

## **Response Letter**

### **Response to comments from reviewer 1**

Dear anonymous reviewer,

Thank you very much for your positive feedback. We greatly appreciate your recognition of our efforts in addressing the comments and improving the manuscript. We fully agree that there will always be room for refining the methodology and improving the quality of the dataset. Your constructive feedback and recognition have been highly encouraging and helpful in guiding us toward our ultimate goal of constructing a realistic and comprehensive dataset to facilitate deep learning-based paleochannel interpretation.

Additionally, we have corrected the reference for SedSim and revised “its capability” to “the capability” as you suggested.

Once again, we sincerely appreciate your thoughtful review and constructive feedback. Your comments have provided us with valuable insights and guidance for improving our manuscript.

Best regards,  
Guangyu Wang  
Xinming Wu  
Wen Zhang

## **Response to comments from reviewer 2**

Dear Samuel Bignardi,

We sincerely appreciate your positive recognition of our revised manuscript. Your feedback on our original submission has been extremely helpful in improving its clarity, fairness, and overall quality. Moving forward, we will continue to explore efficient seismic forward modeling methods to better capture the realistic characteristics of wave propagation.

Additionally, as mentioned in our manuscript (line 232), the subsurface models (seismic impedance and sedimentary facies volumes) have already been published together with the seismic volumes. Nevertheless, to further clarify, we have included supplementary figures to illustrate the subsurface models corresponding to the seismic volumes shown in Figure 9.

Once again, we sincerely appreciate your time and effort in reviewing our manuscript. Your comments have been instrumental in improving its quality.

Best regards,  
Guangyu Wang  
Xinming Wu  
Wen Zhang