

Interactive comment on “Hydrogeological settings of a volcanic island (San Cristóbal, Galapagos) from joint interpretation of airborne electromagnetics and geomorphological observations” by A. Pryet et al.

A. Pryet et al.

a.pryet@gmail.com

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The authors are thankful to the reviewer for his comments and suggestions, they will be taken into account in the revised version of this manuscript. We propose hereafter replies to the specific comments.

1. As suggested, the locations of the two main populated areas (Puerto Baquerizo and El Progreso) and the locations of the main volcanic cones (San Joaquín C4694

and El Junco) will be added on both Figs. 1 and 5.

2. This is a mistake in the figure caption. The actual resistivity range for unit 3 is 10-40 ohm.m. This will be updated.
3. As can be seen on resistivity maps (Fig. 4), *near-surface* (1-15 m) resistivity is relatively homogeneous between the windward and leeward sides. However, on the leeward side, high-resistivity units (> 1000 ohm.m) underlie this thin low-resistivity layer.

Regarding the visualization itself, it is worth mentioning that the cross-sections and 3D volumes presented in Fig. 5 have both been extracted with *Paraview* from the same 3D resistivity model. Cross-sections (Figs. 4 and 5) have been obtained by “slicing”, while 3D volumes (Fig. 5 and sup. material) have been obtained by an extraction based on a resistivity threshold (> 400 ohm.m). As a consequence, units with resistivity lower than 400 ohm.m are only visible on the cross-sections (not as 3D volumes).

4. The authors agree with the reviewer, the resistivity difference between units 2 and 7 (Fig. 4B) may theoretically be interpreted as a contrast in water saturation. Nevertheless, we argue in section 3.2.2 (L. 20-27 p. 9669) and 3.2.3 (L. 9 p 9669) that unit 7 is very unlikely to be saturated. Given the extent of unit 7 in the 3D model, saturation would imply the existence of a *thick basal aquifer* (freshwater lens). This configuration is not compatible with the *shallow salt-water interface* (SWI) observed with geophysical imagery.