



# Ze Vermelho IP Survey Update

## ASX Announcement

23 December 2011

**Cougar Metals NL** is a Perth based exploration company listed on the Australian Securities Exchange (ASX:CGM).

The Company is focused on exploring the highly prospective Alta Floresta gold belt in central west Brazil, where it holds granted tenements covering an area in excess of 1,450km<sup>2</sup> and where past production is estimated at five million ounces of gold. Much of the immediate focus is centred on Ze Vermelho Gold Prospect where the Company has received numerous highly encouraging high grade gold assay results and where it is currently undertaking trial mining, which is providing important information about the structure and grade of mineralisation, whilst at the same time generating strong cash-flows from the treatment of the ore.

The Company also operates growing mineral drilling businesses in Brazil and Uruguay, providing surface diamond, reverse circulation and RAB drilling services to the rapidly growing South American mineral resource industry. The Company currently operates a fleet of 13 rigs with plans to grow this in the near future.

In addition, the Company also holds the mineral rights to the Pyke Hill Measured plus Indicated Resources of 14.7mt @ 0.9% Ni (March 2008).

#### Directors

Randal Swick – Chairman  
Jeff Moore – Director  
Paul Hardie – Director

#### Senior Management

Randal Swick – Managing Director  
Michael Fry – CFO & Company Secretary  
Jayme Leite – Exploration Manager

#### Capital Structure

Shares on Issue: 406,223,576  
52 week range: \$0.02 - \$0.11  
Last Price (21/12/11): \$0.064  
Market Capitalisation: \$25.9 million

#### Substantial Shareholders

Savvy Capital Management – 34.06%  
Marcia Swick – 19.61%  
Top 20 – 64.84%

## HIGHLIGHTS

- Updated imagery received from Induced Polarisation (IP) geophysical survey covering ~90% of the survey area to date.
- Numerous untested high priority gold targets interpreted by Company's geology team from recent IP survey imagery.
- Testing through excavation and bulk sampling undertaken on a target identified from IP imagery lying 50 metres to SE of Ze Vermelho returned 286g of gold at a mean gravity recovered gold grade of 24 g/t.
- Drilling program scheduled in January to test newly discovered gold bearing quartz vein and other recently generated targets.
- Time-domain electromagnetic (TDEM) geophysical survey to commence mid-January aimed to identify zones of massive sulphide.
- Interpretation of IP survey results by specialist underway and results expected in January.

Cougar Metals NL (ASX Code: CGM) is pleased to provide an update with respect to the IP Survey carried out over the Ze Vermelho Gold Mine and surrounding area.

The IP survey, conducted by Fugro-Geomag Brazil, consisted of 32,000 linear metres of closely spaced survey lines across the prospect area.

The survey is now complete and the Company has received imagery for ~90% of the data, with the remaining imagery and interpretation is expected in the new year.

Figure 1 below is an image of IP chargeability with the pink, red, orange colour scales evidencing anomalous zones above a low background. These anomalies are interpreted to represent higher concentrations of sulphide minerals which are commonly associated with gold deposition, down to a depth of about 100m. The north-west trending anomaly in the centre of the image corresponds to known gold mineralisation at the Ze Vermelho Gold Mine. This confirms that the IP chargeability response is identifying sulphide bearing zones and the usefulness of IP to assist with the targeting other potential gold deposits in the district.

Figure 2 is an image of IP apparent resistivity, with the white and light blue colour scales evidencing areas of elevated resistivity. An anomalous zone of elevated resistivity occurs over the known Ze Vermelho gold deposit in the centre of the image. This anomaly is interpreted to be related to quartz veining and silica alteration that hosts the gold and sulphide mineralisation, sitting in a background of more weathered and conductive host rocks. The other north-west trending linear zones of elevated resistivity may also be related to quartz veins containing gold, and therefore represent additional targets for follow up exploration work.

Per Dr Jayson Meyers, (a geoscientist engaged by the Company to analyse and interpret the IP and TDEM survey information): “the recent detailed IP survey has identified a number of chargeability and resistivity highs, some of which are coincident, that occur in unexplored areas in close proximity to the Ze Vermelho Gold Mine. The coincident north-west trending chargeability and resistivity highs represent what I consider to be high priority targets for testing by excavation and drilling.”

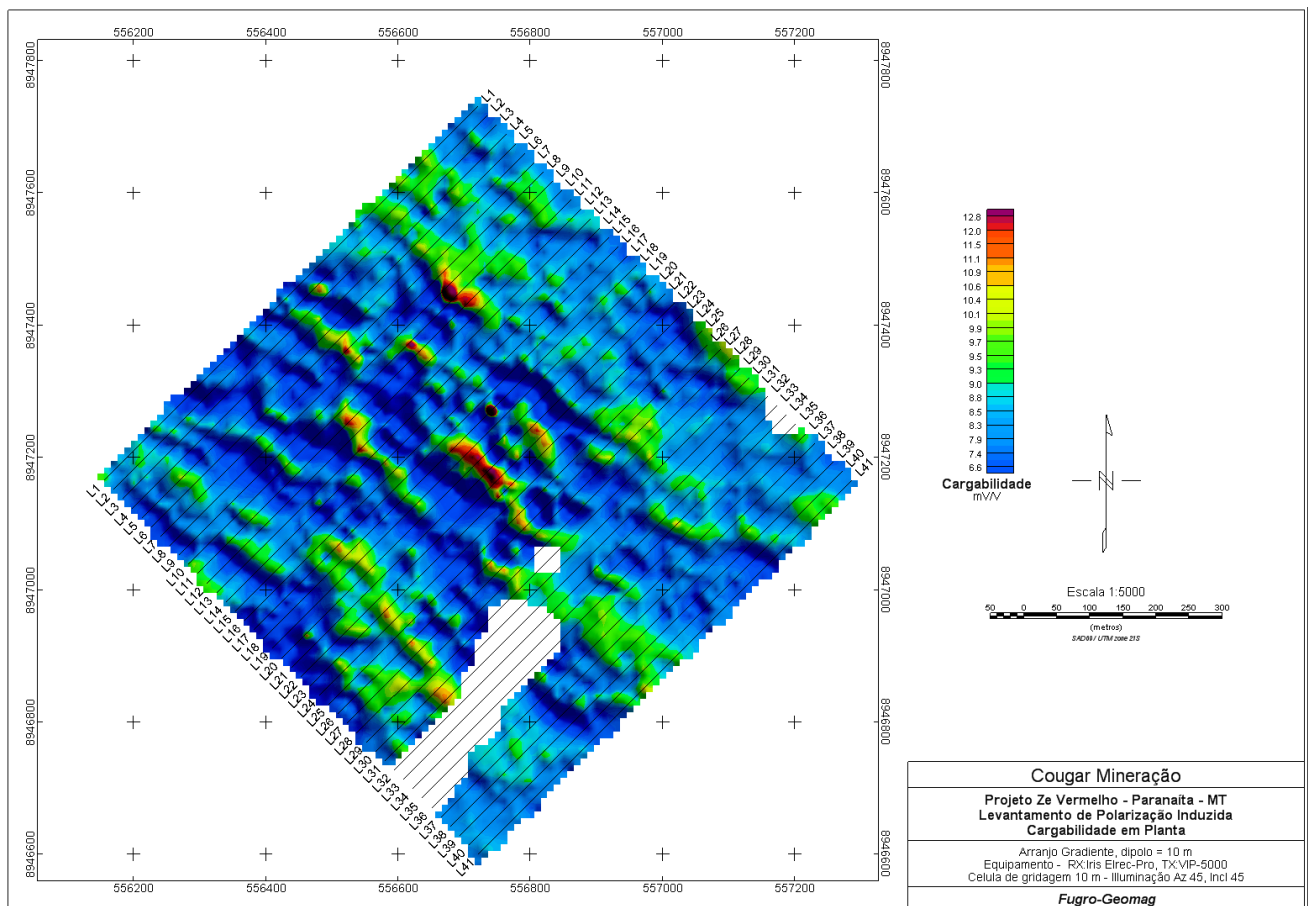


Figure 1: IP chargeability image and survey line locations from data collected over Ze Vermelho

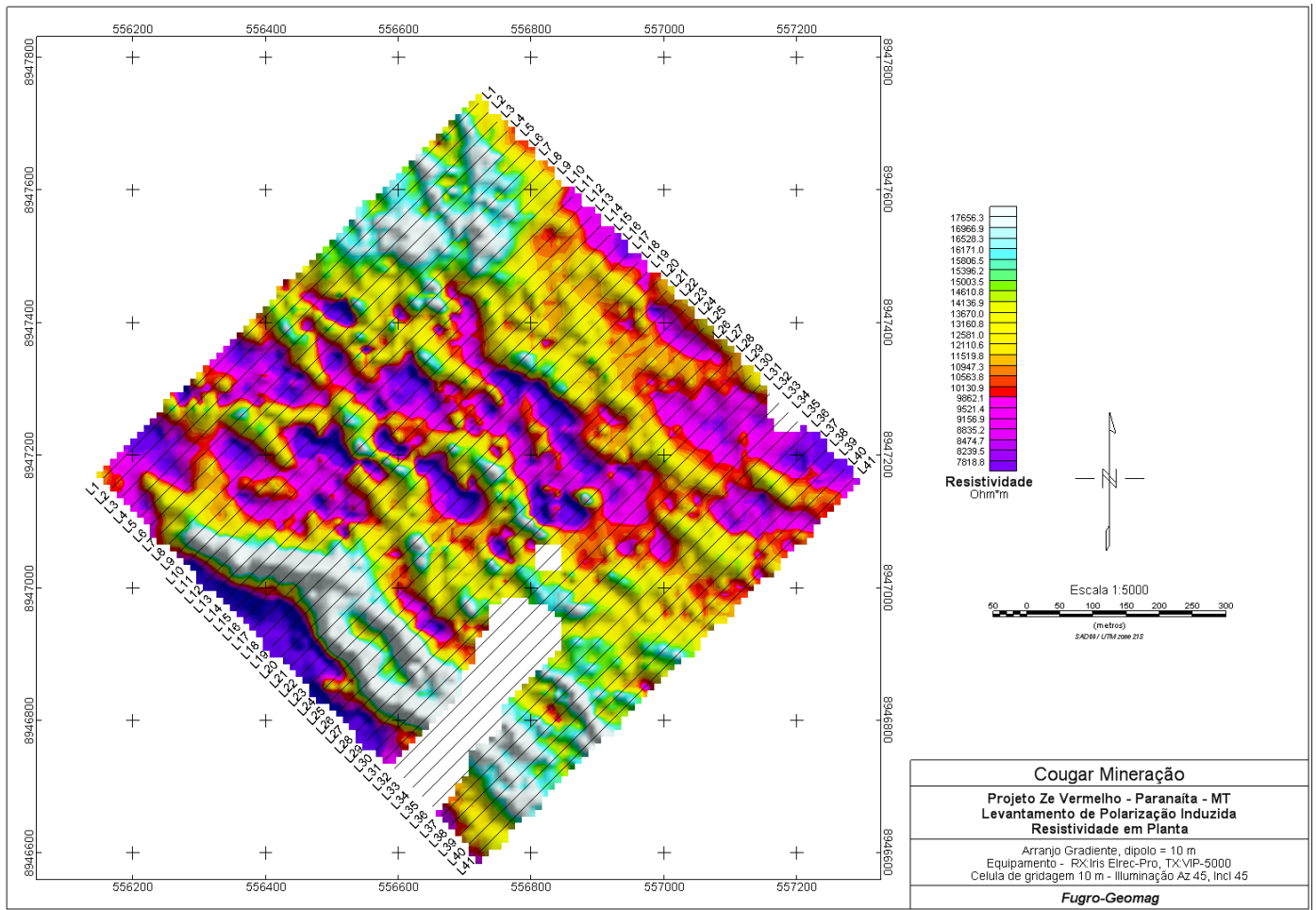


Figure 2: IP apparent resistivity image and survey line locations from data collected over Ze Vermelho

Whilst the final report and specialist interpretation of the IP survey is still pending, the preliminary IP survey results demonstrate an excellent match between the north-west trending geophysical lineaments and the structural framework in which the vein systems are hosted. The structure of Ze Vermelho shows several segmentations, possibly as result of tectonic driven displacements (refer to Figure 3 below).

The Company expects the TDEM survey, which is programmed to commence in mid January 2012, to identify zones of massive sulphide which are typically associated with high gold grades at Ze Vermelho. Strong EM responses that occur along the resistivity lineaments will ultimately be the main targets for following up exploration by drilling and trenching.

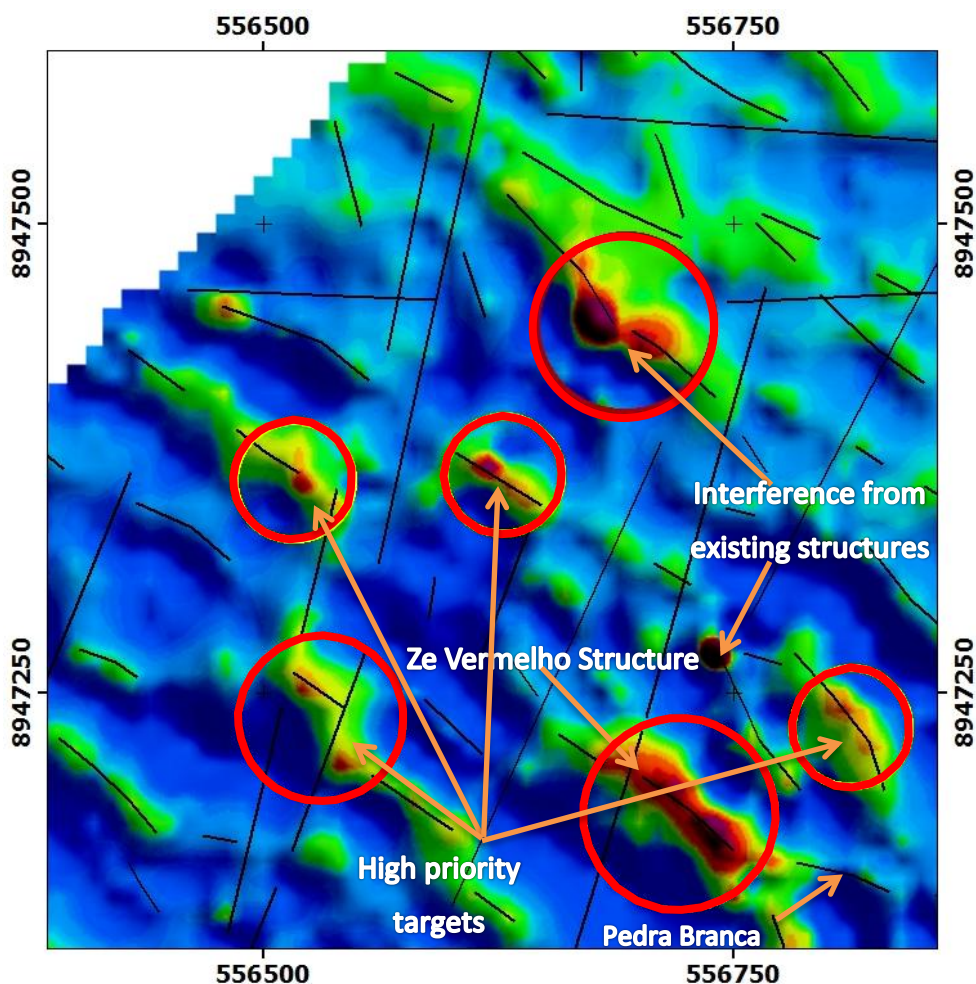


Figure 3: Preliminary interpretation of IP chargeability data showing north-west trending anomalies selected as target zones (circles) and interpreted cross-faults.

### Pedra Branca

Based on the interpreted IP signature for quartz veins and sulphide minerals and in order to test the veracity of the IP survey, the Company investigated a potential structure, approximately 50 metres to the south-east of the existing Ze Vermelho workings, by excavating a small pit.

This pit uncovered a virgin and previously unknown quartz vein, which the Company refers to as “Pedra Branca” (refer Figure 3 above). It consists of a white, massive to brecciated quartz vein up to 55 cm wide that contains small fractures filled with visible gold (refer Figure 4 below).

To date 12t of the vein has been processed and returned 286g of gold, for a mean gravity recovered gold grade of 24g/t Au. In January a trenching and drilling program will be implemented to examine the extensions of the vein.



Figure 4. Photo showing parallel microfractures filled up with native gold.

#### Summary

In summary, the Company is extremely pleased with the IP survey results thus far and will prioritise the testing of targets identified through professional interpretation.

For further information please contact the undersigned via email at [r.swick@cgm.com.au](mailto:r.swick@cgm.com.au) or alternatively contact Michael Fry (CFO & Company Secretary) on +61 8 9381 1755.

Yours sincerely

**COUGAR METALS NL**



**RANDAL SWICK**

*Executive Chairman*

### **Competent Persons Statement**

*The information in this release that relates to Exploration Results is based on information compiled by Dr Jayson Meyers who is a Fellow of the Australian Institute of Geoscientists. Dr Meyers is a consultant to Cougar Metals NL and 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 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Dr Meyers consents to the inclusion in this report of the matters based on information provided by him and in the form and context in which it appears.*