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M E M O

To: Andrew Mc Neill – Zinifex Limited
From: Jovan Silic
Re: Henty Gorge(West) EM target
Date: February 23rd 2006

INTRODUCTION

The Henty Gorge (West) EM target extends from 5200N to 6200N and as yet not closed off in the northern or southern parts of the grid. Data as shown in profile form in Figure 1 -1c, outlines “broad” late time cross-over in the vertical component. However as is evident on profiles of the data shown in figures 1 to 1c and illustrated in Figure 2, the anomalous response consists of two parts.

(a) early time cross over or anomaly outlines the effect of a shallow board formational type poor conductor.

(b) late time “broad” cross over appears to be due to a deeper source at depths of 300 – 400 meters, but within or close to the western edge of the formational shallow conductor.

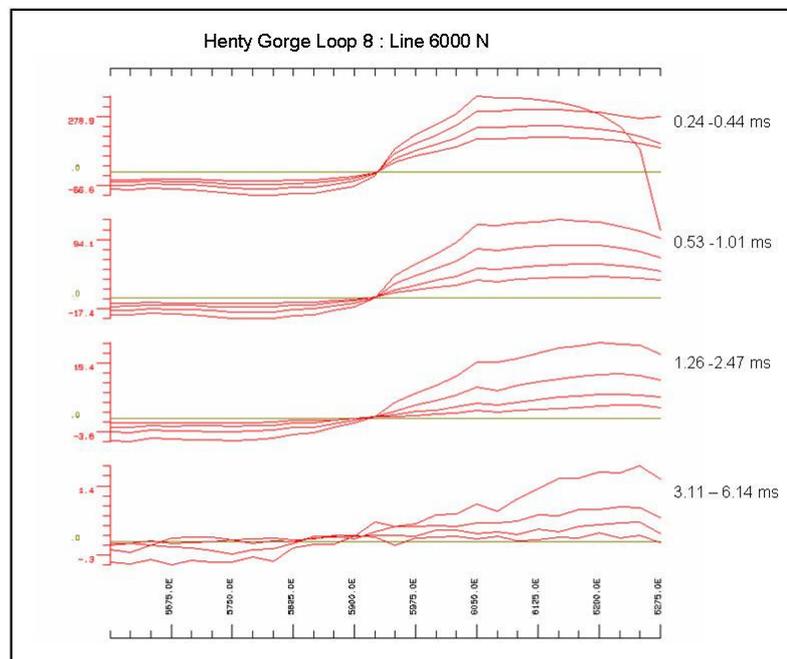


Figure 1. Henty Gorge Loop 8: Line 6000 N

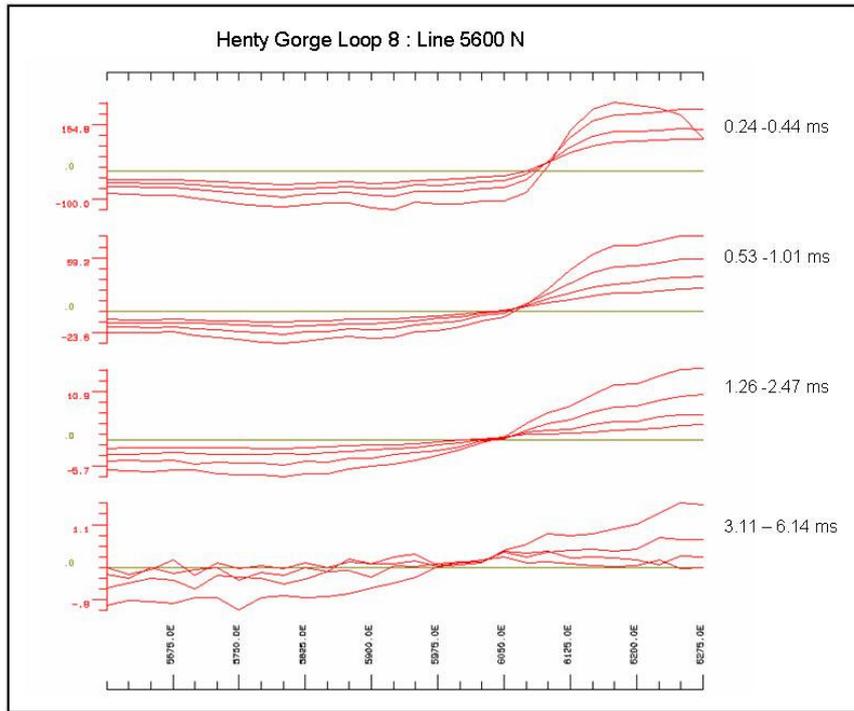


Figure 1a. Henty Gorge Loop 8: Line 5600 N

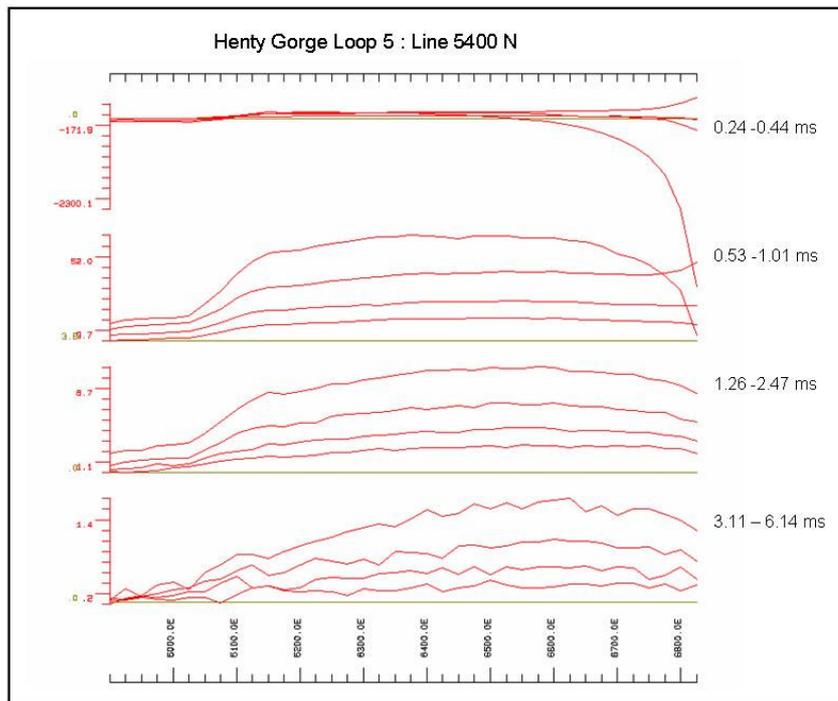


Figure 1b. Henty Gorge Loop 5: Line 5400 N

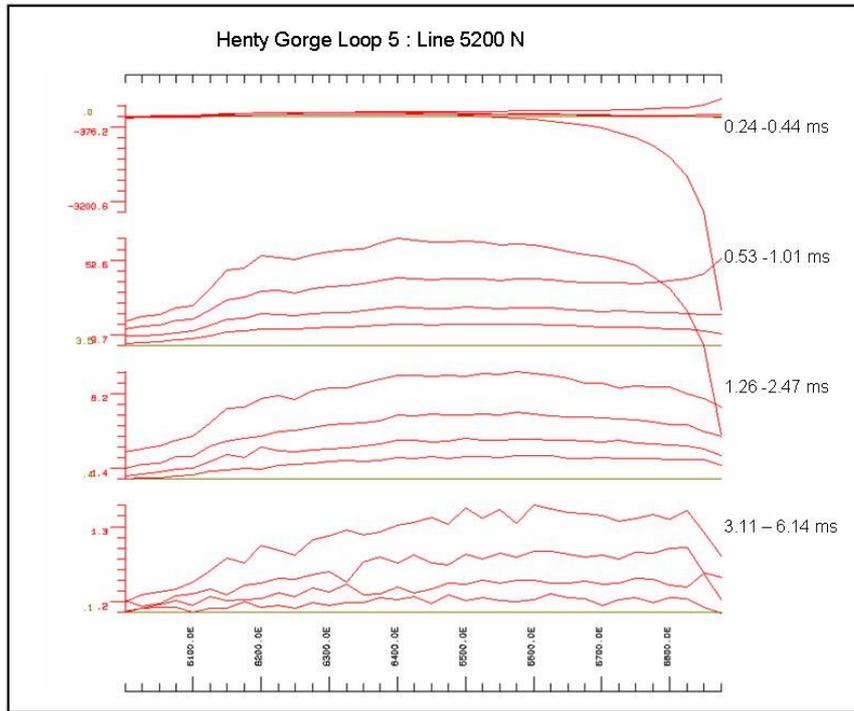


Figure 1c. Henty Gorge Loop 5: Line 5200 N

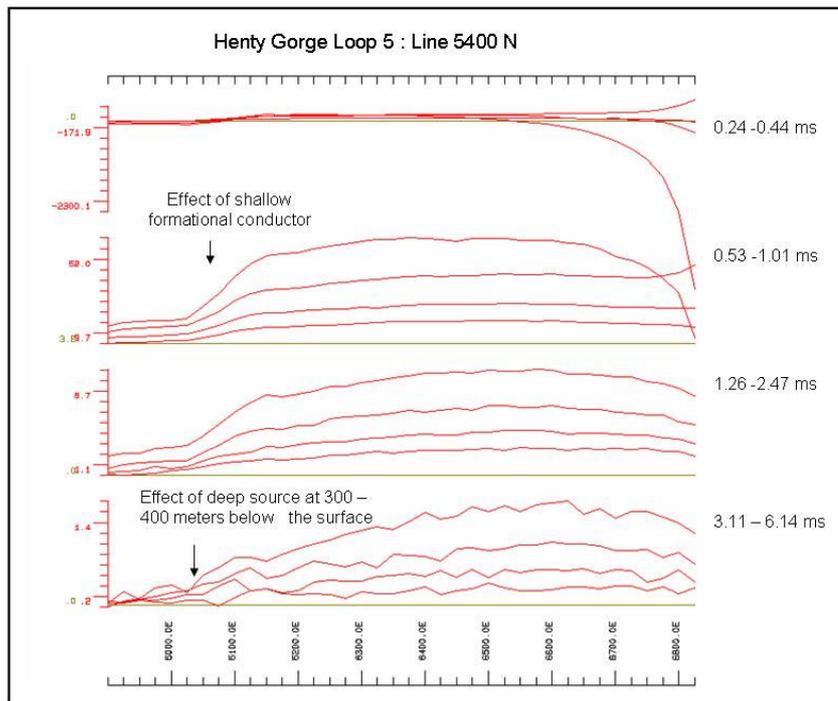


Figure 2. Henty Gorge Loop 5: Line 5400 N

Figure 3 the image of loop 8 EM analytic signal (EMAS) shows the conductive target and/or the shallow conductive unit striking in an approximate N-NW direction whilst rudimentary analysis of the anomalous response (noting the decay constant and the latest anomalous times each survey line) implies that the conductors conductivity thickness product increases towards the southern part of the conductive target.

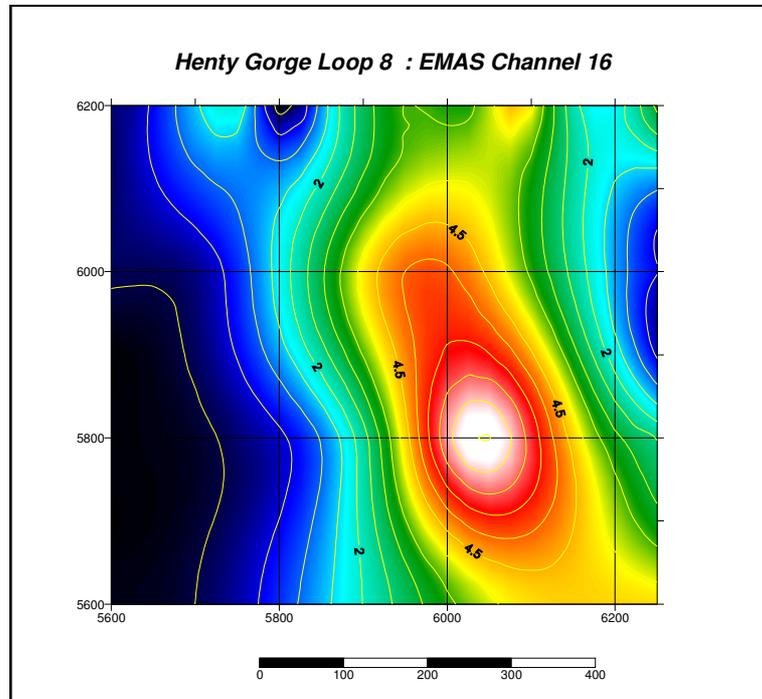


Figure 3. Henty Gorge Loop 8: EMAS Channel 16

INTERPRETATION OF HENTY GORGE (WEST) EM DATA

Because of the presence of lithological conductor and its profound affect on the “early” time response, accurate interpretation of the “late time response is somewhat more difficult than may be expected. Essentially particular time windows need to be chosen and the data interpreted/inverted using only the chosen “late time” response in order to obtain a satisfactory location for the postulated deep conductor.

For example using data from 1.30 – 1.40 milliseconds (Figure 4) results in a “reasonable” fit to the data at the earlier time windows but a serious misfit at late times. However utilizing data from 3.10 to 6.14 milliseconds results in reasonable agreement between the observed and calculated response (Figure 4a) from 3.9 milliseconds onwards, but a serious misfit at earlier times. This “earlier” time discrepancy is then due to the effect of the lithological conductor not accounted for by the modeling/inversion process.

On the basis of these inversions it is interpreted that a moderate good conductor on line 5600 N is located at :

Line	Stn	RL	Dip
5600 N	5980 – 6000 E	240	Vertical-West

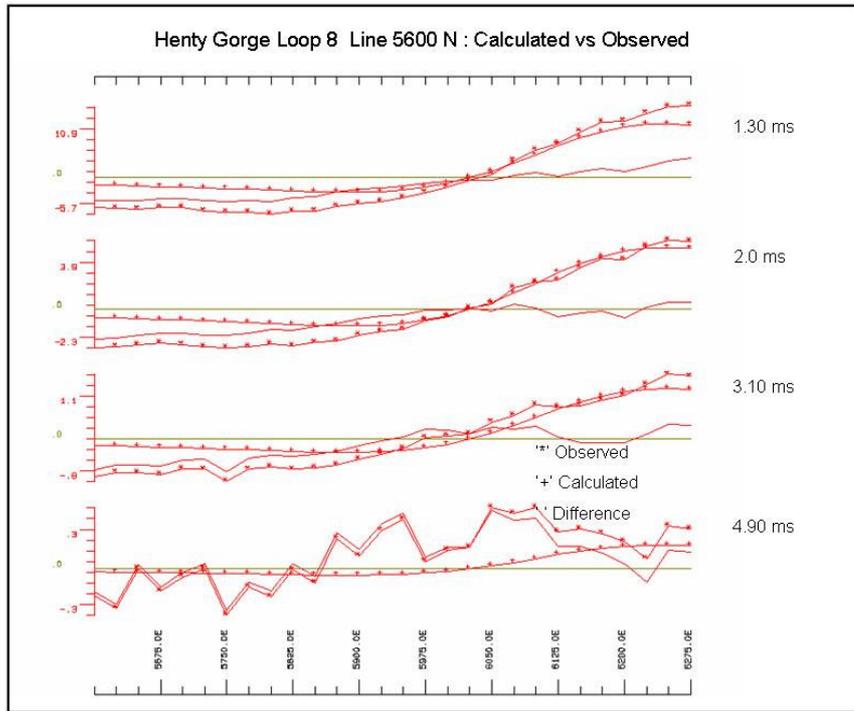


Figure 4. Henty Gorge Loop 8 Line 5600 N: Calculated vs Observed

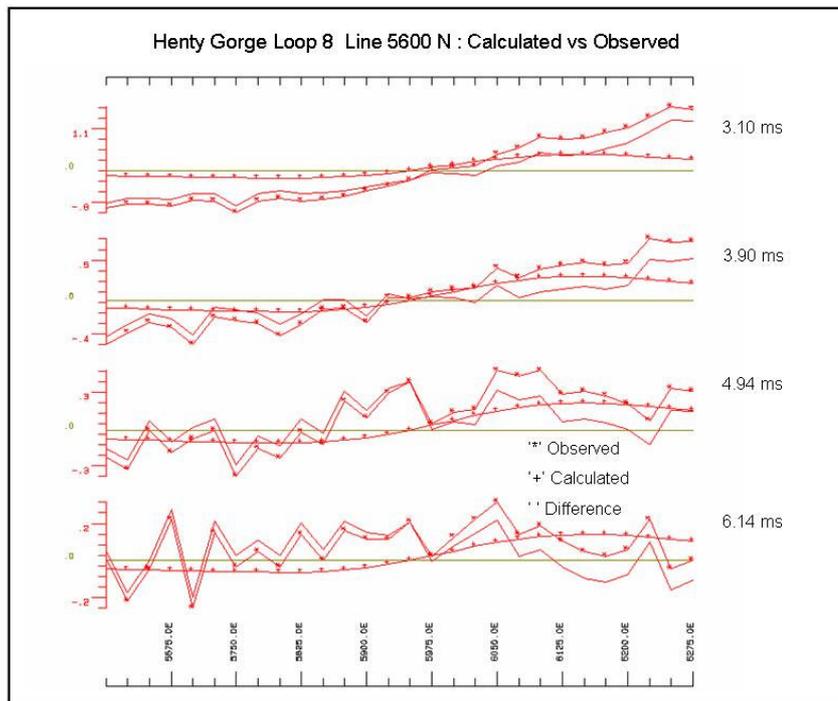


Figure 4a. Henty Gorge Loop 8 Line 5600 N: Calculated vs Observed

CONCLUSIONS

The Henty Gorge ground EM Survey has identified a deep conductor with a strike length of 1 kilometer and more and located in the western part of the grid. It is recommended that this conductor is drilled on line 5600 N.