

# Flagstaff GeoConsultants



## EM INTERPRETATION – SHD22 – Body 1 down-plunge?

EM data from this hole shows a weak conductor intersected at depth 400 m, with a significant off-hole anomaly at the base of the hole. The intersection at 400 m has a small expression extending off-hole at 425 m depth, consistent with minor mineralisation, flat-lying, extending west from the hole a few tens of meters. There is no obvious correlation between this EM data and the logged alteration type. The more-significant anomaly, off-hole beyond the base of the hole, is incomplete (extends beyond the base of hole). The character of the anomaly is very similar to that for Body 1 as seen from SHD21, and its location is consistent with the strike direction inferred from SHD21. Figures 11 and 12 show the profile and decay curve for SHD22, Loop 9. The decay has a fitted  $t^{-3.5}$  decay consistent with current-channelling excitation as deduced for Body 1, seen from hole SHD21 (Figures 2,3). Accordingly, this anomaly is interpreted from axial-component data to be a southerly extension of Body 1, where Body 1 is at depth of order 700 m, at a distance (very roughly) of order 100 m west of the hole; these estimates are very approximate, since we are dealing with an incomplete anomaly extending below the base of the logged hole. This interpretation is supported by the fact that Loop 13 (east) gives corresponding but opposite-sign and lower-amplitude anomalies compared with Loop 9.

The conclusions re SHD22 are however additionally uncertain, since I cannot reconcile the sign of the U and V components acquired with Loop9, with this model. What is clear however is that there is a weak conductor off-hole, beyond the base of the hole. I cannot devise any credible model which does give consistency with signs of the observed partial U and V-component anomalies. In view of the incomplete nature of these anomalies I believe it is not cost-effective to strive further with interpretation of this off-hole anomaly. However if Body 1 is drilled between holes SHD21 and SHD2, and proves of sufficient interest to justify further drilling along strike, then further borehole EM in Hole SHD22, using a central loop over the lake and double-checking of borehole probe sign conventions, would be advisable.

Note added in proof: The anomalies observed for Hole SHD12 Loops 4 and 10, are similar (but opposite in sign) to those observed for SHD22. It is probable that Body 1 as a long linear conductor extends further west (towards the base of Hole SHD12, within 100-200 m of the hole) than is shown in the models in the Summary above. The information from SHD12 reinforces the view that the Body 1 conductor lies west of SHD22, despite the conflicting information apparently given by the U-V components for hole SHD22.

## EM INTERPRETATION – NC4 – Body 2 along strike?

EM data from this hole (reported in Asten 1999b) shows a hint of an anomaly signature at the base of the hole, which is similar to that obtained for SHD21 Loop1 (Figure 4), and SHD1 Loop1. The anomaly is incomplete, and one must resist

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**Flagstaff GeoConsultants Pty. Ltd. (ACN 074 693 637)**

Suite 2, 337A Lennox Street, (PO Box 2236) Richmond South, Victoria, 3121 Australia

Phone: +61 3 9421 1000 Fax +61 3 9421 1099

Email: [postman@flagstaff-geoconsultants.com.au](mailto:postman@flagstaff-geoconsultants.com.au) WebSite: [www.flagstaff-geoconsultants.com.au](http://www.flagstaff-geoconsultants.com.au)