phenomenon is usually due to noisy data; such Bostick solutions are identified on the plots by crosses or + symbols within the raw Bostick resistivity box symbol.

Two types of plan-view presentations of the data are included. Frequency slices of EMAP-filtered resistivities are a useful stable method of showing resistivities at near surface (using 8192 or 4096 Hz) or at depths in the range 300-500m (using 1024 or 512 Hz).

Depth slices of Bostick resistivities give better resolution of variation of resistivity with depth, but these products tend to be noisy, since "bad" resistivity estimates corrupted by noise give "bulls-eyes" of high or low resistivity estimates, especially in the vicinity of power lines. Depth slices are presented for depths corrected for topographic variations referred to the maximum elevation of 560 m, hence depth slices 200, 300, and 400m correspond to RLs of +360, +260, and +160m RL. (NB the maximum elevation of 560 m for this survey, differs from the maximum elevation of 660m which was used as a reference in re-processing the earlier Billiton CSASMT data, as reported in Asten, 1999).

All plan-view images and maps are presented at scale 1:10,000, as PLATES 1-9.

INTERPRETATION

The most useful map product for interpretation of near-surface geology is the top-most "depth-slice" draped on topography (PLATE 1). This is essentially the same as a frequency-slice of resistivities at 8192 Hz, with fill in from lower frequencies where 8192 Hz data does not exist.

Note that the lateral resolution of the CSAMT method is limited by the wavelength of EM radiation measured. Lateral resolution is of similar order to depth penetration; for rocks of 1000 ohm.m resistivity, such resolution is of order 120 m, 250 m and 500 m, for frequencies 8192 Hz, 2048 Hz and 512 Hz respectively. Thus we cannot expect to literally outline the margins of outcropping siltstones with tens of metres of thickness. Rather we expect the CSAMT method to show a thin good conductor as a broad zone of moderate conductivity.

Near-surface conductive trends can be identified from high-frequency CSAMT images of Cagniard resistivities, or equivalently from a depth-slice at 50 m of the Bostick resistivities – see Plate 1. These near-surface zones are marked in red on PLATE 7, and probably represent sub-cropping zones of conductive alteration or black siltstones.

Seven zones of conductors extending to depths greater than 100 m are identified.

Zones 1 and 2: This is the major geophysical feature of the prospect, being dominant on both CSAMT and IP images. The zone correlates with mapped andesitic to basaltic lavas, frequently containing significant sericite-pyrite alteration. In particular