Modelling of the electromagnetic response of the Earth has been beneficial for studying its interior. As of late, it is possible to combine this purely electromagnetic modelling with thermodynamic modelling using lab-based measurements of the mantle rock electric conductivity. This coupling of the models can provide insight into the amount of water present in the upper mantle. The experimental lab-based measurements of the mantle rock electric conductivity can introduce unknown amount of error into this process. In this work I will estimate the propagation of such error into the electromagnetic modelling.