

## AUTHORS RESPONSE TO THE TOPICAL EDITOR

We have revised the manuscript considering all your comments. Below we specify the changes made. We also include the marked-up manuscript version showing the changes made after the list of comments and changes.

**Comment #1:** *Please provide a full definition for GRV in the abstract.*

**Changes made:** We have replaced “GRV” by “gross rock volume” in the abstract. Then, in section “1 Introduction”, we have defined the term as follows:

Page 4, lines 9 – 10: “... gross rock volume (GRV), i.e. volume of the reservoir rock above the oil-water contact”.

**Comment #2:** *Pg 6 line 19 Can you be really clear how you made the manual uncertainty envelopes, was this a visual inspection or did you use the seismic data in anyway?*

**Changes made:** We have changed the sentence to clarify how we defined the manual uncertainty envelopes as follows:

Page 6, lines 19 – 23: “In the manual case, the dimensions of the uncertainty envelopes around each interpreted surface are based on a visual inspection of variations in the frequency content and in the amplitude of the seismic event, of the distance of reflector terminations around faults and of diffractions, if present.”

**Comment #3:** *Pg 9 line 4 delete ‘enough’*

**Changes made:** We have deleted ‘enough’.

**Comment #4:** *Pg 13 line 1 ‘through’ perhaps should be trough, but this is not clear. Please check this and through to line 5 for clarity.*

**Changes made:** We have replaced ‘through’ by ‘trough’ (page 12, line 23) and ‘pick’ by ‘peak’ (page 12, line 24).

**Comment #5:** *Pg 14 lines 1-9 Please check this new section on depth conversion for clarity/English. You show that the depth conversion is critical and has a bigger impact on the uncertainty than the interpretation uncertainty modelling undertaken. This leads to the question of why you did not include this in the first place. I suggest you deal with this by describing how you would include it in a future improved workflow.*

**Changes made:** We have changed the final part of Section “5.3 Seismic survey and other sources of structural uncertainty” to improve clarity. Additionally we have also added a brief description of the workflow that could be developed to combine all sources of the structural uncertainty in the same workflow (page 13, lines 11 – 33, and page 14, lines 1 – 12).

### Other changes made:

- The reference Schaaf and Bond (in this volume) has been updated with the corresponding full reference (page 15, line 3, and page 20, lines 2 – 3).
- The format of some references in the References section has been revised.