



Supplement of

Formation of linear planform chimneys controlled by preferential hydro-carbon leakage and anisotropic stresses in faulted fine-grained sediments, offshore Angola

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Supplementary materials

for

The Alternative Hypothesis Of Gas Chimney Formations In Hanging Walls – Fluid Migrations Along Pre-Existing Vertical Fractures

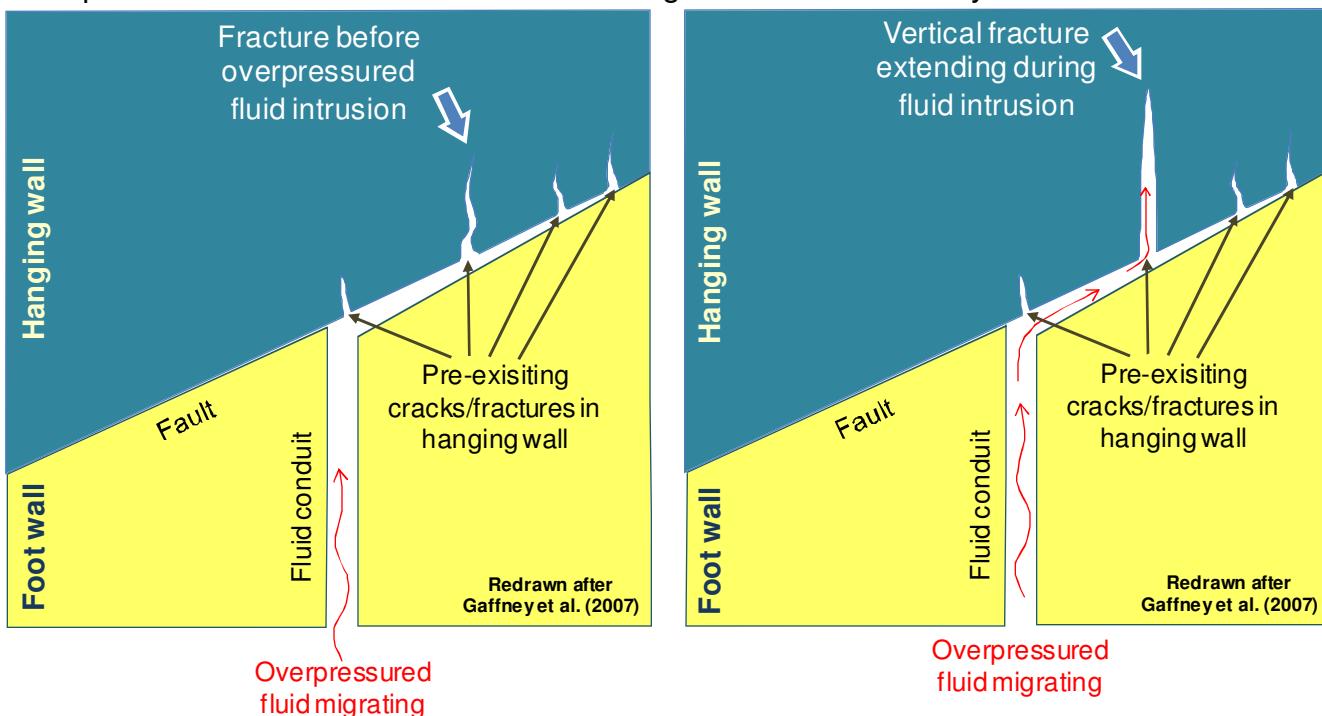
in Section 5.2.4. of

«Formation of linear planform chimneys controlled by preferential hydrocarbon leakage and anisotropic stresses in faulted fine-grained sediments, Offshore Angola»

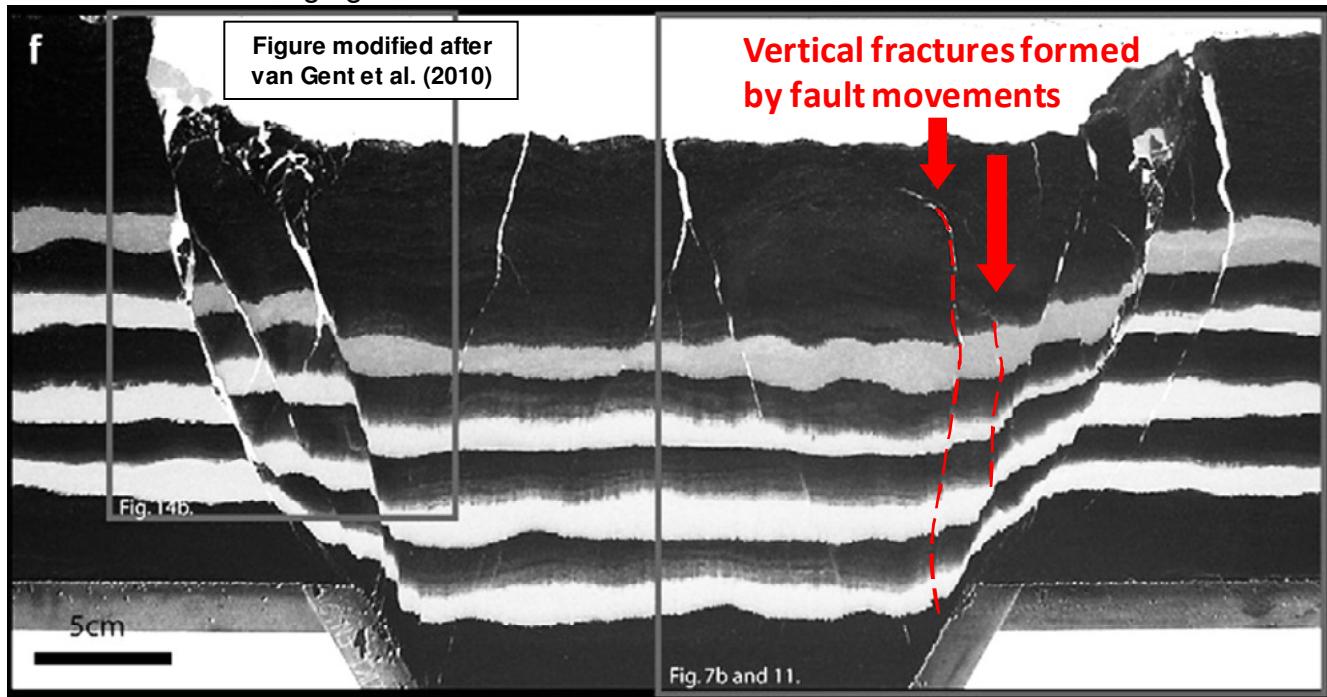
Ho et al. (2018)

Cited figures and references in section 5.2.4.

- Figures below redrawn based on figure 2a-b in Gaffney et al. (2007), show the hypothesis of Gaffney et al. (2007) that overpressured fluid intruded and used the pre-existing fractures in hanging wall to migrate vertically upward, hence the vertical expansion/extension of the fractures forming vertical fluid chimneys.



- Figure below modified from figure 9f in van Gent et al. (2010) shows vertical fractures formed in the hanging wall due to normal faults movements.



In van Gent et al. (2010) multiple smaller fractures occurring in the hanging wall are demonstrated to evolve into segmented fault arrays afterwards.

See also their Youtube video <https://www.youtube.com/watch?v=MmgYBsHuVHk>

References

Gaffney, E. S., Damjanac, B., & Valentine, G. A. (2007). Localization of volcanic activity: 2. Effects of pre-existing structure. *Earth and Planetary Science Letters*, 263(3-4), 323-338.

van Gent, H. W., Holland, M., Urai, J. L., & Loosveld, R. (2010). Evolution of fault zones in carbonates with mechanical stratigraphy—Insights from scale models using layered cohesive powder. *Journal of Structural Geology*, 32(9), 1375-1391.