collected at the final stage of sample preparation. The results for the pulp duplicates show a high degree of repeatability and a high degree of correlation between the original and duplicate sample, with a correlation coefficient typically more than 0.98.<br>• External duplicate samples are collected at the final stage of sample preparation and sent to the umpire laboratory (ALS Laboratories, Ireland ISO/IEC 17025). The results for the external duplicates show a high degree of repeatability and a high degree of correlation between the original and duplicate samples, with a correlation coefficient typically more than 0.97.<br>• MATSA has used 37 different CRM across all the deposits since production at the Aguas Teñidas mine recommenced in 2008. The CRM are used to monitor Cu, Zn, Pb, Ag, and Au grades. All CRM used have been created in - house by MATSA and were sent for round robin laboratory analysis, at ALS Vancouver, ALS Loughrea, SGS Peru, SGS Canada, ALS Perth, and ALS Brisbane. Overall, the grade ranges of the CRM are representative of the different mineralisation types (cupriferous and polymetallic) and grades as demonstrated in the drillhole statistics. |
| **Verification of Sampling and Assaying** | |

| JORC Code Assessment Criteria | Comment |
|---|---|
| *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.* | • Documented verification of significant intervals by independent personnel has not been done, however the mineralisation appears to be reasonably continuous and is not dominated by any one significant intersection.<br>• No drillholes have been twinned.<br>• Logging is captured on laptops and manually uploaded to a Geobank database.<br>• No adjustments have been made to any primary data. |
| **Location of Data Points**<br>*Accuracy and quality of surveys used to locate drill holes (collar and downhole 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.* | • The MATSA drillhole collars, for both underground and surface drillholes, are surveyed by the MATSA survey department. The surface collar locations are surveyed using GPS total station which has a reported accuracy of less than 10 cm in the X, Y, and Z. The underground collars are surveyed using a total station method which has an accuracy of less than 10 cm in the X, Y, and Z coordinates.<br>• Regarding downhole survey the majority of the drillholes have a start and end of hole measurement only. MATSA typically uses a REFLEX Flexi-It multi-shot tool for all of its downhole surveys, with the measurements taken every 25 m. The REFLEX tool is a magnetic tool, and the survey azimuth is aligned to mine grid north.<br>• Collars are marked out and picked up in the ETRS89 UTM Zone 29 N format.<br>• A local mining grid is used for Aguas Tenidas and Magdalena. Conversion to this grid is undertaken from WGS84 co-ordinates and is achieved by adding 1,002.968m to the elevation (Z) values (to avoid negative numbers in the underground development). |
| **Data Spacing and Distribution**<br>*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.* | • Masa Olivo drill spacing is approximately 50m x 50m or 50m x 75m.<br>• San Pedro step-out drilling is 150m to 650m along strike.<br>• No mineral resource or ore reserve estimates have been reported based on the new results contained of this press release.<br>• No sample compositing is applied during the sampling process. |
| **Orientation of Data in Relation to Geological Structure**<br>*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.* | • All drilling undertaken is typically aimed to intersect mineralisation perpendicular to strike where access facilitates this. However due to underground and surface access some drilling intersects mineralisation at oblique angles.<br>  • No significant sampling bias occurs in the data due to the orientation of drilling with regards to mineralisation. |
| **Sample Security** | |

| JORC Code Assessment Criteria | Comment |
|---|---|
| *The measures taken to ensure sample security.* | • All drill core is delivered to the core shed, usually via flatbed trucks, for photography, core recovery calculations, geological and geotechnical logging, and sampling.<br>• The core shed, sample preparation facilities and laboratory are all confined within secure boundaries, with controlled access points, where only authorised, mine personnel are allowed entry. |
| **Audits and Reviews**<br>*The results of any audits or reviews of sampling techniques and data.* | • No audits or reviews have been completed. |
| **Section 2 Reporting of Exploration Results** | |
| **Mineral Tenement and Land Tenure Status**<br>*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.* | • MATSA currently holds 47 mining permits which cover all three mines and has the rights to exploit the Aguas Teñidas and Magdalena mines in the municipality of Almonaster la Real and the Sotiel mine in the municipality of Calanas, both of which are in the province of Huelva. The Company also has 27 granted investigation permits, and 21 pending approval which cover more than 1,100 km² in the IPB and 160 km² in the Spanish region of Extremadura.<br>• The Aguas Teñidas, Magdalena, and Sotiel mines are covered by 22, 23 and 2, mining permits, respectively. The Aguas Teñidas mining permits were renewed in 2012 for a 30-year period and are due to expire on 31 August 2042. The Magdalena mining permits were issued in 2013 and are due to expire on 15 January 2043, except for the Magdalena Masa 2 permit which is due to expire on 7 July 2046. The Sotiel mining permit was renewed in 2015 and is due to expire on 19 January 2045 the main permit and on 3rd May, 2053 a secondary Sotiel site permit recently granted. |
| **Exploration Done by Other Parties**<br>*Acknowledgment and appraisal of exploration by other parties.* | • Mining in the IPB has occurred for over 2,500 years. Activity can be dated to Roman and Phoenician periods. Significant interest in IPB did not re-emerge until the 1800s following the successful extraction of Cu, resulting in over 60 mines operating by 1900. The Rio Tinto Company was formed in 1873 to operate these mines. The discovery of the Neves Corvo deposit in 1977, renewed exploration interest in the region, which ultimately led to the discovery of the mineralisation associated with the Aguas Teñidas mine and re-opening of the Sotiel Mine in 1983.<br>• The Calañesa deposit is the oldest known deposit in the mine area. The deposit was first mined in the Roman period; however, the oldest records referencing exploration and mining are from 1886 by the Compagnie des Mines de Cuivre d Aguas Teñidas, who operated the mine until the end of the 19th Century. It was later mined in 1916 by Huelva Copper Company until 1934. Since this time, most of the exploration in relation to the Calañesa deposit has been surface drilling by MATSA, the majority of which was completed in 2018, except for the exploration conducted by Billiton during the 1980s. Billiton relinquished the property in 1990. Placer Dome subsequently acquired the project and between 1991 and 1994 drilled the deposit and built on Billiton's previous work. Navan then acquired the project between 1995 and 2000 and, in 1995, acquired the mining rights for the Aguas Teñidas and Western Extension deposit. In April 1997, Navan acquired Almagrera SA from the Spanish government. This operation comprised the Sotiel underground mine, a minerals processing complex (at Sotiel mine) for Cu, Zn, and Pb, and an acid plant. |
| **Geology** | |

| JORC Code Assessment Criteria | Comment |
|---|---|
| *Deposit type, geological setting, and style of mineralisation.* | • The MATSA deposits are interpreted to be volcanogenic massive sulphide (VMS), and sedimentary hosted massive sulphide (SHMS) deposits. VMS deposits are predominantly stratiform accumulations of sulphide minerals that precipitate from upwelling hydrothermal fluids associated with magmatism on or below the seafloor in a wide range of geological settings. SHMS deposits are similar to VMS deposits but are formed by fluid mixing in permeable sedimentary rocks and generally lack the abundance of volcanics/magmatism.<br>• Aguas Teñidas and Magdalena are characterised as a bimodal-felsic VMS deposit based on the mineralogy, geological setting and geometry/size.<br>• Sotiel is characterised as a sedimentary hosted massive sulphide (SHMS) based on the mineralogy, geological setting and geometry/size. |
| **Drill hole information**<br><br>*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>• *Easting and northing of the drill hole collar*<br>• *Elevation or rl (reduced level – elevation above sea level in metres) of the drill hole collar*<br>• *Dip and azimuth of the hole*<br>• *Downhole length and interception depth*<br>• *Hole length.*<br>*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.* | • Information relating to the collar parameters of the drill holes described in this announcement are listed in Appendix 1 of the announcement. A summary of all material information and the results of the completed holes described in this announcement are included in this announcement. |
| **Data aggregation methods**<br><br>*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.*<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.* | • Appendix 2 shows intercepts are based on a greater than 0.1% Cu COG and may include up to a maximum of 3m consecutive waste, minimum composites of 0.3m and final composite grade of greater than 0.1%Cu.<br>• Minimum and maximum DD sample intervals used for intersection calculation are 0.1m and 2m respectively subject to geological boundaries.<br>• No metal equivalents are used in the intersection calculation.<br>• Mineralisation type has been recorded in the composites table. These are based on the below parameters:<br>▪ Cupriferous material has ´Cu%/Zn% >1.7 and Zn% <2.5´<br>▪ Polymetallic material has ´Zn% >2.5´ or ´Zn% <2.5 and Cu%/Zn% <1.7 |

| JORC Code Assessment Criteria | Comment |
|---|---|
| *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | |
| **Relationship between mineralisation widths and intercept lengths**<br>*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 downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').* | • All drillhole intercepts are reported in downhole thickness.<br>• Underground drill holes for Masa Olivo are interpreted to be approximately perpendicular to the strike and dip of mineralisation, therefore the true thickness is estimated to be approximately 80% of the downhole thickness reported.<br>• Pre-Sandfire surface drill holes at Masa Olivo are oblique to mineralisation and steeply dipping therefore the estimated true thickness is approximately >25% of the downhole thickness.<br>• The drill holes for San Pedro are interpreted to be oblique to the strike and dip of mineralisation, therefore the true thickness is >60% of DH thickness. |
| **Diagrams**<br>*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.* | • Appropriate maps and sections are included within the body of the accompanying document. |
| **Balance reporting**<br>*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.* | • The accompanying document is considered to represent a balanced report. |
| **Other substantive exploration data**<br>*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.* | • All substantive data is reported. |
| **Further work**<br>*The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).* | • Step-out drilling along-strike and down-dip extensions of mineralisation continue subject to geological interpretation and observations for both Masa Olivo and San Pedro.<br>• DHEM geophysical work is planned.<br>• Long sections are included in the press release showing areas of potential resource extensions. |

| JORC Code Assessment Criteria | Comment |
| --- | --- |
| *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | |