

Corrigendum

Corrigendum to “The physics of gas chimney and pockmark formation, with implications for assessment of seafloor hazards and gas sequestration” [Mar. Petrol. Geol. 27 (2010) 82–91]

L.M. Cathles^{a,*}, Zheng Su^b, Duofu Chen^c

^a Department of Earth and Atmospheric Sciences, Cornell University, Ithaca, NY 14853, United States

^b CAS Key Laboratory of Renewable Energy and Gas Hydrate, Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, Wushan, Guangzhou 510640, China

^c CAS Key Laboratory of Marginal Sea Geology, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Wushan, Guangzhou 510640, China

A corrected version of Fig. 6 appears below. The new material in insert (a) replaces the corresponding section in the original figure. The rest of the figure is unchanged. The original Fig. 6a illustrated how pockmarks 50 m diameter and 4 m deep lie along a fault on the margin of the Blake Ridge salt dome shown in Fig. 6b, but it was misleading because it appeared to be an interpreted seismic section (data), and it was not. This corrected version replaces the previous part (a) with the interpretive sketch published by Paull et al. (1995). It presents the data more clearly than the original, and it is clearly an illustration of an interpretation.

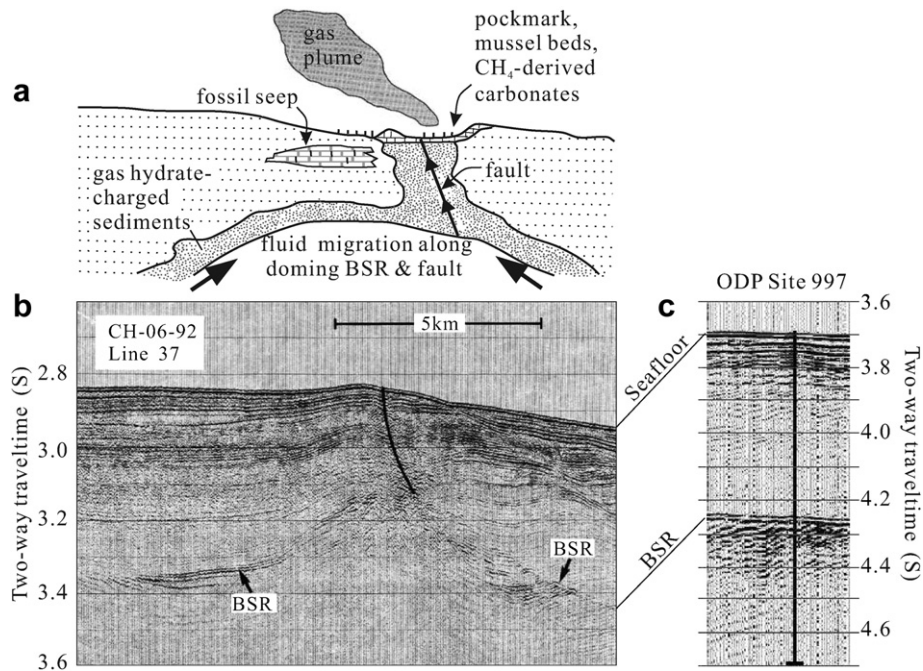


Fig. 6. The Geological context of gas venting at Blake Ridge. A salt diapir at Blake Ridge is capped by a small fault (b) which may have initiated gas venting. The low frequency seismic disturbance that now surrounds this fault is interpreted to be a gas chimney (Taylor et al., 2000). The chimney becomes complex near the surface. Gas is actively seeping from parts of the fault, and pockmarks ~4 m deep and 50 m wide have formed along the fault (Paull et al., 1995). Biogenic gas may be moving along the margins of the salt dome to feed the fault, as Paull

DOI of original article: 10.1016/j.marpetgeo.2009.09.010.

* Corresponding author. Tel.: +1 607 255 2844; fax: +1 607 254 4780.

E-mail address: lmc19@cornell.edu (L.M. Cathles).

et al. suggest in (a). The BSR rises near the salt diapir, reflecting the temperature perturbation caused by the diapir. The BSRs some distance from the salt dome lie at similar depths as the BSR at ODP Site 997 (c) 98 km to the southwest (e.g., at ~0.56 s two-way travel time below the seafloor). Fig. 6a and b is from [Paull et al. \(1995\)](#); Fig. 6c is from [Matsumoto et al. \(1996\)](#).

References

- Matsumoto, R., Paull, C., Wallace, P., the Leg 164 Scientific party, 1996. Gas Hydrate Sampling on the Blake Ridge and Carolina Rise: ODP. Leg 164 Preliminary Report.
- Paull, C.K., Ussler III, W., Borowski, W.S., Spiess, F.N., 1995. Methane-rich plumes on the Carolina continental rise: associations with gas hydrates. *Geology* 23, 89–92.
- Taylor, M.H., Dillon, W.P., Pecher, I.A., 2000. Trapping and migration of methane associated with the gas hydrate stability zone at the Blake Ridge Diapir: new insights from seismic data. *Marine Geology* 164, 79–89.