

Appendix 4  
Preliminary Interpretation of  
Huxley CSAMT Results  
by Ian Tedder

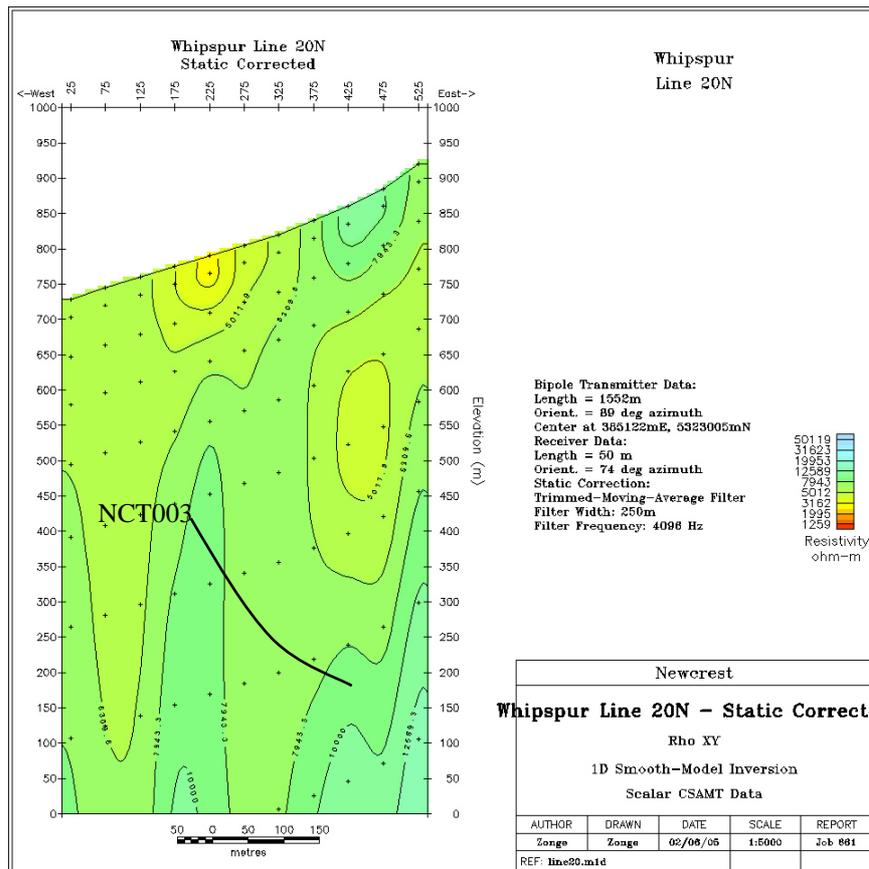
(See Digital File EL20\_2003\_200605\_06\_Appendix4.pdf)

**DATE:** 6 June 2005  
**TO:** John Holliday  
**FROM:** Ian J. Tedder  
**SUBJECT:** Preliminary Interpretation of Huxley CSAMT results.

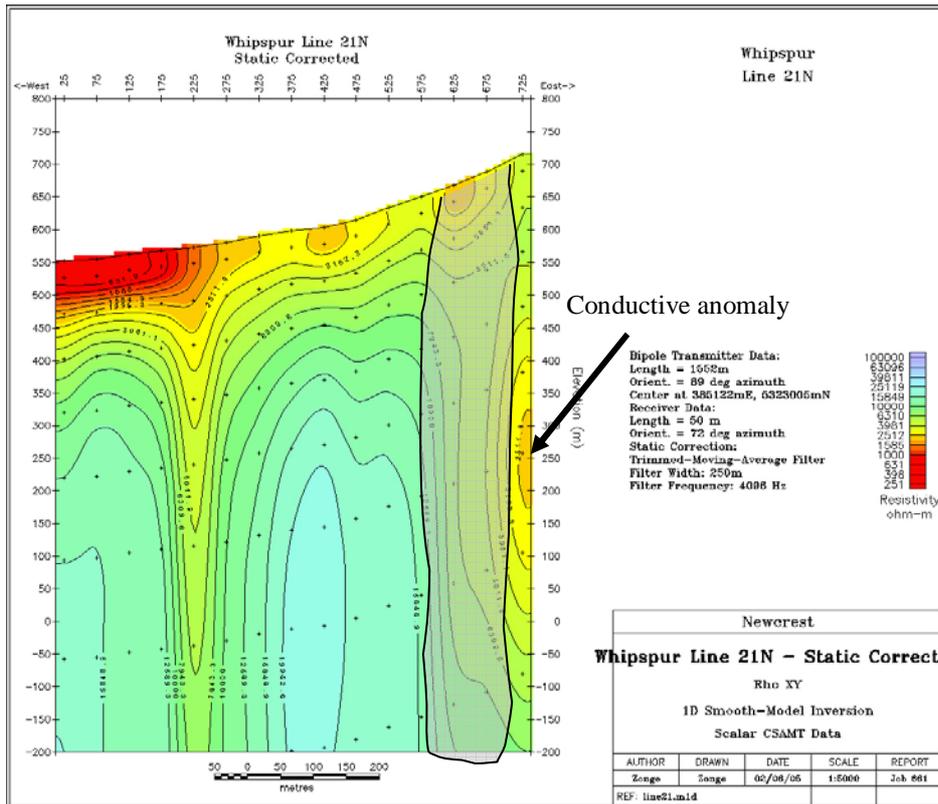
## CSAMT Results

Static and non static corrected pseudosections of the CSAMT survey on the Nasty Nob to Huxley grid were received. The summary interpretation of results that follows is based on the static corrected sections, 1980's geological mapping and assumptions as to what geological units may be doing at depth.

1. Line 20, the northern most line is one of the less interesting lines, with no suggestion of any anomalies. It was drilled in part by NCT003 which passed through predominantly massive rhyolites in the first half of the hole and then lapilli volcanoclastics and pumiceous breccia units. A major fault was intersected at 443-448 m. A zinc mineralised zone occurs in the pumiceous breccia from around 490 – 638 m. None of these units or the fault can be detected in the CSAMT results.

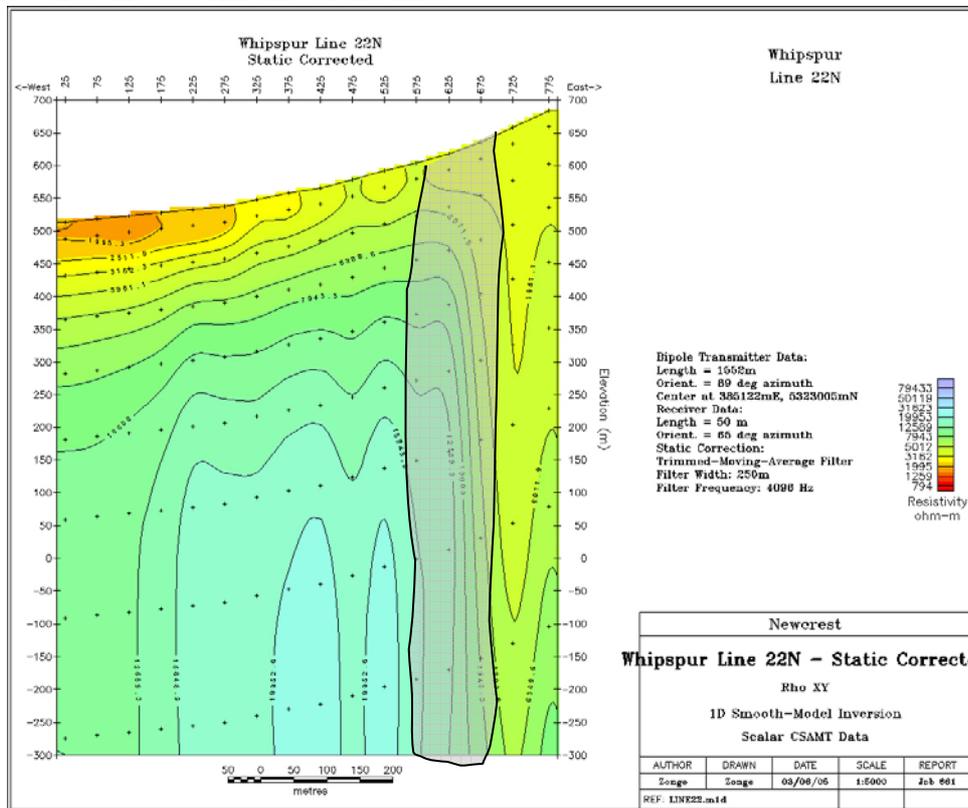


2. Line 21. One possible conductive anomaly (defined by 3 points) occurs right at the eastern end of the line. There is a possibility the anomaly is due to a lithological contrast between two adjacent units – massive rhyolite/dacite unit (shaded in diagram below) and finer grained volcanoclastics further to the east.



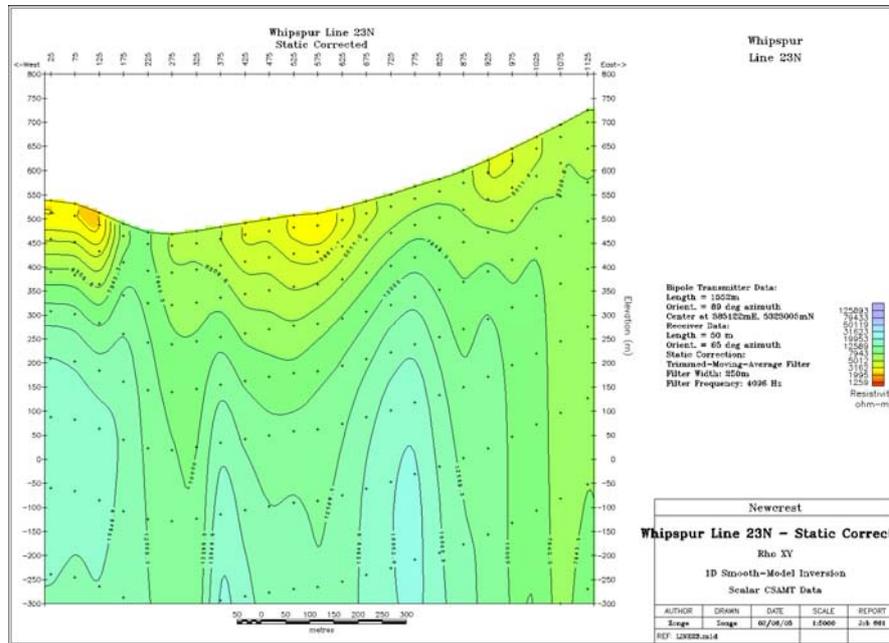
Shaded zone represents massive rhyolite interpreted from surface mapping.

- Line 22. No distinguishable anomalies identified, with the only warping of contours being possibly due to lithology contrasts between rhyolites and volcanics towards the eastern end of the line.

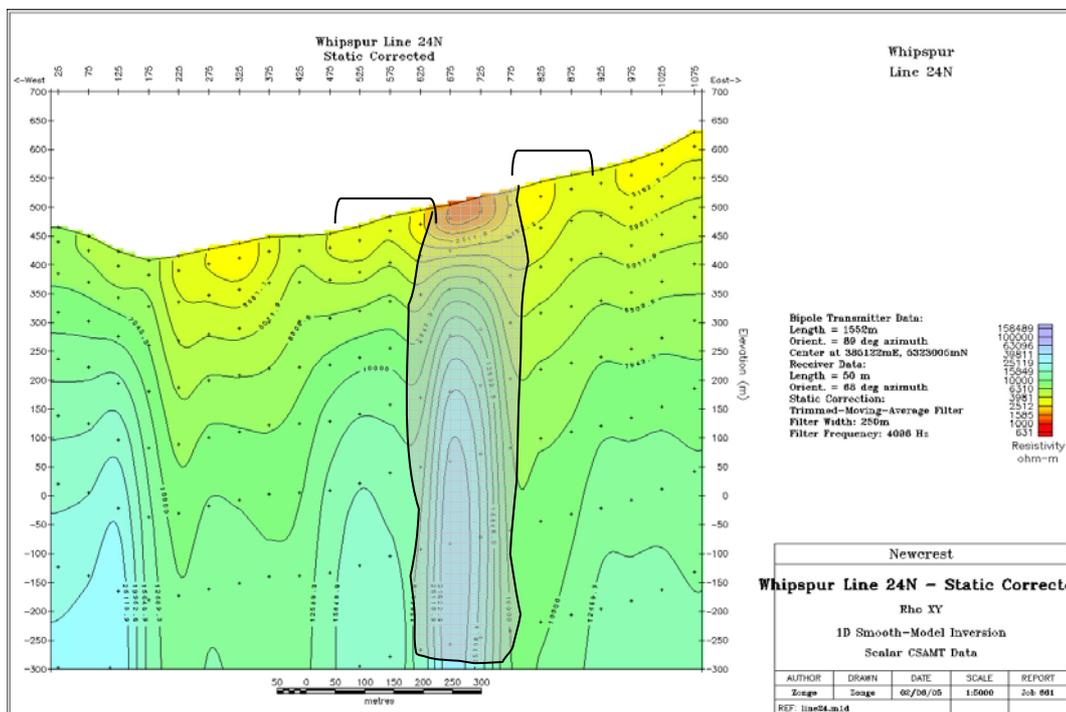


Shaded zone represents relatively massive rhyolite unit.

4. Line 23. No anomalies. Similar to Line 20. Most of the line passed over undifferentiated volcanics with the only variation being in relatively massive rhyolites over the first 250 m (western end) of the line – but the signal from these do not contrast significantly from the volcanics.

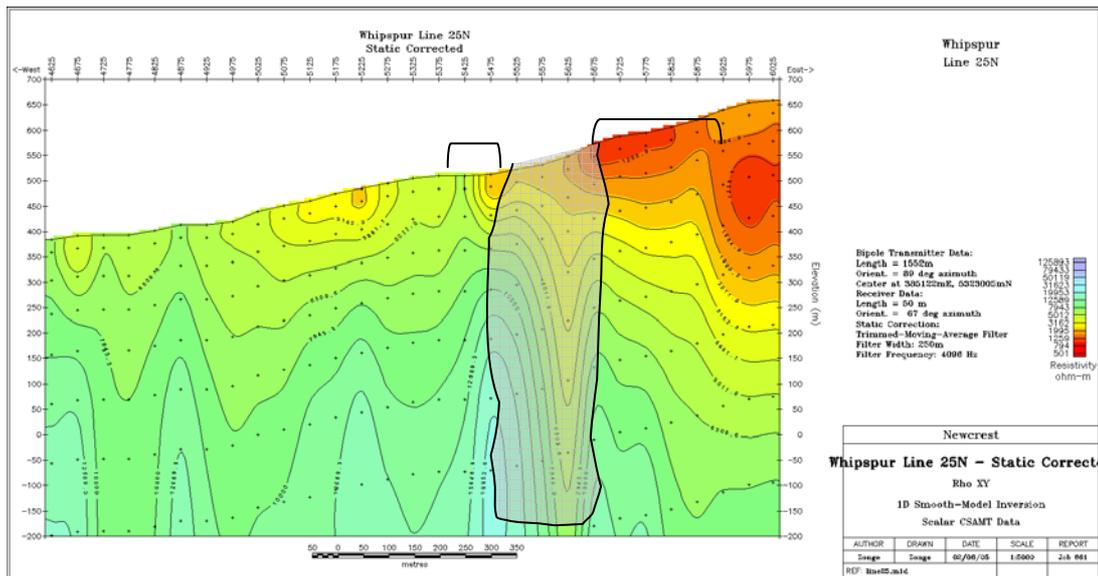


5. Line 24. One resistive anomaly stands out on this section, but suspiciously it coincides with a contact between massive rhyolitic and dacitic volcanics. The contact is very oblique to the CSAMT line making interpretation difficult.

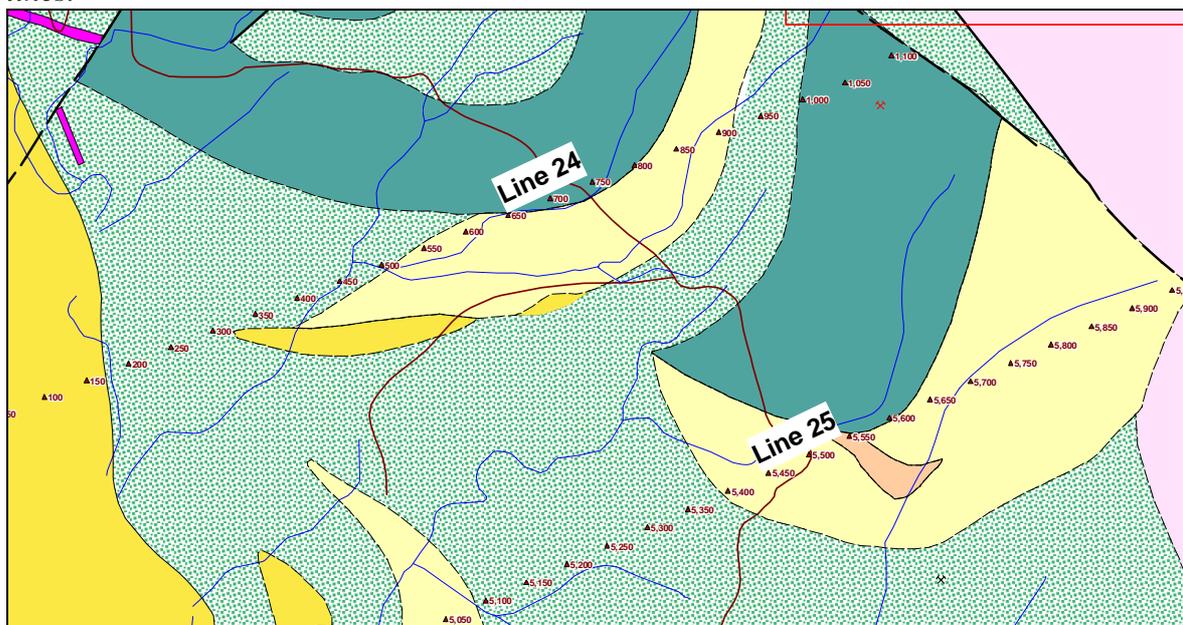


*Shaded zone represents the zone of dacitic volcanics. Massive rhyolites occur for a similar distance out each side of the shaded area (brackets).*

6. Line 25. There is a very modest resistive anomaly on Line 25. The weak resistive anomaly on Line 25 is unlikely to be a continuation of the anomaly on line 24 if it is the result of lithology contrasts because while geologically the eastern half of line 25 is a replica of the eastern end of line 24, there is no direct stratigraphic correlation between the lines. (Refer to geological figure below). If the anomaly on line 24 is the result of silica alteration, it is of some concern that a repeat, albeit weak resistive anomaly also occurs in roughly the same lithological position on line 25. The weight of evidence therefore suggest the anomalies on both line 24 and 25 are due to lithological contrasts, not alteration.

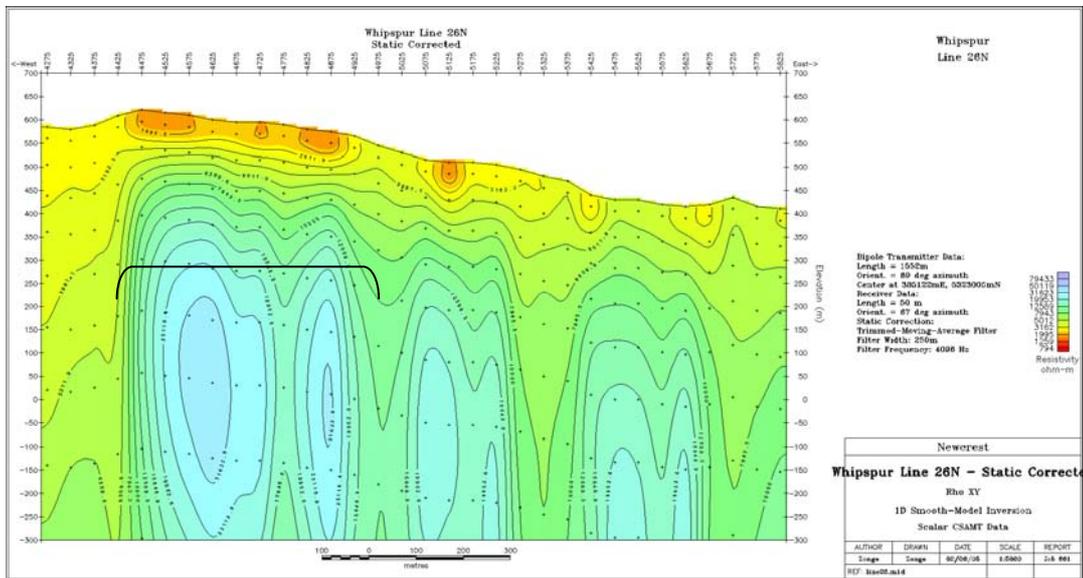


*Shaded zone represents the zone of dacitic volcanoclastics. Massive rhyolites occur out each side of the shaded area (brackets). The conductive zone at the eastern end of the line coincides predominantly with Owen conglomerate – an atypical result compared to other lines.*



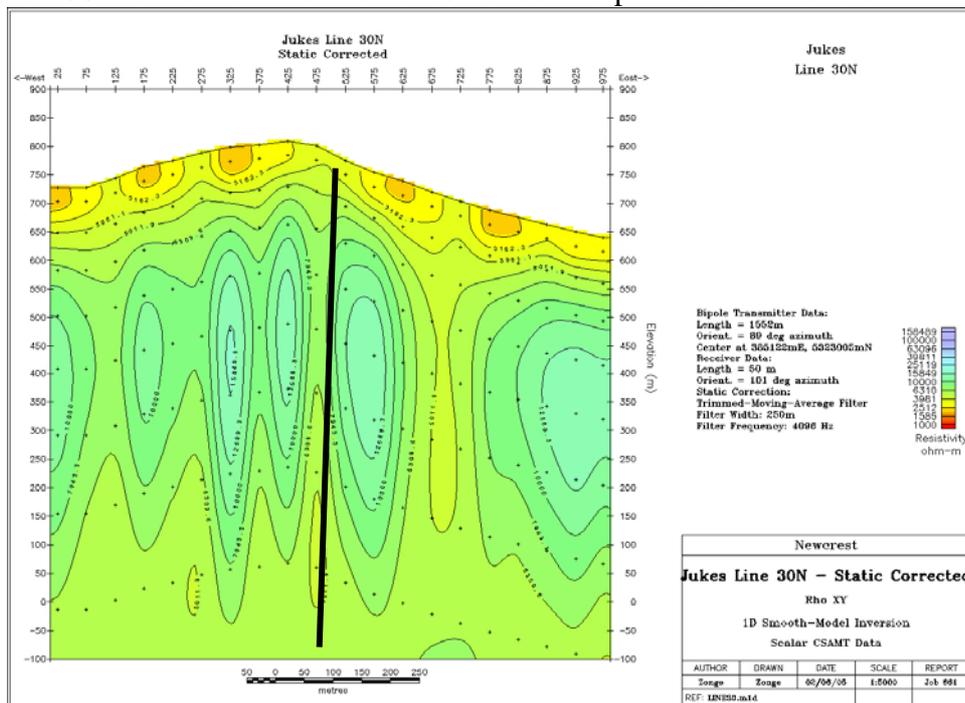
*Geology of lines 24 and 25 showing the repetition of the dacitic volcanoclastic units (dark green) and the orientation of the CSAMT lines with respect to the lithological contacts . The labels (Line 24 and Line 25) are located at the approximate location of the resistive anomalies. For scale – the pegs on lines are 50 m apart.*

7. Line 26. There are enough contrasting geological units at the western end of line 26 to suggest that the two relatively broad resistive anomalies located there are due to lithological variations.



*Bracket encompasses possible weak resistive anomalies that may be due to lithological contrast between massive rhyolites and volcanics.*

8. Line 30. Jukes area. No anomalies can be interpreted from this line.



*The heavy line represents the fault contact between Tyndall units to the east (right side) and CVC units to the west. Any Jukes style alteration anomaly should be visible just to the west of the line.*