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Reply on RC1

Agathe Defourny et al.

Author comment on " $\delta^{13}\text{C}$, CO_2 □/□ ^3He and ^3He □/□ ^4He ratios reveal the presence of mantle gas in the CO_2 -rich groundwaters of the Ardennes massif (Spa, Belgium)" by Agathe Defourny et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2021-611-AC1>, 2022

Dear Referee,

On behalf of all co-author, I thank you very much for the interest you have given to our work.

Your comment is very interesting. Indeed, our point of attention consisted in proving a mantle origin of the gas. We did not go into the details of whether it was a plume or Morb origin, and as it is quite far from our expertise topics, we certainly mixed both origin in the paper without noticing. We will modify the paper and refer more widely to a "mantle origin", and will mention that the exact origin of the volcanism of the eifel is still a matter of debate, with appropriate references.

All the other minor comments will be integrated as well.

Again, thank you for improving the quality of the paper with your proofreading.

Regards,

Agathe Defourny