

Replies to Dr. Christian Berndt (referee 2).

- ❖ I have tried to review the manuscript "The abyssal giant pockmarks of the Black Bahama Escarpment: Relations between structures, fluids and carbonate physiography" but had to give up after the first paragraph of the results section. Although I entered the review with a lot of good will, I had to give up because the manuscript is not in a reviewable state yet. The main problem is the language ...

Dear Mr. Berndt, you have stopped the review just after the geological setting? Bear in mind that you do not have any obligation to review a manuscript. The other reviewer has proposed plenty of constructive and useful reviews. Regarding the language, he is American and that is true, we are French. As scientists, we need to be able to split science and language. Our scientific team is now wondering if there was any conflict of interest in reviewing this paper. I truly hope not. If that is the case, please specify it to the editor. We ignored this at the time of submission.

Firstly, here are a couple of interesting references regarding our work in the area:

Mulder T., Gillet H., Hanquiez V., Ducassou E., Fauquemberg K., Principaud M., Conesa G., Le Goff J., Ragusa J., Bashah S., Bujan S., Reijmer J.J.G., Cavailhes T., Droxler A.W., Blank D.G., Guiastrennec-Faugas L., Fabregas N., Recouvreur A., Seibert C. Carbonate slope morphology revealing a giant submarine canyon (Little Bahama Bank, Bahamas): **Geology**, 46, 31-34, 2018, doi: [10.1130/G39527.1](https://doi.org/10.1130/G39527.1).

Mulder T., Gillet H., Hanquiez V., Reijmer J.J.G., Droxler A.W., Recouvreur A., Fabregas N., Cavailhes T., Fauquemberg K., Blank D.G., Guiastrennec-Faugas L., Seibert C., Bashah S., Bujan S., Ducassou E., Principaud M., Conesa G., Le Goff J., Ragusa J., Busson J., and Borgomano J., Into the deep: A coarse-grained carbonate turbidite valley and canyon in ultra-deep carbonate setting, **Marine Geology**, 407, pp. 316-333, 2019. doi: [10.1016/j.margeo.2018.11.003](https://doi.org/10.1016/j.margeo.2018.11.003).

- ❖ but also the figures are not in good shape...

I assume you have not been through all the figures? Minimizing their quality is surprising. The figures 1 and 2 display isobaths contours inflexion that are key to discuss the detailed physiography and structural control in the area (as we do in onshore studies that are much more detailed than offshore studies). It is a different way to deal with bathymetric data that you definitely need to consider (less beautiful than colors but much more accurate). We do not have any feedback on the two last diagrams ... The other reviewer has proposed plenty of constructive and useful comments. We do regret your behavior.

- ❖ Section 4.1 may serve as an example. There is not a single sentence in the first two paragraphs that makes any sense.

I do want to comment this in details. That was neither the opinion of the other reviewer (American) nor the one from the first editor who accepted the manuscript for review.

- ❖ I have made plenty of comments on the manuscript (see attached pdf) and I am willing to review a revised version once the manuscript has been proof-read by a native English

speaker and figures 1 and 2 have been redrafted. This revised version should ideally take my comments into account.

We are really disappointed by this incomplete review because there was a lot of scientific, methodologic and synthetic effort in this manuscript; One more time - the other reviewer who is (i) a specialist of the area and (ii) very experienced in fluids circulation understanding - did not react as you did. We are still wondering if there was any conflict of interest in reviewing this paper. I truly hope not. If that is the case, please specify it to the editor.

Line 1: I am pretty sure you mean Blake. Regardless, you should check the term. There is the Blake Escarpment and the Bahama Escarpment, but I think there is no Blake Bahama Escarpment. Maybe the correct term should be Blake and Bahama escarpments? This should be checked with <http://geonames.nga.mil/> and then be used consistently throughout the text. There are a couple of instances where the spell checker played tricks on you (Blake->Black).

Indeed, “Black” Bahama Escarpment is an automatic “Microsoft word spelling modification” that we did not correct in the last proof. You are right; the correct spelling is “Blake”. This has been modified.

Line 12: leave it to the reader to decide if they are spectacular.

Done

Line 22: what would be Type?

We have deeply modified the abstract.

Line 23: Just by saying "indeed" doesn't make it true. What is the evidence that this is the case?

We have changed this.

Line 52: control not energy

We have changed this.

Line 58: it is uncommon to cite text like this in geoscience literature.

We do not agree (e.g. see an example below from [Judd_Hovland_Seabed_Fluid_Flow_Impact_of_geology_biology_and_the_marine_environment](#))

Associated features

Close inspection of high-resolution shallow seismic data has resulted in the identification of a range of intra-sedimentary features.

Buried ('fossil') pockmarks

Pockmarks are not found exclusively on the seabed. Buried or 'fossil' pockmarks occur at various horizons within the Kleppe Senior Formation and the Witch Ground Formation (Fig. 2.11). Long (1992) described them as "*pockmarks that have ceased venting and have subsequently been covered by sediments*". When these features are seen only on two-dimensional seismic sections it is possible to confuse them with linear features such as ice scour marks (as in Fig 2.12). However, in areas for which adequate seismic coverage is available, there can be no such mistake.

Line 68: The choice of references is interesting. It has a heavy french bias and omits some of the most influential works (e.g. the book by Judd and Hovland and the review by Katrine Andresen).

See above, this work has been cited. By the way, M. Agirrezabala is not French (he is from Spain) and works efficiently with a German team.

Line 80: See also the paper by Aurelian Gay on Kongo.

Aurélien is French by the way.

Line 89: What?

We do not understand this question.

Line 114: This last sentence is making the setting super-special, which would indicate that the subject is only interesting for very few people. I suggest dropping it or rephrasing it in a revised version.

Interesting.

Line 122: "the Bahamas are islands which may sit on pre-Triassic continental crust."

We have modified this sentence according to the other reviewer's feedback.

Line 142: "Consistently" -> Grammar

We have changed this to "similarly". Thank you.

Line 178: lowstands or low sealevel stands

This has been modified.

Line 181: what is structurally porous?

This has been rephrased

Line 188: check spellings Black or Blake?

See above.

Line 192: Please state how the data were processed. What kind of velocities did you use. What kind of migration did you use. What is the final resolution in x and z direction.

Done

Line 200: you mean it is a transform margin.

Yes it is. See Mercier de Lépinay et al., 2016

Line 202: what is an oceanic paleo transform fault? Do you mean a fracture zone?

We have modified the text.

Line 204: the corridor controls the physiography? What do you mean?

We have modified the text. "To shape" has been used.

Line 209: What is the meaning of this sentence?

We have named and defined the different structures of the area.

Line 210: what is an 18 km long curvature? A curvature is the amount of how much something is curving.

We have modified the text. We did not provide a curvature value but a distance along which the BBE is curved.

Line 212: A curvature cannot be located exactly at an intersection. You must mean something different.

We have modified the text.

Line 214: The orientation controls the shape?

We have modified the text.

Line 221: See above.

?? Please be more accurate.

Figure 1: both figures are really hard to read. In fact, this is more a game of puzzle than a clear figure. It takes ages to find the small labels and even after 20 minutes staring at the figure I cannot find the location of 4a and 4b.

Why don't you use colors to clarify things?

Colors are much less accurate than isobaths contours in performing structural analysis. Thanks to this “field geologist” and “onshore” method, we obtain an interesting structural sketch that we are proud of.

For Fig. 2: Never show a contour line that cannot be identified!

No need to use an exclamation point. ☺ We can try to add a label on an isobath.

Where do the structural elements in **1b** come from? They do not look very sensible.

Structural lineaments have been interpreted from the bathymetric map during the physiographic analysis. This is “our interpretation” of the area based on our knowledge thanks to **3** oceanic cruises in the area, acquiring bathymetric, reflectivity data as well as seismic data. These lineaments explain recognized sharp contours of certain isobaths as well as low and highs in the area.

Some examples:

Mulder T., Gillet H., Hanquiez V., Ducassou E., Fauquembergue K., Principaud M., Conesa G., Le Goff J., Ragusa J., Bashah S., Bujan S., Reijmer J.J.G., Cavailhes T., Droxler A.W., Blank D.G., Guiastrenec-Faugas L., Fabregas N., Recouvreur A., Seibert C. Carbonate slope morphology revealing a giant submarine canyon (Little Bahama Bank, Bahamas): *Geology*, 46, 31-34, 2018, [doi: 10.1130/G39527.1](https://doi.org/10.1130/G39527.1).

Mulder T., Gillet H., Hanquiez V., Reijmer J.J.G., Droxler A.W., Recouvreur A., Fabregas N., Cavailhes T., Fauquembergue K., Blank D.G., Guiastrenec-Faugas L., Seibert C., Bashah S., Bujan S., Ducassou E., Principaud M., Conesa G., Le Goff J., Ragusa J., Busson J., and Borgomano J., Into the deep: A coarse-grained carbonate turbidite valley and canyon in ultra-deep carbonate setting, *Marine Geology*, 407, pp. 316-333, 2019. [doi: 10.1016/j.margeo.2018.11.003](https://doi.org/10.1016/j.margeo.2018.11.003).

Fig. 3: I can start reading the labels at 135% zoom and the final publication size will even be smaller!

No need to use an exclamation point. ☺ We can try to fix this
You have stopped there? How about the figure 4, 5, 6, 7, table 1, appendix 1?