

Dear editor,

We thank you for thoroughly reviewing our manuscript and giving detailed suggestions. We've included all given textual comments in the revised manuscript and used all comments and questions about the content to improve the quality of the manuscript. Please find below our response to the main comments:

Comment	Response
Fig. 1a: a location map at a local scale, e.g. European scale, may help.	We agree with the editor and have updated the figure.
Fig. 1b: a geological map instead of a geographic map may help to frame the studied area and to support the description provided in the tectonic setting. Also, add the locations of the hydrocarbon fields and highlight the wells displayed in figs. 3-6.	We agree with the editor regarding the addition of the hydrocarbon fields and the highlighting of the wells, which is updated in the figure. However, the map will become too chaotic if we also add a geological map, which in the flat study area would add very little information to the subsurface structures, wherefore we kept the geographic map. Fig. 1 already shows the national geological map, which we believe is sufficient to support the described tectonic setting.
Data section: you can note the information that you extracted from wells.	We agree and have updated the text to: <i>'Specifically, for those wells gamma ray logs in combination with the available formation tops made it possible to tie the wells to the seismic data. This allowed the calibration of the age of the main seismic horizons and sequences.'</i>
Method section: you can explain briefly that you tied the wells to the seismic data to calibrate the age of the main seismic horizons and sequences. You can also add some words to clarify the limitations regarding the well tops, to describe the applied procedure to choose the used formation tops, and to define the incorporated formations.	We agree, see updated text in the comment above.
Methods section: You can reorganise a bit the methods to clarify the interpretation procedure. I provide some suggestions in lines 125-140. It can be worth to mention the flattened procedure applied to seismic interpretations and to add some words to explain briefly the purpose of performing it the framework of this study.	We agree and have updated the text, adding an explanation about the flattening procedure. <i>'All four seismic sections were flattened for the base of the Rijnland Group. Despite all the limitations and biases of the flattening procedure, the flattened sections provide insights in the thickness variations of the Rijnland Group and underlying Nieuwerkerk Formation.'</i>
Data and methods section: The paper will benefit greatly from a section presenting the seismic stratigraphy, based in figure 2, and in the seismic profiles. You did a thoroughly and hard work interpreting and mapping the units	We agree and have added a description of the seismic stratigraphy to the methods section.

<p>and horizons. You can describe the seismic horizons (reflection parameters defining the horizons, age constraints,...) and the seismic units (seismic facies, bounding horizons, tectono-stratigraphic relationships-unconformable-conformable, age constraints,..). With this section in the paper, you will not need to introduce several times the seismic horizons and units and instead you can focus on describing their variations along seismic profiles.</p>	
<p>Figs. 3-6: In the seismic lines, you can add the projection distance for wells that do not intersect the lines.</p>	<p>We agree and have updated all figures along.</p>
<p>Fig. 1c: You can also highlight in figure 1 the wells that are displayed in seismic profiles to facilitate the straightforward localization of the data.</p>	<p>See comment above, done.</p>
<p>Results section 4.1: For the description of the seismic lines, if you provide thickness estimations for megasequences observed along the depth migrated profiles, it will help to quantify and describe variations.</p>	<p>We agree and have updated the section along with the given comments.</p>
<p>Results section 4.2: For the description of thickness maps, if you also provide thickness ranges, maximum and/or minimum values, it will help to describe and quantify the observed variations for each unit.</p>	<p>We agree and have updated the section along with the given comments.</p>
<p>Fig. 7h: You can describe/discuss a bit the structural map defining the highs and basins and the main bounding faults that you present in figure 7h. It is an important result of your work and this information is now in several parts of the text. I think the reader may get it more straightforwardly if you present it on a section or in a paragraph.</p>	<p>We get the editor's point, however , all important observations from Fig. 7h are already discussed in the text, and we do not want to add repetitions that likely would reduce the readability of the text.</p>
<p>Discussion section 5.1: The Tectonic Evolution may benefit from a bit of reorganisation of the information. See the text for some suggestions;</p> <p>'You can reorganize and rewrite this section to avoid repeating the information that you already presented in the observational part of the paper. You thoroughly described the megasequence and faults and the thickness of the megasequences.</p> <p>As you are discussing the tectonic evolution, you can define periods of tectonic evolution and discuss for each period the evolution of corresponding megasequences (deposition,</p>	<p>We are aware of the given comments, but we believe that placing a summary of findings and results at the beginning of the discussion helps the reader.</p> <p>Apart from adding some details, we have left this part of the text as it is.</p>

deformation, ...) and faults (development, inversion, ...) bringing here the observations that you described before from the interpretation of the seismic sections, the thickness maps and of the structural map.'

Supplementary materials: For the seismic lines in the supplementary material, you may include vertical and horizontal scales.

We agree, done.