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## Meridian Provides Update on Espigão Copper-Gold Exploration Program

*8km of open geochemical anomalies extend over 11 newly modelled EM bedrock conductors*

LONDON, United Kingdom, December 23, 2020 /Newsfile Corp./ - Meridian Mining SE (TSXV: MNO) (“Meridian” or the “Company”) today provides an exploration update on its Espigão Polymetallic project (“Espigão” or the “Project”). The Company’s programs have continued at Espigão in parallel with its acquisition of the Cabaçal Copper-Gold project. Geochemical results have been received for all 779 soil samples on licence 886303/2009 in the NW quadrant of the Project area. Positive results continued to be delivered, with the footprint of key pathfinder elements greatly expanded, and further bedrock conductors modelled from the Company’s 2015 HeliTEM® survey.

Highlights of results to date are:

- Expanded and “open” polymetallic soil anomalies defined at Espigão over 4km by 8 km survey corridor;
- 11 new Electromagnetic Magnetic (“EM”) conductive plates modelled;
  - EM Conductors are co-incident to soils anomalies and copper DDH intersections;
  - Including DDH\_EM\_012: 19.50m @, 0.16% Cu 1.05% Pb & 19.9% MnO<sub>2</sub>, from 47.65m.
- EM clusters align to structural trends/extensions of surface hydrothermal vein systems;
  - Eight of the EM conductors have strike lengths extending past 750m in length
  - EM plates can have depth extents exceeding past 600m; and
- Latest geochemical and geophysical results strengthen IOCG prospectivity.

Results reported are from the initial survey lines in the Eduardo Mendes prospect area. Sampling has been conducted on 800m spaced north-south lines, with samples spaced at ~50m intervals, collected from the B-soil horizon. The purpose of the sampling and modelling has been to trace the structural extensions to the known prospects, to develop geochemical exploration vectors to rank targets, and to refine and prioritize targets based on bedrock geophysical signatures. The results of the soil sampling have exceeded the Company’s expectations, as it was expected that the soil anomaly would be restricted to within, known, narrow structural/conductive corridors, 100 to 200m in width. The survey results expanded this to extend over 8km along strike by ~4km across strike, while remaining open in all directions.

The Company has received the first results of modelling the 2015 EM data for the Califórnia, Calça Frouxa and Eduardo Mendes prospects. 11 EM clusters have been defined with significant individual Maxwell plates modelled that are now known to underly extensive surface and open polymetallic and pathfinder soil anomalies.

Licence 886303/2009 hosts the Califórnia, Calça Frouxa and Eduardo Mendes prospects, part of a system of structures associated with hydrothermal copperiferous, manganeseiferous and ferruginous vein, stockwork and breccias within the project area (Figure 1a, b). The principal ENE-orientated structural corridor at Eduardo Mendes aligns with a corridor of recessive weathering, where the land surface has been incised below a broader lateritic plateau. Prominent NE-trending valleys may represent cross-structures and are

known to carry traces of detrital gold<sup>1</sup>. Internal zones of depressed results are interpreted to be related to the thick surface lateritic layers present on the plateau's top.

The Company considers the Espigão hydrothermal system to have intrusive-related / IOCG characteristics based on geophysical data, and geochemical responses from historical shallow drilling, and indicator minerals detected in stream surveys<sup>1</sup>. The current geochemical program is using an expanded multi-element suite (ALS Minerals scheme AuME-TL43), to develop better targeting tools for this zoned hydrothermal system.

Results from the soil survey program continue to exceed expectations, with broad signatures of multiple elements aligned with the principal structures, subsurface EM conductivity clusters and forming a broader halo, confirming the dynamic nature of the hydrothermal system. The wide scale of the multielement signature is evident in Figure 2. The ENE structural trend corresponds to peaks in various key elements, particularly Copper ("Cu"), Lanthanum ("La"), Manganese ("Mn"), Lead ("Pb"), Zinc ("Zn"). Elements extending more broadly into a halo around the corridor (beyond the limit of historical drilling) include Silver ("Ag"), Cadmium ("Cd"), Cerium ("Ce"), Cobalt ("Co"), Barium ("Ba") and Cesium ("Cs").

A series of geophysical targets have now been defined which show variation in the overlying trace element signatures consistent with partitioning in a dynamic hydrothermal system. The targets are as follows:

- 1) Eduardo Mendes: Conductor 750m long by x 550m deep; vertical, striking to the ENE (~062). Conductivity-thickness of 3. The position corresponds with a known hydrothermal centre from which past extraction of manganese mineralization was undertaken. Concentrates were particularly anomalous in base metals (on average 0.22% Cu). The oxides extend to depth, with results from prior shallow drilling at the prospect including DDH\_EM\_012: 19.50m @, 0.16% Cu 1.05% Pb & 19.9% MnO<sub>2</sub>, from 47.65m. The soil response across and long strike from the conductor show anomalies in Pb, Zn, Ag, Cu, La, Mn, Cd.
- 2) Califórnia East #1: Conductor 800m long by x 500m deep; dipping 80° to the SE (164). Conductivity-thickness of 1.3. Marked by more discrete response in La, Ag, Cu. Northern flank marked by low-level anomalies in Te, Sb, As W.
- 3) Califórnia East #2: Conductor 500m long by 400m deep; dipping 80° to the SE (164). Conductivity-thickness of 1.4. Associated with Ag-As-Sb-Se-Ce-La response, with Te, Sb extending to the northern flank.
- 4) Califórnia East #3: Conductor 1000m long by x 600m deep; dipping 85° to the SE (164). Conductivity-thickness of 0.5. Western projection of Califórnia East #1 Conductor. Crossed by soil line on western margin which shows more subtle response but with projection of the anomaly and structure still marked by a copper response above background.
- 5) Califórnia Central #1: Conductor 1000m long by x 500m deep; dipping 72° to the SE (150). Conductivity-thickness of 1. Suggestions are also present of a northerly trending conductor but the response is cryptic due to line orientation. Discrete soil response over anomaly defined in Cu, Pb, Bi, W, La and low-level As-Au. Projects from trend of surficial cuperiferous manganese oxide veins.
- 6) Califórnia Central #2: Conductor 1000m long by x 600m deep; dipping 60° to the south. Conductivity-thickness of 0.9. The soils show a more discrete soil response in Cu and Pb. The conductor projects from trend of surficial cuperiferous manganese oxide veins observed at

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<sup>1</sup> Meridian Mining announcement of May 18, 2020.

surface, with shallow drilling on the western margin returning 4.45m @ 37.7% MnO<sub>2</sub>, 0.19% Cu, 1.22% Pb, 223ppm Zn from 17.5m (DDH\_ADE\_002)

- 7) Califórnia West: A wide diffuse shallow conductive response at the western end of the survey area appears to be a flat-lying regolith feature. It has a subdued geochemical response in soils, although Te is elevated over the position and the development of the zone may reflect deeper weathering channelled along the same structure.
- 8) Calça Frouxa Trend West #1: conductive response modelled as a series of plates 365m - 800m long by 87 - 316m deep; vertical, striking to the ENE (~071). Conductivity-thickness of 2 – 8.7. The southern plates have a response in Cu, Ag, Cd, Cs, and Zn.
- 9) Calça Frouxa Trend West #2: conductive response modelled as a series of plates 1000 - 1095m long by x 200-600m deep; vertical, striking to the ESE (100). Conductivity-thickness of 0.8 – 1.75. Western flank shows increasing levels of Zn, La, Ag.
- 10) Calça Frouxa Central: conductive response modelled as a series of plates 1000m long by 200-250m deep; vertical, striking to the ENE (~72). Conductivity-thickness of 4.7 – 5.1. Projects from trend of surficial cuperiferous manganese oxide veins. Associated with soil response with Cu, Ag, Mo, Sb, Te and low level Au. Shallow encountered stockwork veins, without being deep enough to traverse the footprint of the anomaly. Individual veins shoed base metal enrichment (e.g. DDH\_CF\_008: 0.35m @ 66.4% MnO<sub>2</sub>, 0.22% Cu, 1.26% Pb, 160ppm Zn from 10.3m)
- 11) Calça Frouxa North: Conductor 750m long by x 500m deep; dipping 65° to the SE (163). Conductivity-thickness of 0.6. Corresponds with subtle discrete Cu, , La, Co, Zn anomaly, with elevated broader Sb-Te.

Dr Adrian McArthur, CEO, states, “With its advanced Copper-Gold resource delineation project at Cabaçal combining with these exciting results at our project in Espigão, Meridian, is now well on its way to become the focus of investors looking for exposure to both stable resource development and the excitement of discovery via exploration in the Copper-Gold space. Released today, these defined soil anomalies coupled with the newly modelled EM conductors have added extremely valuable context to the prospectivity for exploration and discovery at Espigão. The Company will now complete its assessment of the geochemical and geophysical responses at the other Espigão targets to order and rank all targets for the subsequent gravity survey and drill program in 2021.”.

### ***Marketing services agreement***

The Company also wishes to announce that it has engaged 121 Group Ltd provision of marketing services, for which Meridian will pay 121 GROUP USD \$3,500 per month for an initial 6-month period, renewable every month thereafter.

**Figure 1a (top):** Overview of structural arrays on the project area. **Figure 1b (bottom):** soil survey over HelITEM conductivity with maxwell plates.

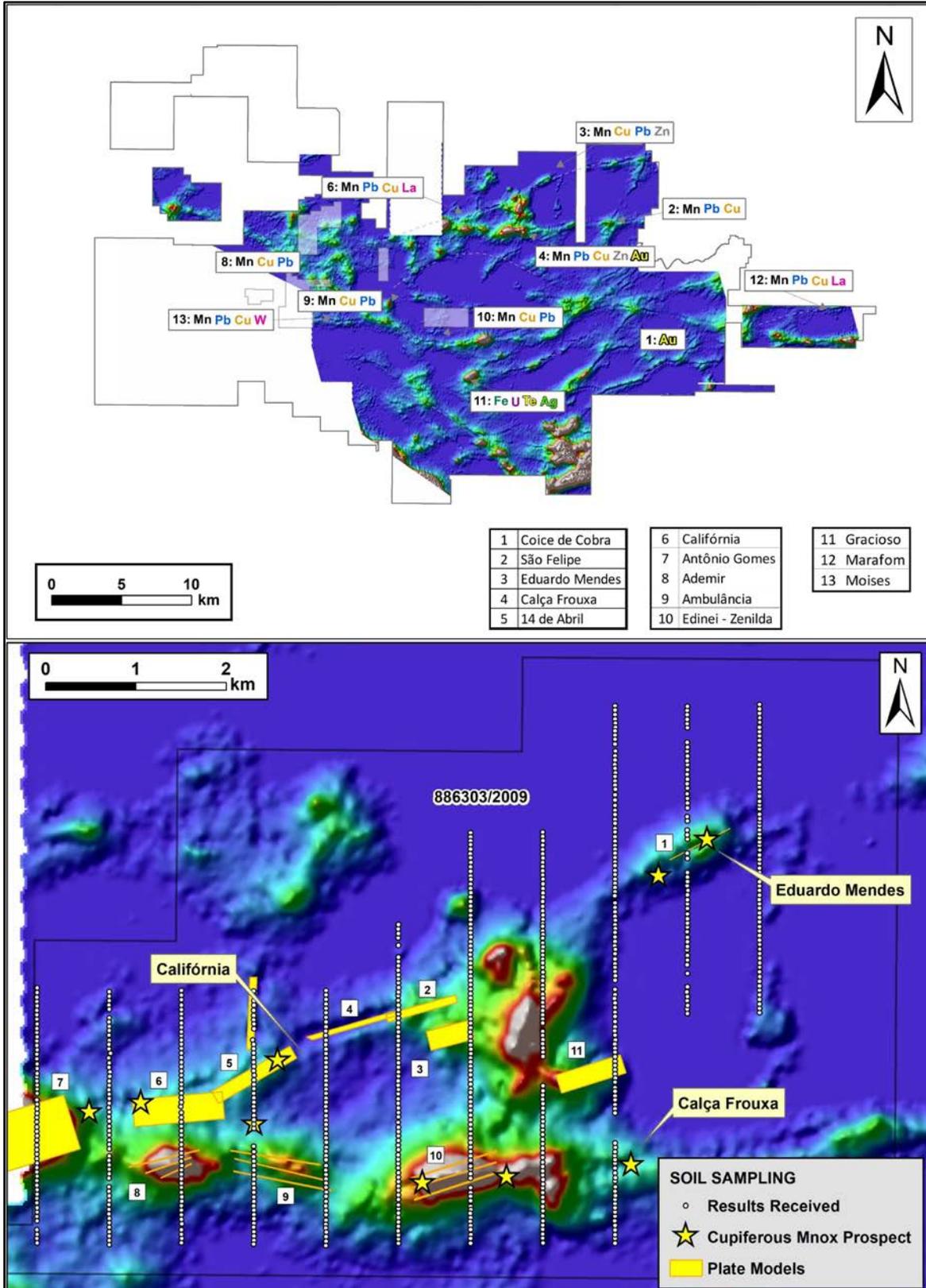


Figure 2a: Eduardo Mendes multielement data: Au, Ag, Cu, Zn, Pb & Co

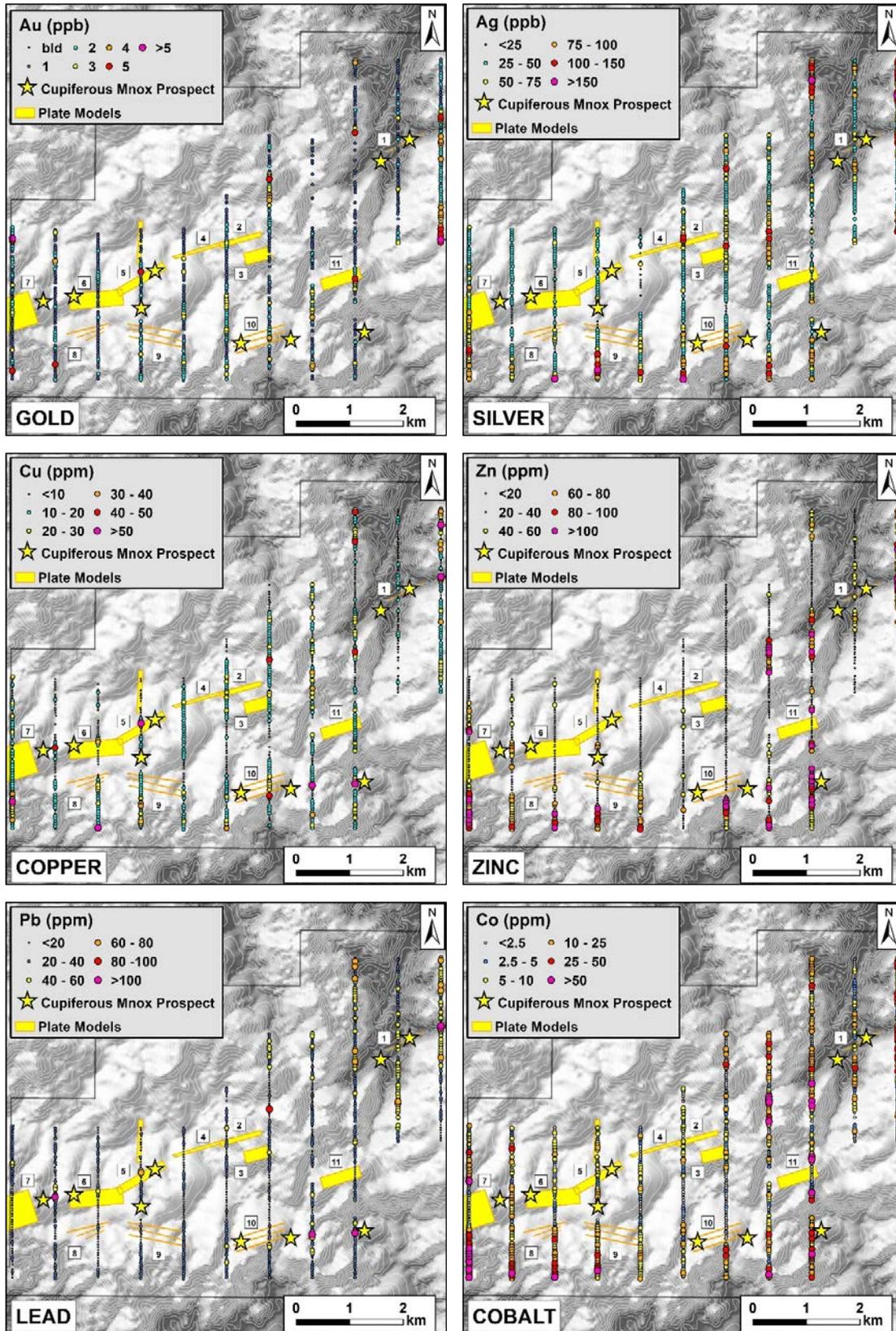
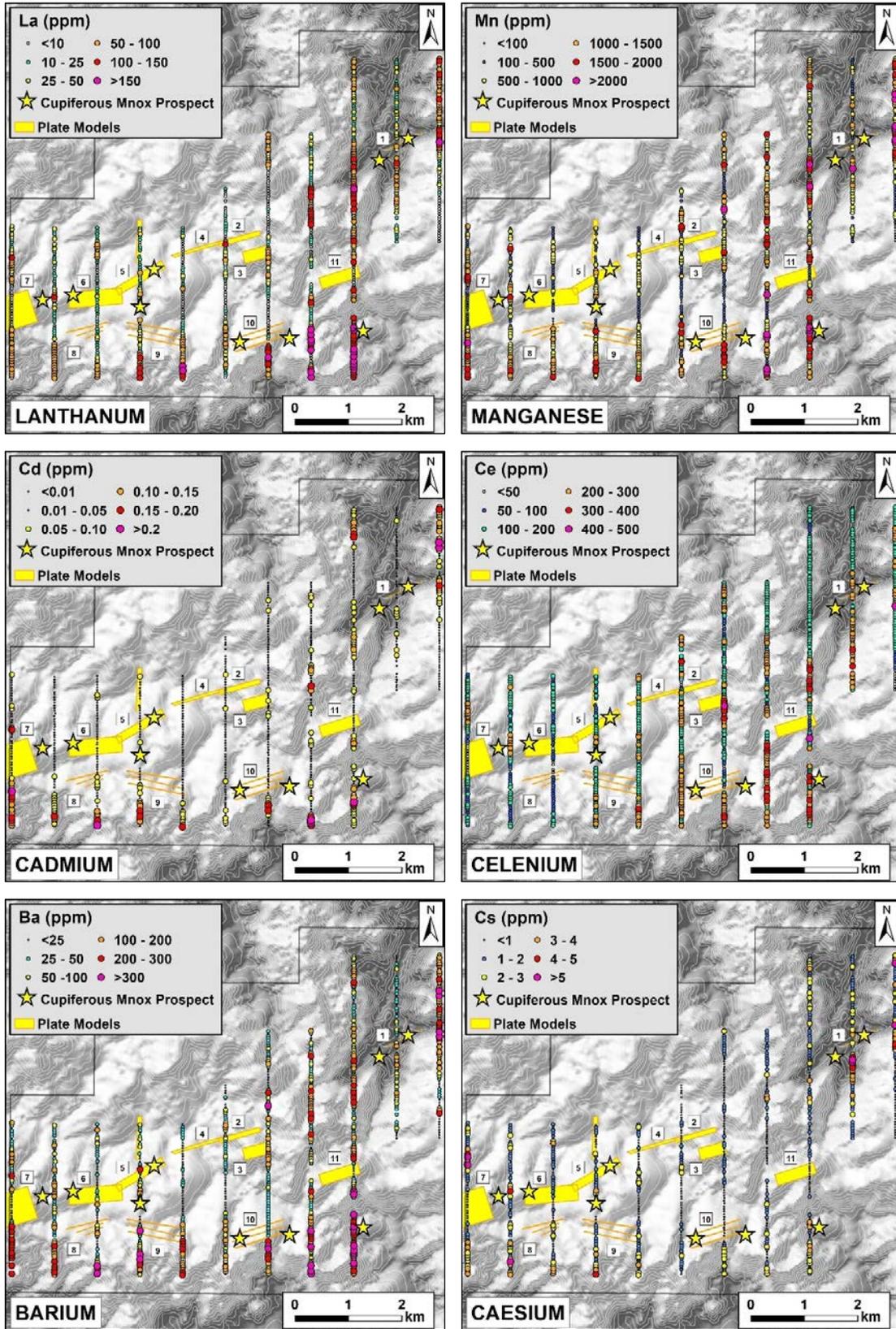


Figure 2b: Eduardo Mendes multielement data: La-Mn-Cd-Ce-Ba-Cs



## QUALIFIED PERSON

Dr. Adrian McArthur, B.Sc. Hons, PhD. FAusIMM., CEO and President of Meridian Mining as well as a Qualified Person as defined by National Instrument 43-101, has supervised the preparation of the technical information in this news release.

On behalf of the Board of Directors of Meridian Mining SE

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## NOTES

*Samples are collected from the B-soil horizon by means of a hand auger. Samples are stored securely on the Company's premises before dispatch by commercial courier to ALS preparation facilities in Goiana. Analysis is conducted at ALS Laboratories in Lima, Peru by method code AuME-TL43, a 51 gold and multi-element package designed for soil and stream geochemistry by Aqua Regia digest and ICP-MS and ICP-AES finish. Results are monitored by laboratory and company quality control programs.*

## ABOUT MERIDIAN

Meridian Mining SE is focused on the acquisition, exploration, development and mining activities in Brazil. The Company is focused on exploring and developing the camp scale Cabaçal copper-gold VMS project in the state of Mato Grosso, the Espigão copper-gold polymetallic exploration project, and the Mirante da Serra manganese project in the state of Rondônia, Brazil.

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## FORWARD-LOOKING STATEMENTS

Some statements in this news release contain forward-looking information or forward-looking statements for the purposes of applicable securities laws. These statements include, among others, statements with respect to the Company's plans for exploration, development and exploitation of its properties and potential mineralisation. These statements address future events and conditions and, as such, involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the statements. Such risk factors include, among others, failure to obtain regulatory approvals, failure to complete anticipated transactions, the timing and success of future exploration and development activities, exploration and development risks, title matters, inability to obtain any required third party consents, operating risks and hazards, metal prices, political and economic factors, competitive factors, general economic conditions, relationships with strategic partners, governmental regulation and supervision, seasonality, technological change, industry practices and one-time events. In making the forward-looking statements, the Company has applied several material assumptions including, but not limited to, the assumptions that: (1) the proposed exploration,

development and exploitation of mineral projects will proceed as planned; (2) market fundamentals will result in sustained metals and minerals prices and (3) any additional financing needed will be available on reasonable terms. The Company expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise except as otherwise required by applicable securities legislation.

The Company cautions that it has not completed any feasibility studies on any of its mineral properties, and no mineral reserve estimate or mineral resource estimate has been established. Geophysical exploration targets are preliminary in nature and not conclusive evidence of the likelihood of a mineral deposit.

The TSX Venture Exchange has neither approved nor disapproved the contents of this news release. Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

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