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## Meridian Reports Modelling on Airborne Geophysical Data

### *Large EM plate defined at Ervino Target*

May 25, 2020 - Meridian Mining SE (TSXV: MNO) ("Meridian" or the "Company") today reports on the recent result of renewed modelling of HeliTEM data within the Espigão Cu-Au polymetallic project in Rondônia, Brazil. The Company engaged Core Geophysics to generate a Maxwell plate model of a large conductive anomaly at Ervino. The modelling has defined a significant Electromagnetic ("EM") plate located at the intersection of E-W and NW-SE mineralized structural trends, coincident with an underlying magnetic anomaly (Figure 1).

Highlights of the Ervino plate modelling results:

- The Ervino prospect hosts a large EM plate modelled to be 800m strike, 1000m dip extent dipping at 65° and a plunge direction of 187.5°;
- The Ervino EM plate is located above an extensive magnetic anomaly.
- The target is situated at a favourable structural setting, with NW structural trend projecting towards the Gazetta gold target, and the E-W and NW-SE trends associated with cupriferous manganese vein and stockwork systems.
- Immediate flanking areas assayed 0.21% Cu, 0.07% Pb, to a peak of 0.32% Cu, 0.32% Pb in manganese concentrates.
- The result provides a strong Justification for processing the remaining 80% of 2015 HeliTEM conductive clusters to produce Maxwell plates to guide and prioritize targeting.

### **Ervino Target**

The Ervino target represented one of the 45 additional conductive clusters of various strengths to be modelled within the Espigao Cu-Au Project (Figure 2). Ervino is located in the western branch of the central mining lease. Manganese oxide concentrates have been extracted from colluvial mineralisation at the Ervino property, and adjacent properties (Jair, Alecino). The colluvial mineralization is distributed over an area of ~300 x 600m to the west, and ~ 120 x 570m to the east, with some historic extraction at Ervino (of unknown extent). Two shallow holes (DDH\_JM\_001, DDH\_JM\_002) were drilled to depths of 41 and 39m respectively (~31 mbs), intersecting cupriferous manganese stockwork 220m and 270m west of the conductor.

The conductor lies at a structural intersection – a favoured setting for focussing of hydrothermal fluids and intrusions (Figure 3). A corridor fanning out to the northwest is associated with the Ademir Curral Prospect, and gold in stream anomalies in the Gazetta area ~ 9km to the NW. Cupriferous manganese mineralization has also been extracted over periodic showings over a corridor extending 4km west of the Ervino target and extensions to the SW as it merges with the cross-structural trend.

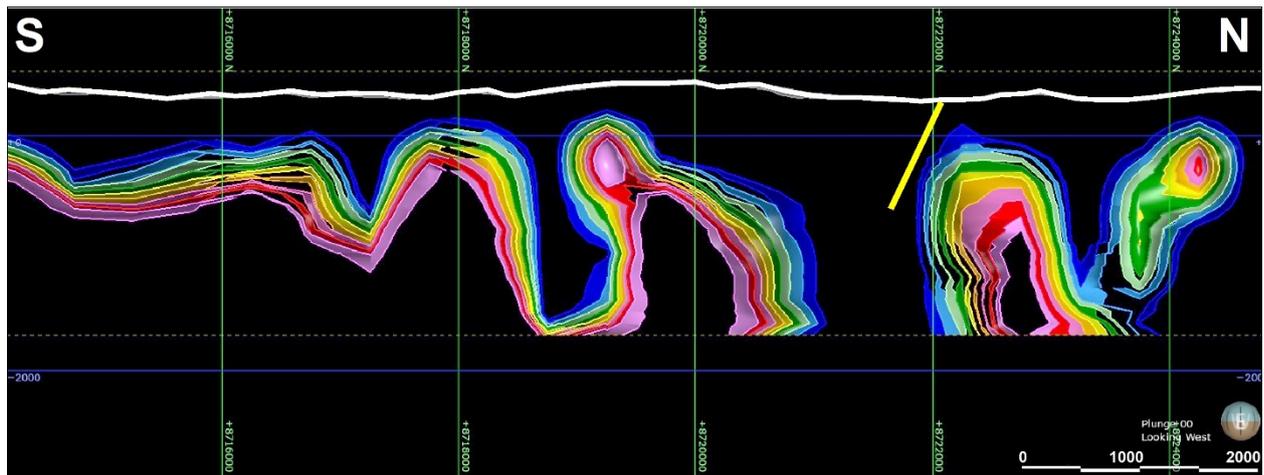


Figure 1: Section of Ervino Conductor, looking west on 743300 E. Contoured coloured shells, represent iso-surfaces of increasing magnetic intensity with progressively warmer colours, from 0.1 – 1 SI units. Ervino EM plate is yellow line dipping to the south. The white line is the surface

Mr Clark states, “This one example of an EM conductivity cluster being modelled has returned a strong result for the targeting of blind Cu-Au systems at the prospective Espigão Polymetallic Project. To have a strong EM result from data acquired in 2015 is a great result and the Company is very thankful to Core Geophysics for the work they have done. The Espigão Project shows strong indications of a large-scale zoned hydrothermal system, with extensive stream and soil gold anomalies, cupriferous manganese veins, and EM plates and magnetic anomalies coincident with the structural corridors. Following the capital raising, we look forwards to testing the potential of the system at depth.”

### Espigão Cu-Au Project

The Espigão region has operated for some years as a producer of high-grade hydrothermal manganese. A multi-element database of manganese concentrate chemistry has progressively expanded over recent years, coupled with data from exploration and pre-production programs. A characteristic of the concentrates is that they are enriched in copper (>0.2% Cu), with variable contents of other base metals. The peak copper content from XRF analysis on a concentrate is 1.02% CuO (taken from a 25t pile concentrate pile from the Antonio Gomes region). Other metals become progressively enriched from south to north through the project<sup>1</sup>. Two main gold in stream and soil anomaly clusters have been defined<sup>2</sup>, with several satellite stream anomalies requiring further follow up. The exploration priority for the Company is now focussed on testing a zoned mineralization model, with base-metal enriched manganese veins being a characteristic of hydrothermal systems, developed in the carapace and peripheral settings to porphyry Cu-Au systems, and iron-oxide copper-gold (IOCG) systems such as the Kitumba deposit in the Mumbwa district of Zambia.

<sup>1</sup> Meridian News Releases of November. 8, 2018; June 12, 2019,

<sup>2</sup> Cancana News Release July 19, 2016

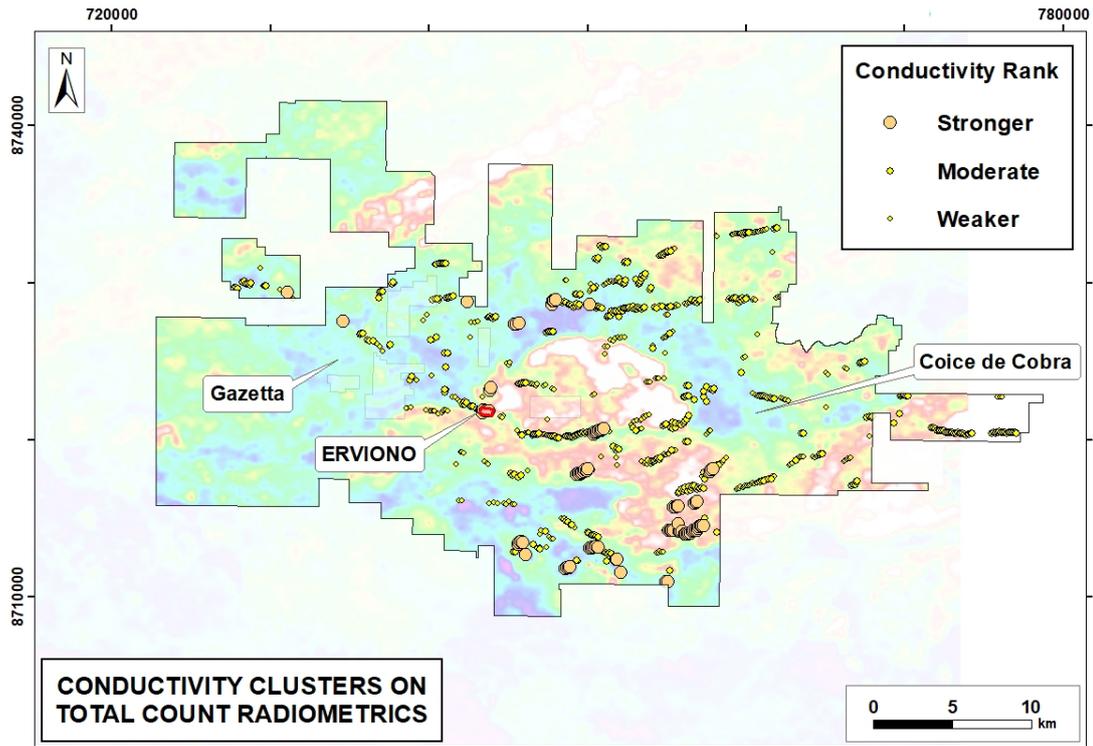


Figure 2: Setting of the Ervino conductor in relation to conductivity clusters of the Espigão Project, which are associated with cupriferous manganese oxide occurrences at surface. Also shown are the position of the Gazetta and Coice de Cobra Gold Prospects. Note that some licences on the northern and western flank of the project lacking anomalies have not been covered by the HelITEM survey.

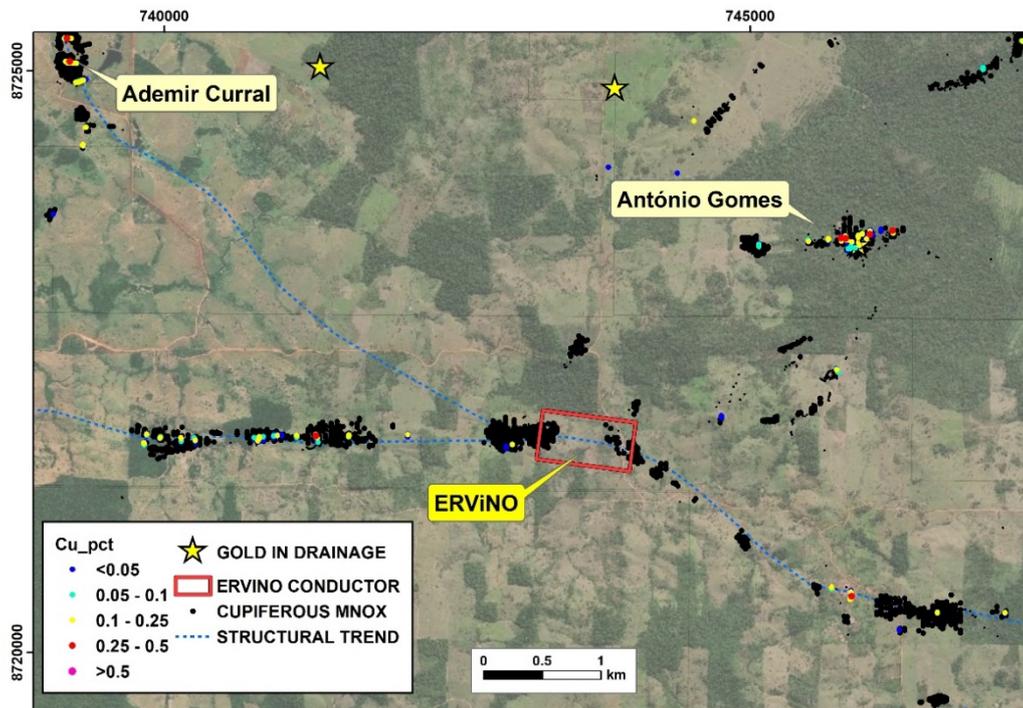


Figure 3: Local setting of Ervino Target EM plate in plan view, with surrounding cupriferous manganese occurrences defined from mapping and colluvial mining activities. Copper assay data in drilling in trenching is plotted where present. Stream sediment gold occurrences are represented by gold stars.

## **HeliTEM Airborne Survey**

The HeliTEM survey was flown in 2015 by LASA Prospecções S.A. / Compagnie Générale de Géophysique-Veritas (“CGG”) and is an advanced broad-spectrum helicopter electromagnetic system with an ability to measure conductive bodies at depth. In total a 7,300-line kilometre survey was flown on a 100-metre spacing across the Espigão project. Prior data processing including 2-D gridding and conductivity depth slices inversions. Only 9 (approximately 15%) of the conductive clusters were modelled a Maxwell plates. Historical drilling was principally focussed on shallow drill testing of manganese showings (average drill depth 40 meters below surface).

## **Next Steps**

The benefit of completing the modelling of all the Espigão’s EM conductive clusters is that it provides a prioritize targeting sequence for follow up programs of gravity surveys, surface EM surveys and future drill programs. The Company is encouraged further by these recent (2019-2020) results of associating the EM data, the base metal and gold in soil anomalies, and drill results with data acquired from trial 2015 gravity surveys. A trail gravity survey conducted north-west of Ervino at Ademir Curral indicated a strengthening Bouguer anomaly open to the south southeast. As Meridian moves forward with its post capital raising exploration programs, a gravity survey is priority to understand the geometry of the sub-surface EM conductivity and its potential association with an intrusive related system. Following closure of the current financing, the Company will expand work programs focussed on testing the polymetallic potential of the Espigão Cu-Au Project. Activities planned include:

- Data processing of the remaining conductivity clusters to generate Maxwell plate models; integration of results with magnetic models.
- Expansion of multi-element surface geochemical program and mapping along structural corridors.
- Refinement of drill targets with support from additional geophysical methods (gravity, ground-based TEM).

A presentation on the HeliTEM data can be downloaded from the Company’s web site.

Geophysical exploration targets are preliminary in nature and not conclusive evidence of the likelihood of a mineral deposit

On behalf of the Board of Directors of Meridian Mining SE

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## **NOTES**

*Positive visual identifications of gold in stream sediment pan-concentrates are cross-checked by mineralogical reports at SGS Geosol Laboratórios Ltda (Method Code ANACL\_MIN). Drainage sampling is undertaken from a 20-litre bucket of alluvium from the lower level of a stream channel. The technique is an indicator of minerals of exploration interest in the source area and is not referenced to grade. Gold in drill core and trenching has been analysed by at SGS in Belo Horizonte by methods FAA323 and FAA505 (fire assay of 30g / 50g charge), with samples containing visible*

*gold analysed by screen fire assay (SGS method FAASCR). Gold in soil samples have been analysed by at SGS in Belo Horizonte by method FAA505, with a selection of samples also analysed for multielement package by method ICP40B. Manganese and multi-element results have been in drilling and trenching along with some production samples have been analysed at SGS in Belo Horizonte by XRF techniques (XRF79C) for major oxides in mineralized zones, supplemented by multi-acid digest and ICP-OES analysis (ICP40B) in areas of trace mineralization or wall-rock alteration. Production samples have also been analysed at ALS Laboratories (Vancouver, Canada; Lima, Peru; method ME-XRF26), and Bureau Veritas (Perth, Australia; method XF203). Until dispatch, samples are stored in the company's supervised stockpile yard or exploration office.*

## ABOUT MERIDIAN

Meridian Mining SE is focused on the acquisition, exploration, development and mining activities in Brazil. The Company is currently focused on exploring and developing the Espigão polymetallic project, the Mirante da Serra manganese project and maintaining the Ariqueemes tin exploration portfolio in the state of Rondônia, Brazil.

Further information can be found at [www.meridianmining.co](http://www.meridianmining.co).

## FORWARD-LOOKING STATEMENTS

Some statements in this presentation 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. In particular, because the Company's production decision relating to Meridian Mineração Jaburi S.A, manganese project is not based upon a feasibility study of mineral reserves, the economic and technical viability of the Espigão manganese project has not been established

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