Supplement of

Large-scale ERT surveys for investigating shallow regolith properties and architecture

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Introduction

The 300 resistivity models resulting from the inversion of the synthetic resistivity models are provided in Figures S1-S12. Depending on the models, the inversion process was terminated after 1 to 11 iterations. As indicated by the root mean square misfit error (average: 0.89%, range: 0.40-2.12%) and the chi² mathematical criteria (average: 0.81, range: 0.16-4.11), acceptable convergence between the calculated and simulated apparent resistivity data was achieved for all models. In 98% of all cases, the root mean square misfit error and the chi² were less than 1.5 and 2, respectively.

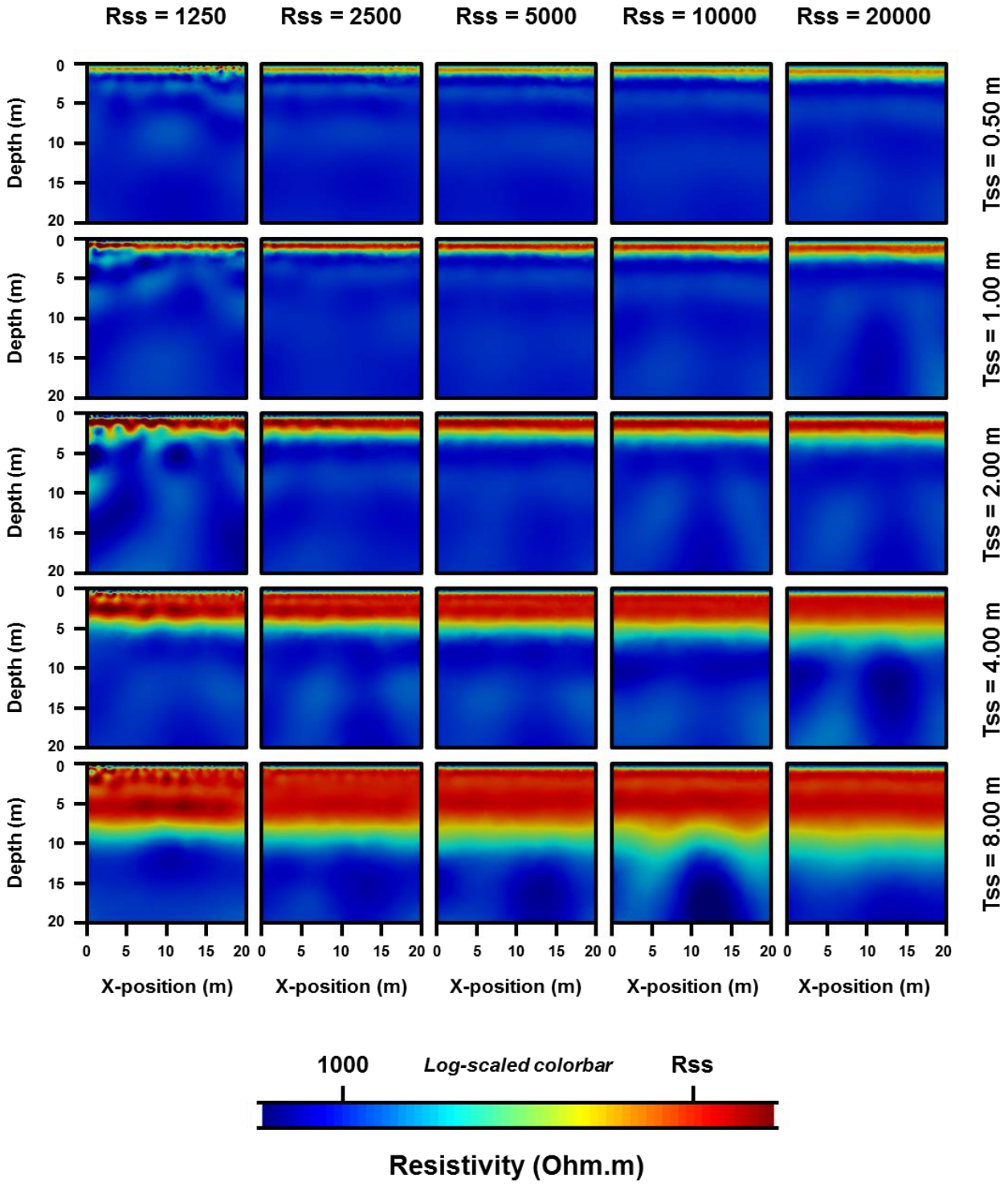

Figure S1: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the dipole-dipole array with an ESI of 0.25 m.

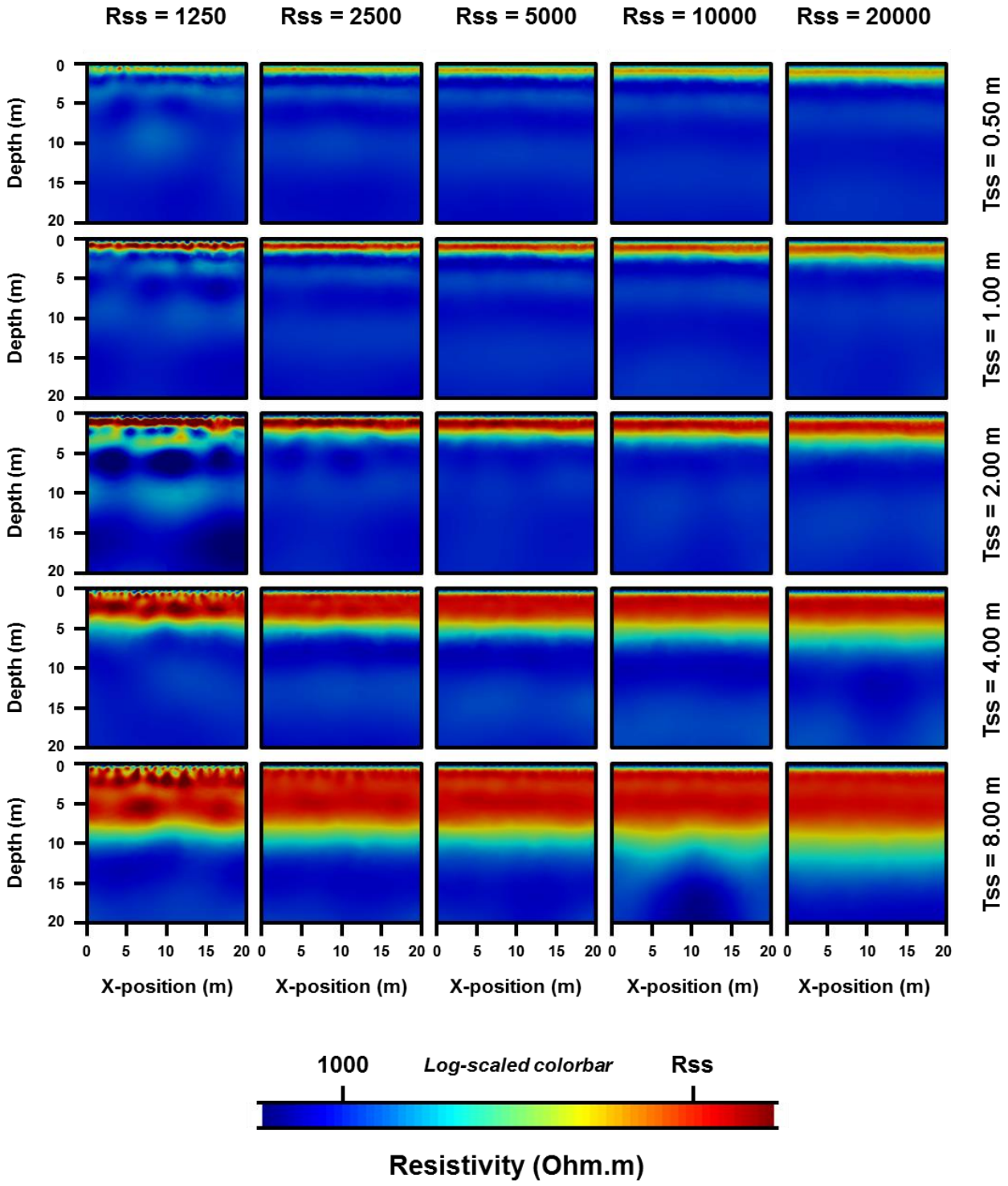

Figure S2: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the dipole-dipole array with an ESI of 0.5 m.

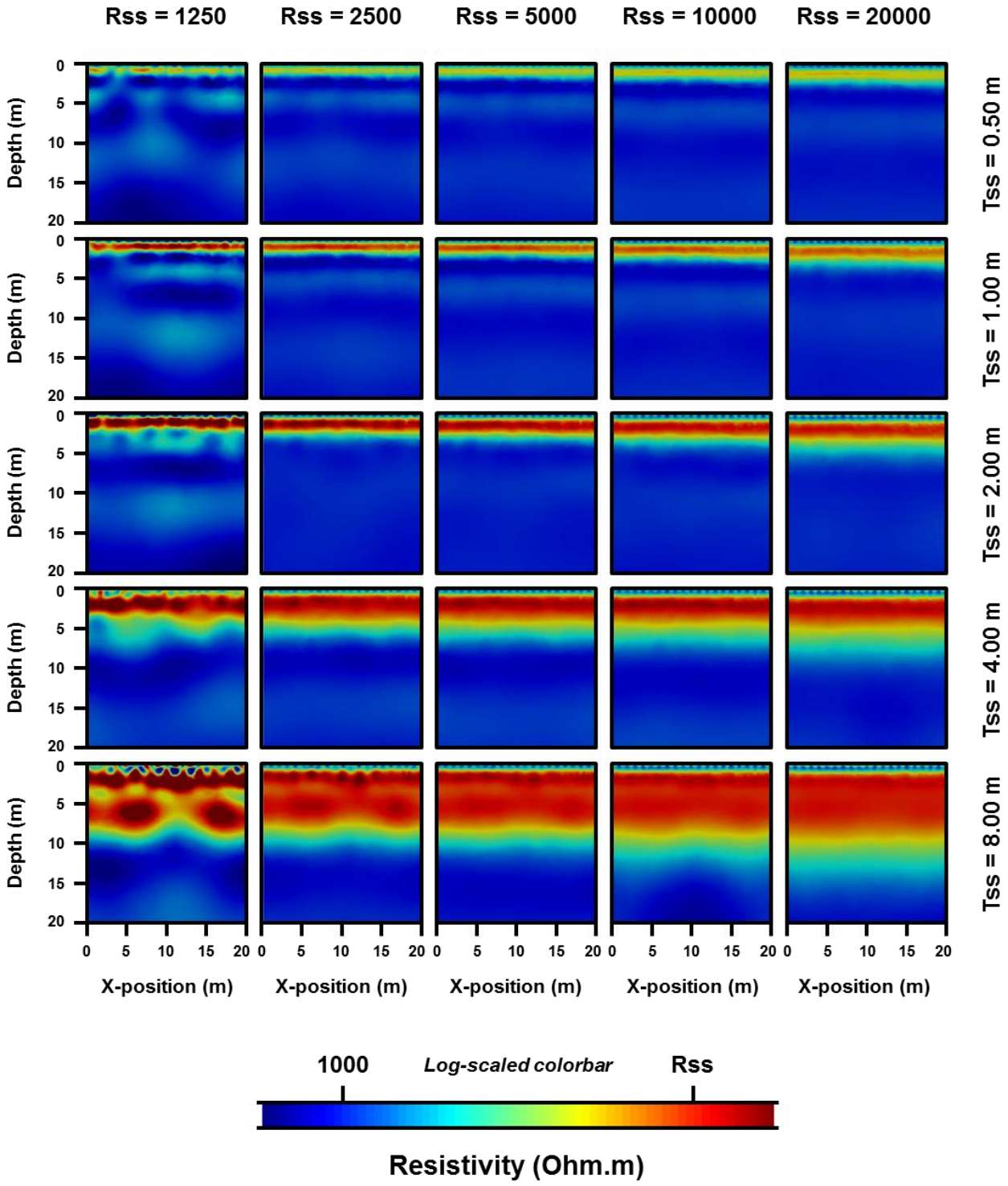

Figure S3: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the dipole-dipole array with an ESI of 1 m.

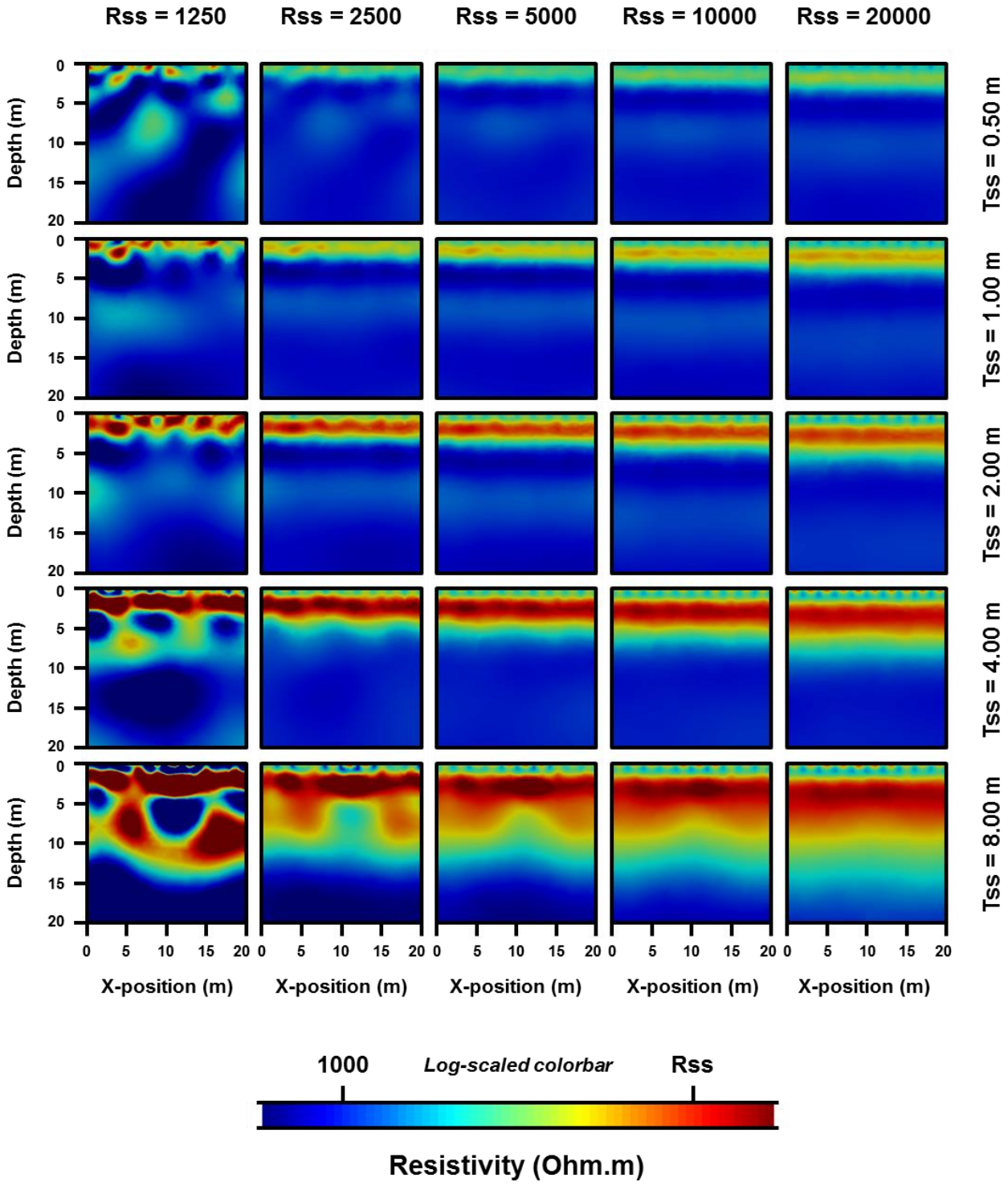

Figure S4: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the dipole-dipole array with an ESI of 2 m.

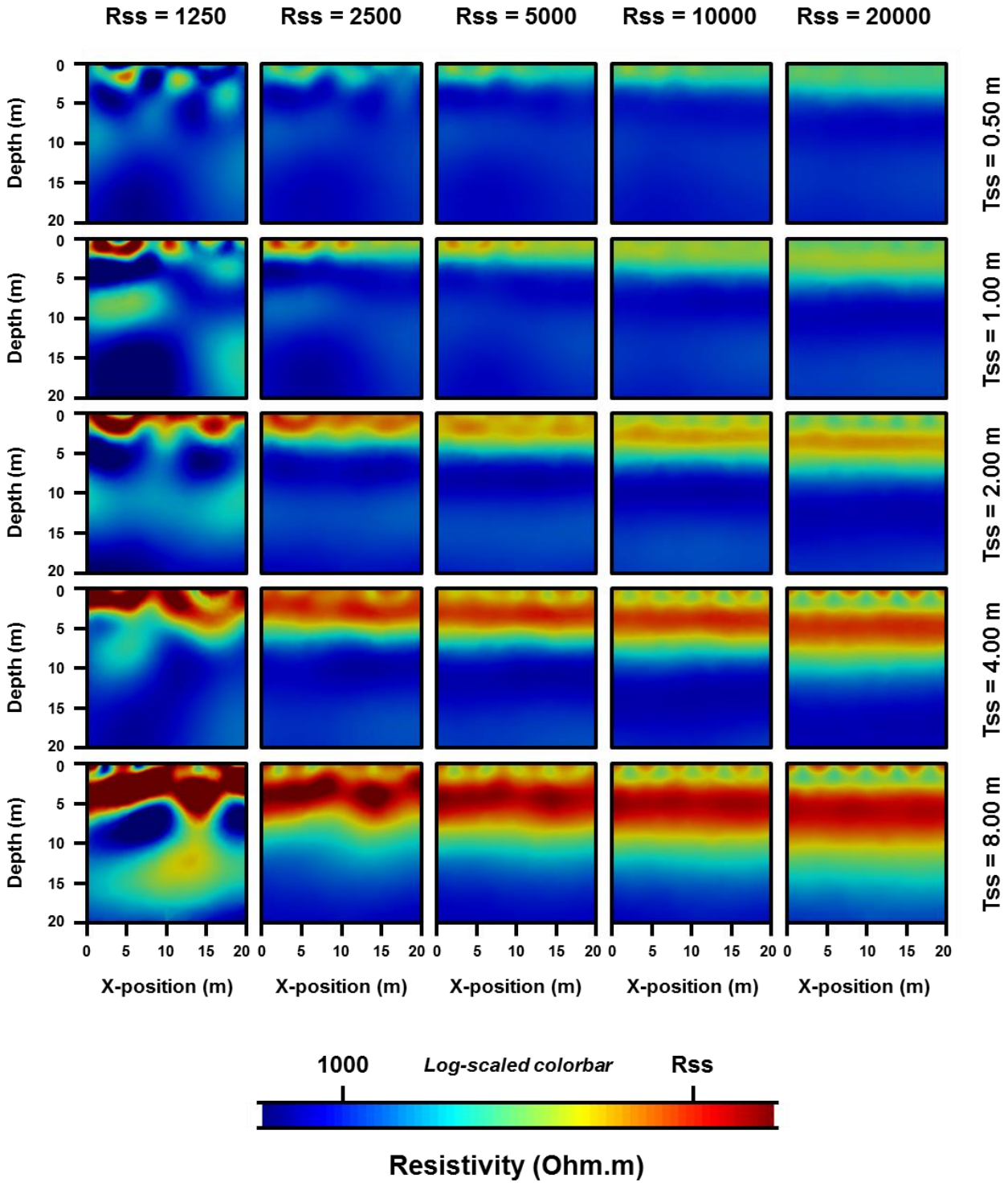

Figure S5: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the dipole-dipole array with an ESI of 4 m.

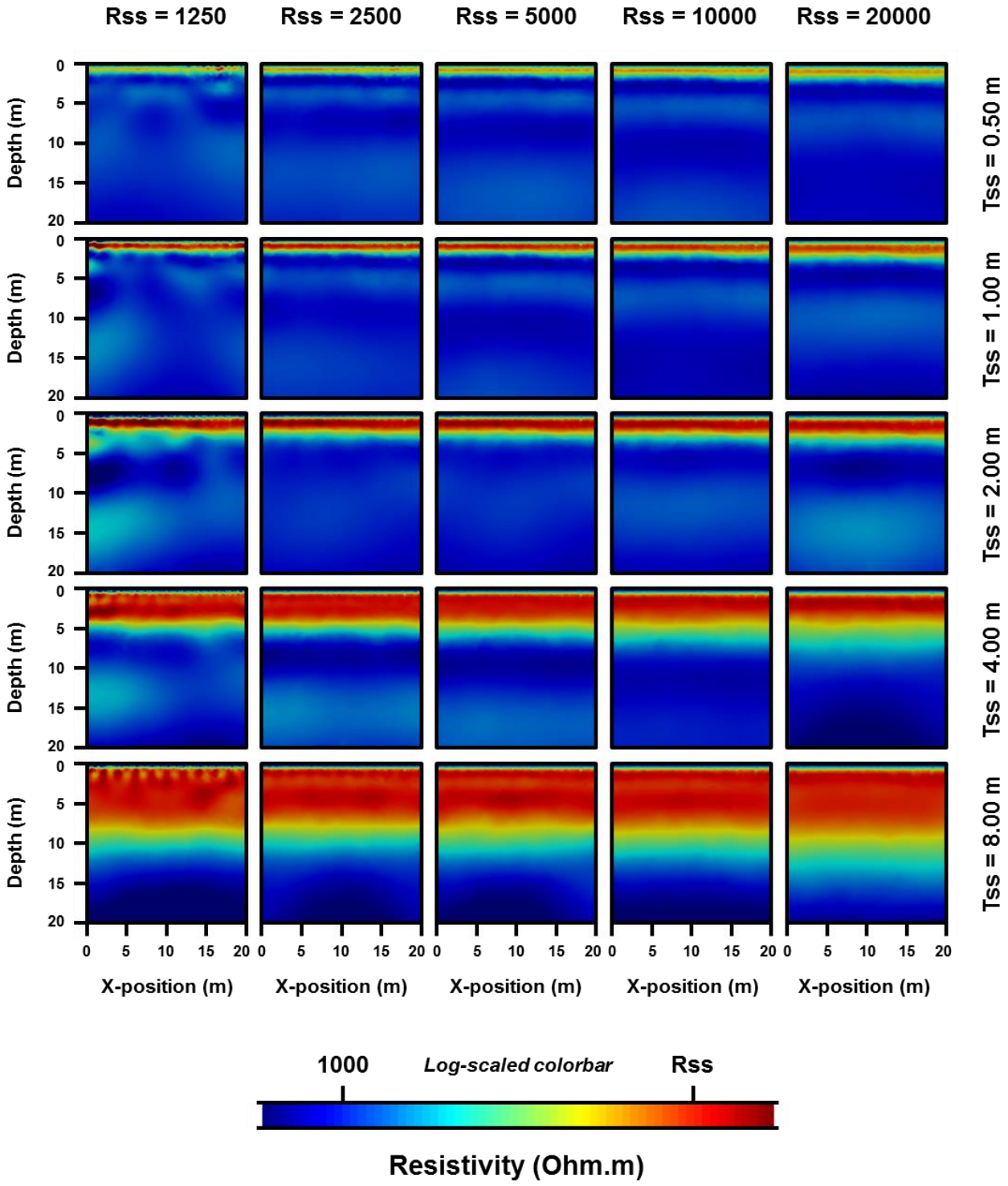

Figure S6: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the Wenner-Schlumberger array with an ESI of 0.25 m.

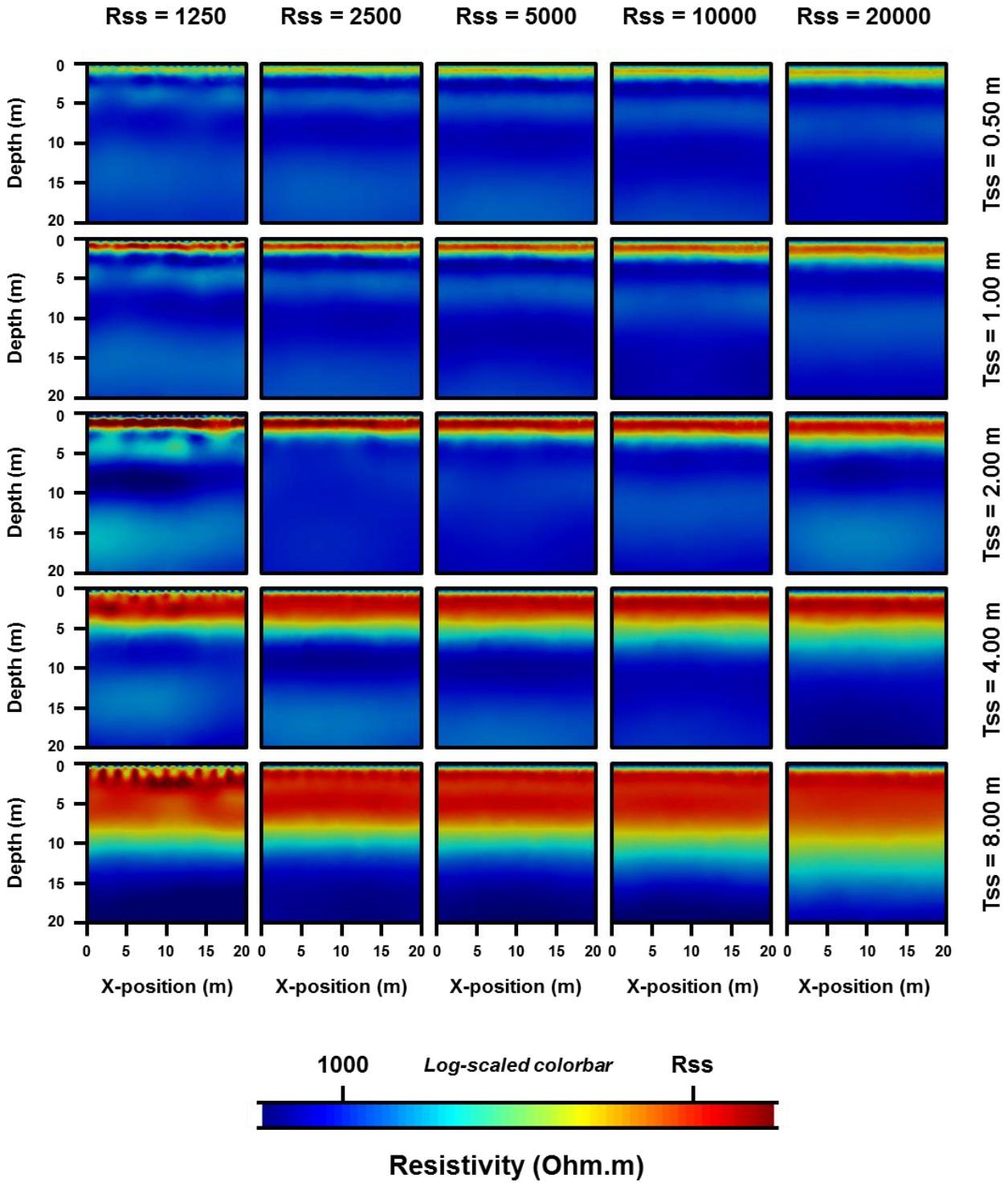

Figure S7: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the Wenner-Schlumberger array with an ESI of 0.5 m.

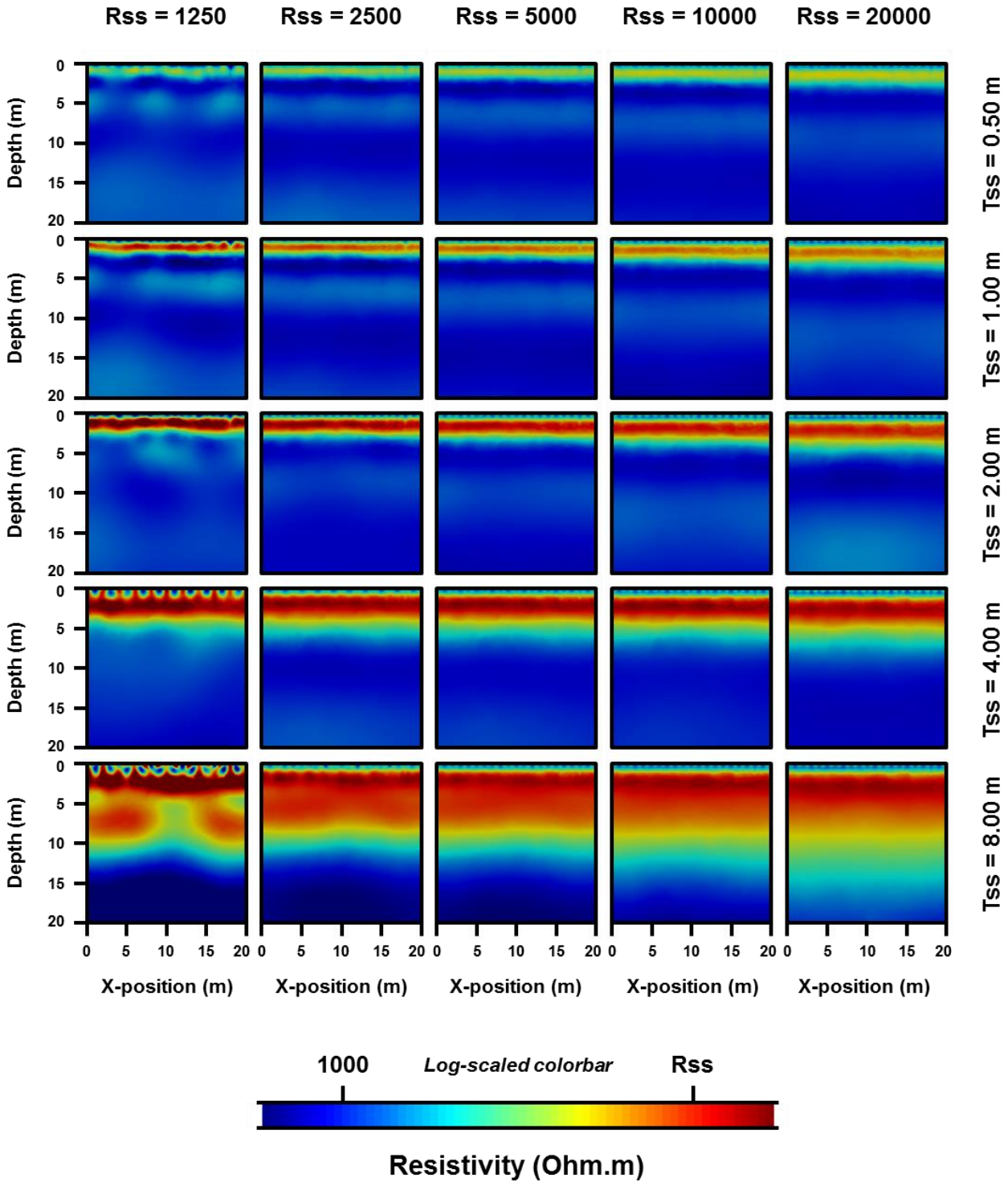

Figure S8: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the Wenner-Schlumberger array with an ESI of 1 m.

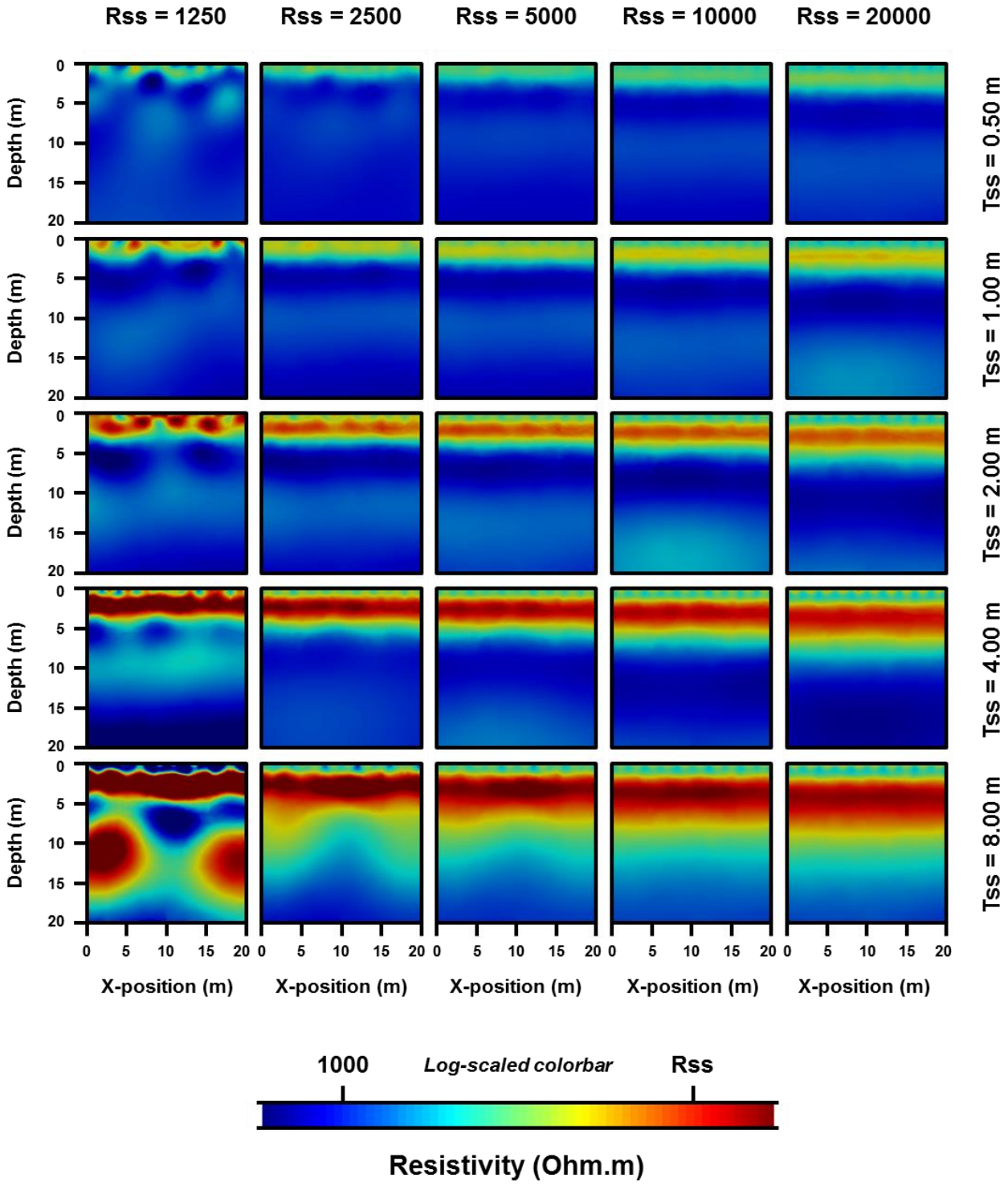

Figure S9: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the Wenner-Schlumberger array with an ESI of 2 m.

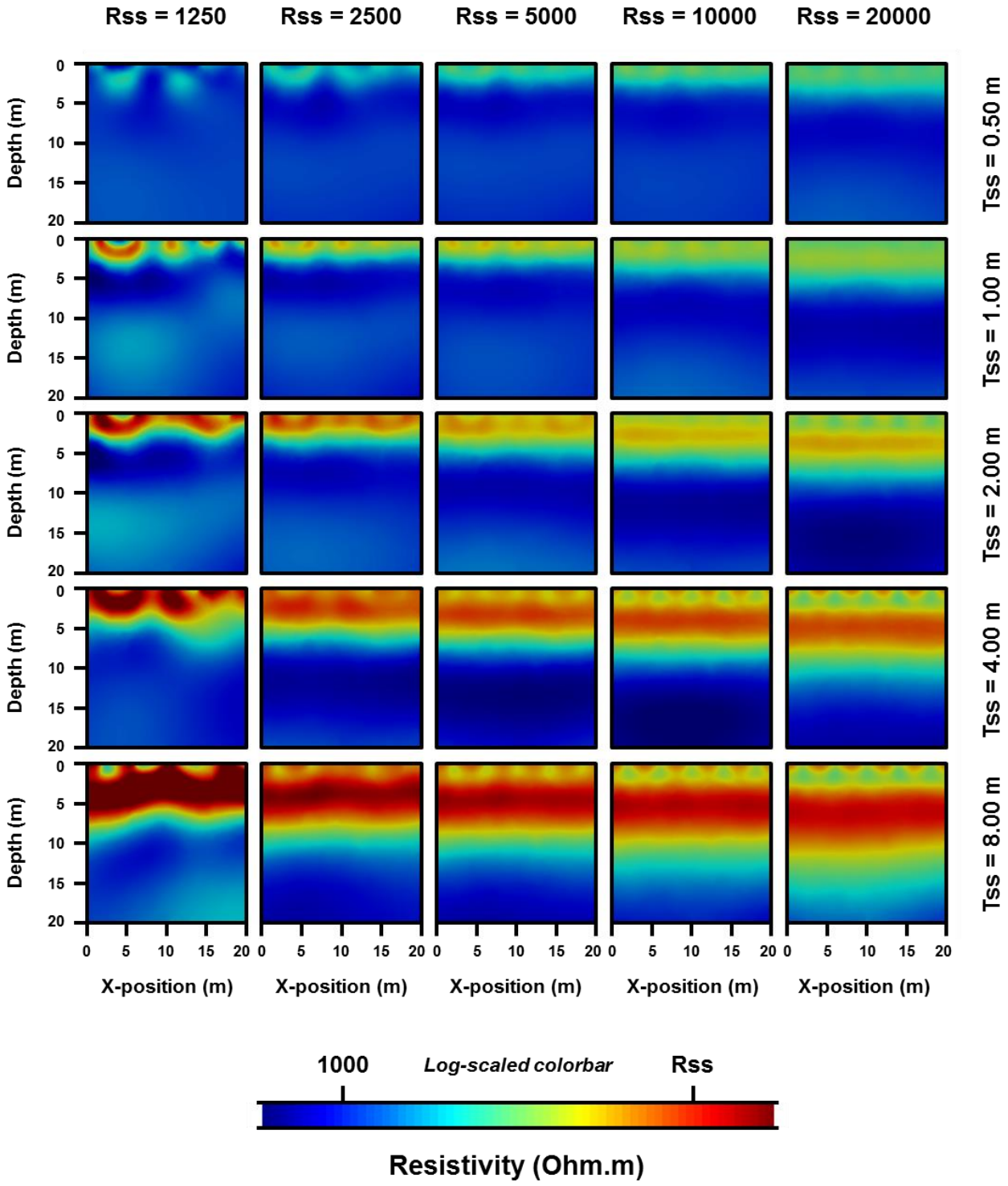

Figure S10: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the Wenner-Schlumberger array with an ESI of 4 m.

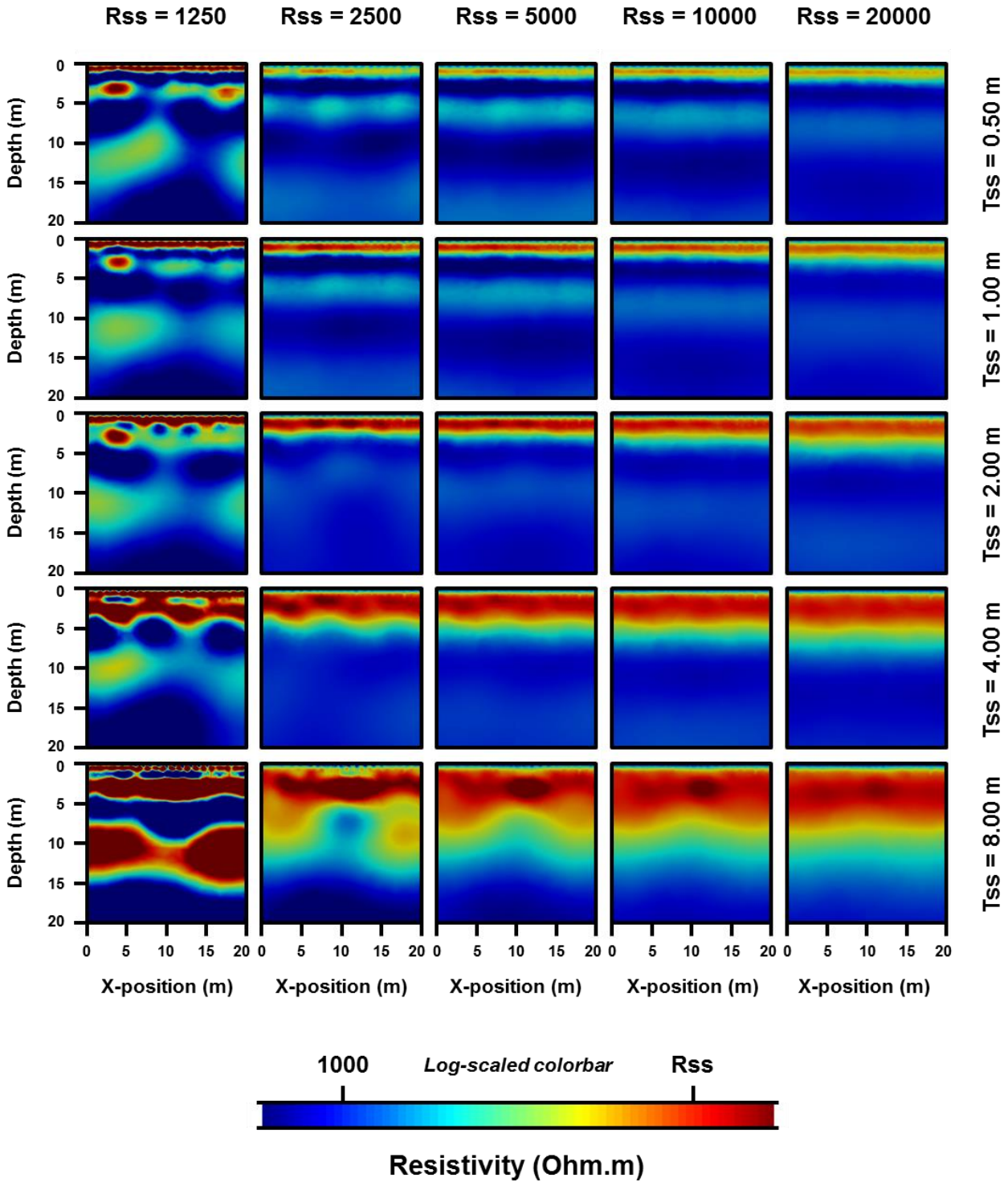

Figure S11: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the dipole-dipole array with an ESI of 2 m and upgraded with the four interpolated levels of surficial apparent resistivity.

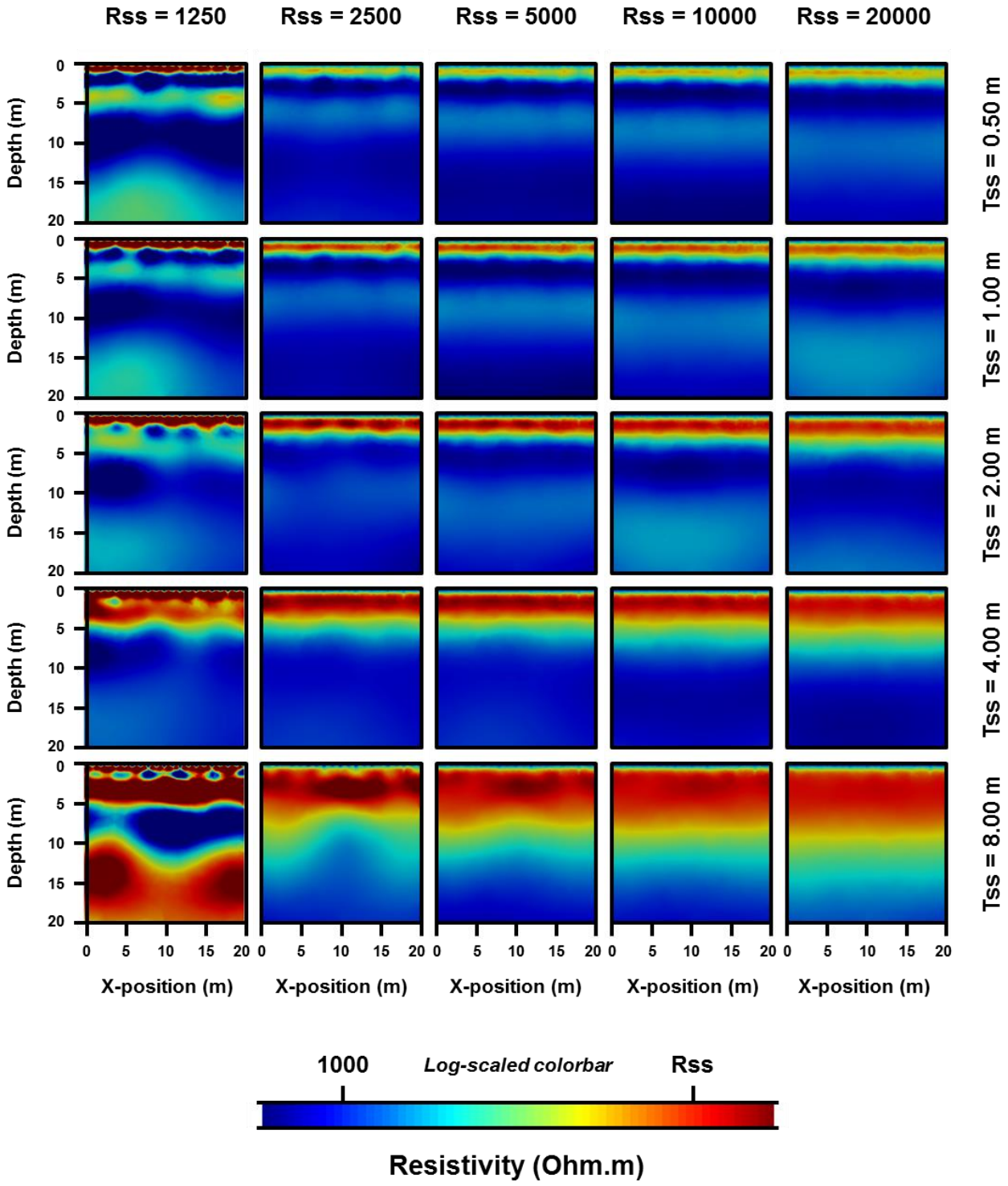

Figure S12: Results of inversion of the synthetic resistivity models (Rss and Tss values stand for the subsolum resistivity and thickness in the model, respectively) using the Wenner-Schlumberger array with an ESI of 2 m and upgraded with the four interpolated levels of surficial apparent resistivity.