

# Geophysical Surveying by Malbex Expands Potential of Rojo Grande and Identifies New Drill Targets at Del Carmen Norte

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TORONTO, ONTARIO -- ([Marketwire](#) - Sept. 23, 2010) - [Malbex Resources Inc.](#) (TSX VENTURE: MBG) today announced that several new drill targets have been identified in geophysical surveys completed during the most recent field campaign at the Company's Del Carmen Norte gold-silver prospect in San Juan province, Argentina. The controlled source audio-frequency magnetotelluric (CSAMT) survey identified substantial volumes of elevated resistivity, which are typically associated with zones of hydrothermal silicification, the principal host of gold-silver mineralisation in high-sulphidation epithermal deposits. The survey clearly identified enhanced resistivity at the Rojo Grande target where drilling by Malbex discovered significant widths of near-surface gold-silver mineralisation in the 2009/2010 field program. A ground magnetic survey was also completed across the visibly altered area at Del Carmen Norte (Figure 1).

## Highlights from the geophysical surveys at Del Carmen Norte are:

- \* Extensive CSAMT resistivity anomalies including
  - o elevated resistivity coincident with outcropping silicification and gold-silver mineralisation at Rojo Grande, where drill hole 32 intercepted 142.15 metres (m) grading 0.88 grams per tonne (g/t) of gold (Au) and 13.7 g/t silver (Ag) in vuggy silica, massive silicification and quartz-alunite alteration;
  - o a large resistivity anomaly, interpreted to indicate strong silicification, that is up to 1,200 metres wide and extends over 1,000 metres southwest from Rojo Grande to and beneath the steam-heated hydrothermal alteration at Cerro Amarillo; and
  - o discrete anomalies beneath Quebrada Pedregosa and Quebrada Del Medio that flank the central massif of alteration.
- \* The ground magnetic survey reveals
  - o an asymmetric magnetic low (2km x 3km) in the core of the altered area, which hosts the prospective Rojo Grande and Naciente Quebrada Pedregosa targets (based on longer and more significant drill intercepts in the 2009/2010 field program). This low is interpreted to reflect magnetite destruction by intense epithermal alteration; and
  - o the magnetic low is enveloped by semi-continuous magnetic highs (and relatively unaltered rocks), with other previously drilled targets (Cresta del Gallo, Brecha Limite, etc.) occurring along the outer margin of the magnetic low.

"We are very pleased with the results of the CSAMT survey and the number of promising drill targets that it has generated," said Dr. Peter Stewart, Vice-President Exploration. "Particularly encouraging is evidence for a substantial volume of silicification at Rojo Grande and an even larger volume of silicification (elevated resistivity) that appears to extend from Rojo Grande southwest towards and below the steam-heated zone at Cerro Amarillo (Figure 1). The potential of this latter area was highlighted recently by Dr. Richard Sillitoe following his visit to Del Carmen Norte. Given the encouraging results from our recent drilling at Rojo Grande and Naciente Quebrada Pedregosa, we look forward to drill testing these and other geophysical features when our field program resumes in October."

A separate document containing the figures referenced in this release is available at [www.malbex.ca](http://www.malbex.ca).

Geophysical surveying completed by personnel from Quantec Geoscience Argentina S.A. (Quantec) between January and April 2010 consisted of:

- \* 127.25 line-kilometres (l-km) of ground magnetic surveying on 100 m line spacings with readings taken every 10 m, and
- \* 14.1 l-km of CSAMT surveying on five lines separated by 400 m with measurements taken every 50 m along the surveyed lines (Figure 2).

The data processing and reporting was carried out by Quantec personnel. The Quantec report is not a "Technical Report" as defined by NI 43-101 but summarizes the survey methods, survey results and

provides Quantec's interpretation of results for the geophysical surveys at Del Carmen Norte. The complete report (in Spanish), entitled "Informe de Interpretación, Estudio de Magnetometría y Audio Magnetotelúrica con Fuente Controlada, Proyecto Del Carmen", is available at [www.malbex.ca](http://www.malbex.ca). Geophysical survey data collected in the 1990's by the previous operator of exploration at Del Carmen Norte was also re-processed by Quantec prior to the study reported here. Most significantly, the historic surveys included resistivity/induced polarization (IP) data for Rojo Grande and the central massif (Figure 2).

## Magnetic Survey

The ground magnetic survey was aimed principally at identifying:

- \* areas of low and moderate magnetic signature that likely result from the destruction of magnetic minerals (principally magnetite) by hydrothermal alteration of the host andesitic volcanic rocks; and
- \* abrupt truncations and lineations within the gridded magnetic data that identify faults, fractures and other structures that may have localized hydrothermal flow and controlled sites of gold-silver mineralisation.

Five different images were produced from the magnetic survey data, including: total field, vertical field, inclination of the vertical derivative (second derivative), reduced to pole and analytical signal. High magnetic readings are shown in purple and red colours; low readings are shown in blue.

Three domains of magnetic character are identified in the reduced to pole image: high (Domain I), low (Domain II), and moderately to strongly reduced magnetic character (Domain III) (Figure 3). NE-SW and NNW-SSE lineaments within domains and defining domain boundaries likely represent fractures and faults. Small variations in magnetic character indicate N-S structures may also be present within the strongly altered central region (Domain II + III, as best seen in the second derivative image, Figure 4).

The Rojo Grande silicified ledge lies in low to moderately magnetic Domain III. Brecha Límite, Brecha Límite Norte and Ladera Sur de las Tortólas targets occur at the northwest boundary of this domain. The large Domain II area of low magnetic character (and most intense hydrothermal alteration) contains the Quebrada Pedregosa and Naciente Quebrada Pedregosa targets, while the clearly fracture-controlled alteration and mineralization at Cresta del Gallo is aligned with the southeast boundary between Domain II and the relatively unaltered volcanic rocks of Domain I.

## CSAMT Survey

The processing of CSAMT data provides 2D resistivity sections that are colour contoured to illustrate changes in modelled resistivity (in ohm-m) for up to 500 m vertical depth. The most resistant areas are shown in white, having resistivity values about two orders of magnitude greater than the purple coloured, non-resistive (conductive) areas (Figures 5-9).

The ability of CSAMT surveys to identify hydrothermal silicification as regions of elevated resistivity is clearly demonstrated at Rojo Grande. Line 2600N shows a shallow NW-dipping strongly resistive region coincident with silicified outcrops and silicification in core from nearby drill holes (Figure 5), including hole 32. The silicified ledge at Rojo Grande is also visible as a shallow NW-dipping zone on the 2D resistivity section of line 2200N (Figure 6). The continuity of high resistivity (and silicification) between CSAMT lines is confirmed by the prior IP survey at Rojo Grande that found strong near-surface resistivity that extends northeast of line 2600N and across line 2200N to the southwest (Figure 10). The extent of the IP resistant zone is consistent with the distribution of reddish stained silicified outcrops (Figure 1).

The extensive area of low magnetic character (Domains II + III) is underlain principally by large resistive regions that appear to coalesce and widen to the southwest toward the international border and steam-heated alteration zone. These rise from 300 m deep on line 2600N to the surface by line 1800N where resistive, steam-heated siliceous alteration is underlain by a very strongly resistive region over 1 km wide (Figure 7). The presumed NE trending fault zone that separates Domain II from unaltered magnetic rocks to the southeast coincides roughly with the Quebrada Pedregosa drainage which is underlain on all surveyed lines by resistive bodies, possibly representing hydrothermal siliceous breccias in sub-vertical feeder structures. The resistivity anomalies (and localized vertical conductive panels) beneath the steam-heated zone and upper reaches of Quebrada Pedregosa on lines 1400N and 1000N are probable vertical fault zones (Figures 8,9). Smaller, sub-vertical zones of silicification exposed on surface at Cresta del Gallo, 10-30 m wide and drill tested, are not evident in the CSAMT survey data but may represent small structures extending from the larger resistive zones at depth nearby (see Figures 5,6).

## Conclusions and drill targets

The magnetic survey at Del Carmen Norte defined a large magnetic low area centred on the massif of visibly altered rocks between Quebrada del Medio and Quebrada Pedregosa, most likely caused by widespread magnetite destruction and diminished magnetic signature in the altered volcanic rocks. While magnetic patterns indicate mainly NE and NW trending structures which may have influenced hydrothermal activity, more subtle magnetic features suggest N trending structures may also be present. Intersection points of fractures at different orientations are interpreted to be most prospective for enhanced hydrothermal flow, and the formation of breccias and associated higher grades of gold-silver mineralization within the large alteration system.

The CSAMT and IP surveys have demonstrated the ability to distinguish zones of silicification as resistive anomalies. The extensive resistive anomalies, both near-surface and in the subsurface, in the domains of lower magnetic and altered character, clearly constitute promising future drill targets. The main targets to be drill tested are:

- \* the silicified ledge at Rojo Grande – silicified outcrops, CSAMT and IP data identify a shallow-dipping NE-SW striking sheet, 800 m long by up to 400 m wide and 200 m in vertical height (A, Figure 1);
- \* the core of the altered massif (southwest of Rojo Grande) – the large subsurface resistive zone seen at depth on line 2200N (Figure 6) is up to 1.2 km wide on 1800N and 1400N, and apparently continues for over 1,000 metres to the southwest beneath the steam-heated zone at Cerro Amarillo (B, D and C, Figure 1); and
- \* multiple near-surface and subsurface resistive zones beneath the Quebrada del Medio and Quebrada Pedregosa drainages (E and F respectively, Figure 1).

The initial focus of the upcoming drill program at Del Carmen Norte will be to follow up the encouraging intersections in holes 20 and 32 (plus others) at Rojo Grande, by attempting to define horizontal and vertical continuity of mineralization and the geological and structural controls on mineralization. Malbex has initiated 3D modelling of all geological, geophysical and previous drilling using the digital elevation model derived from Jan-Feb 2010 satellite imagery. The modelling will identify those resistive sectors and fractures in the large alteration system that are most strongly mineralized, or were untested or incompletely tested in previous drill campaigns.

Dr. R. Sillitoe noted porphyry-style veining in clasts in hydrothermal breccia at Naciente Quebrada Pedregosa (PR of June 24, 2010). The very large resistive zone that underlies the steam-heated zone and other parts of altered massif southwest of Rojo Grande (anomalies B,C and D in Figure 1) is considered highly prospective for high-sulphidation mineralization similar to that at Pascua-Lama and at depth for Au-Cu porphyry mineralization similar to deposits in the Chilean Maricunga Belt (Cerro Casale, Caspiche). The premise is that elevated CSAMT resistivity reflects widespread subsurface silicification and/or quartz veinlet stockworks and breccias.

Subsurface resistivity anomalies appear to be continuous for >800 m strike length in the uppermost Quebrada del Medio and flanking most of Quebrada Pedregosa (anomalies E and F in Figure 1). Once completed, the 3D model is anticipated to provide improved drill targeting of mineralization intersected in holes 23 and 24 at the Naciente Quebrada Pedregosa target and elsewhere beneath Quebrada Pedregosa and the southern edge of the central massif of alteration.

## **Del Carmen Geology and Work Program**

The 147 km<sup>2</sup> Del Carmen concession package is located near the southern end of the El Indio Gold Belt, and hosts the Del Carmen Norte and Del Carmen Sur hydrothermal alteration systems. Del Carmen Norte is a large high sulphidation epithermal gold-silver system that covers approximately 9 km<sup>2</sup>. The initial interpretation of the geology at Del Carmen Norte is of a generally sub-horizontal volcanic stratigraphy where lithologies favourable for silicification and mineralisation are sandwiched between less favourable volcanic layers, and cut by steep faults that strongly influenced hydrothermal fluid flow. In addition to the geophysical surveys, 4,710 m (32 holes) of diamond drilling, mapping and rock chip sampling were completed at Del Carmen Norte in the 2009/2010 field campaign.

A second, less exposed, high sulphidation epithermal system occurs at Del Carmen Sur some 5 km to the south of Del Carmen Norte. Geological mapping, sampling and mechanical trenching were conducted at Del Carmen Sur in the 2009/2010 field season.

Peter Stewart, PhD, Vice-President Exploration of Malbex Resources Inc., is a Professional Geoscientist in the Province of Ontario, and is the Qualified Person as defined by NI 43-101 responsible for the technical information presented in this news release.

## About Malbex

Malbex Resources Inc. is a gold exploration company led by experienced management and directors. Malbex holds an indirect 100% interest in three exploration projects in Argentina's El Indio Gold Belt, which hosts over 40 million ounces of gold in past production and current reserves. Two of the projects are in close proximity to [Barrick's](#) Veladero and Pascua-Lama gold deposits. For more information, please visit [www.malbex.ca](http://www.malbex.ca).

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