

## ***Interactive comment on “The Depth Limit for the Formation and Occurrence of Fossil Fuel Resources” by Xiongqi Pang et al.***

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I believe this is a very nice study. This manuscript proposed a new model and workflow to quantitative predict the depth limit of the fossil fuel resources in sedimentary basins, which has a wide implication in nowadays petroleum industry. Abundant oil exploration and production data from PetroChina and Sinopec were integrated in this study to illustrate their model. But I still have some comments and suggestions here: 1. Does the laboratory workflows for all these geochemical data as shown in figures 2, 3, and 4 are the same? Is there any deviation for different these data caused by different laboratory workflows? 2. How does the dashed envelope line be established in figures 2, 3, and 4? It's formed by handwriting or any professional software? It seems that some of these dashed envelope lines are not that well fit with the geochemical data.

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3. How to preclude these outlier geochemical data? Is it possible that some outlier geochemical data (such as fig. 2b) are caused by detection deviation? As a whole, I congratulate the authors on a well-executed study.

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C2