

***Interactive comment on “Methane release from  
gas hydrate systems during the  
Paleocene-Eocene thermal maximum and other  
past hyperthermal events: setting appropriate  
parameters for discussion” by G. R. Dickens***

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Received and published: 17 June 2011

Dear Darren,

Thank you for the comments and the nod of appreciation.

Methane oxidation in the water column does produce water, but I think it gets lost in the immense surrounding pool. Methane oxidation in the atmosphere is complex and involves removal of OH radical. This has been discussed in several papers, notably Schmidt and Shindell (2003).

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As to the other events . . . I have to admit I had never heard about the Devonian Kacak Event, so I need to do some reading! Of the others, the early Toarcian is the one that stands out as having many similarities to the PETM, at least with available data. I think best to hold off on additional speculation, given that the paper is already wildly speculative. Now, what would be cool, is to see coupled long-term carbon and sulfur isotope records spanning these events.

Jerry

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Interactive comment on Clim. Past Discuss., 7, 1139, 2011.