

General comments for the revised version of the manuscript “Formation of linear planform chimneys controlled by preferential hydrocarbon leakage and anisotropic stresses in faulted fine-grained sediments, Offshore Angola”

The overall manuscript is greatly improved and now meets the publication requirements, aside a very few minor adjustments. It can be seen that the authors have put in great amount of effort. The figures are much clearer now, especially the 3D illustration for the morphology of the Linear Chimney and the figure of classification. Each section has a much better flow for reading. The introduction is very well written as well. The section of geological setting has been greatly improved. The discussion sections are much more focused and detailed, it may be a bit lengthy which may be in part do to adding in the extra information as requested by reviewers (including myself), but since the manuscript is addressing a relatively new and very technical topic, it is reasonable and perfectly acceptable.

There are just some minor mistakes left in the main text, some sentences are repetitive (please see the list below), and there are two places that need clarification: please specify that polygonal faults were impermeable “at the time” when gas migration happened and when chimneys formed.

Generally speaking the manuscript is ready for publication. After applying the minor corrections in the list below the article can be published at its present state.

P2/L12 add reference

P4/L2 typo "being"

P4/L2 typo "an to"

P4/L19 redundancy remove “salt”

P9/L31 and P10/L8 repetition

L10/L28 Remove “In contrast, residual gas is still present in the reservoir of Type 2 chimneys” put in L24 and change it to “....at their downward termination (Fig. 10c) which are interpreted as residual gas accumulation”

P11/L12 what is 731) ?? something missing?

P11 please put in subtitle for each point

P11/L20 please clarify that the PF planes were impermeable “at the time” when gas migrated

P12/L8 redundancy, remove “where gas is likely to have accumulated before exceeding the lithostatic pressure.”

P12/L13 redundancy, remove “In the upper parts of a graben, extensional phenomena dominate, while”

P12/L17 remove “Based on seismic observations and the hypothesis of gas migration into the specific part of a PF interval, as established above”

P12/L20 please clarify that the PF planes were impermeable “at the time” when chimneys formed

P13/L18 change σ_2 to intermediate stress, please be consistent with the term

P14/L4 is a bit contradicting with L8-10. Please change L8-10 into something like “...the planform and orientation of chimneys can be affected simply by the stress field of a “neighboring” tectonic fault when PFs are absent.”

P15-P16 in 5.3.2 please put in subtitle for the two sub sections, such as: 1) palaeo stress indicated by linear chimneys and 2) palaeo stress indicated by linear PHAAs

P16-L13 please move point 4 before 1

P16-L20 remove “strongly”

Figure 3 where is SE?

Figure 4 redundancy - remove “(interval A)”

Figure 5 excellent figure! Which reflection on section (b) and (c) the map (a) corresponds to?

Figure 8 excellent figure! May consider to remove the grey lines between blocks in the right column

Figure 10c please label which is peak or trough for the seismic traces