Differences in microbial methane turnover and carbonate isotopy between two neighboring mounds along the Pacific Costa Rican continental margin

Supplementary data

Figure captions

Figure 1S. Measured porewater data obtained from SO206-39 (Multi Corer) at Mound 11 during cruise SO206 and modeled vertical profile. Top left - sulfate (SO$_4^{2-}$), top right - methane (CH$_4$), middle left – chloride (Cl$^-$), middle right – bicarbonate (HCO$_3^-$), bottom left – sulfide (HS$^-$), bottom right – calcium (Ca$^{2+}$).

Figure 2S. Measured porewater data obtained from SO206-50 (Gravity corer) at Mound 11 during cruise SO206 and modeled vertical profile. Top left - sulfate (SO$_4^{2-}$), top right - methane (CH$_4$), middle left – chloride (Cl$^-$), middle right – bicarbonate (HCO$_3^-$), bottom left – sulfide (HS$^-$), bottom right – calcium (Ca$^{2+}$).

Figure 3S. Measured porewater data obtained from SO206-44 (Multi Corer) at Mound 12 during cruise SO206 and modeled vertical profile Top left - sulfate (SO$_4^{2-}$), top right methane (CH$_4$), middle left – chloride (Cl$^-$), middle right – bicarbonate (HCO$_3^-$), bottom left – sulfide (HS$^-$), bottom right – calcium (Ca$^{2+}$).

Figure 4S. Measured porewater data obtained from SO206-46 (Multi Corer) at Mound 12 during cruise SO206 and modeled vertical profile. Top left - sulfate (SO$_4^{2-}$), top right - methane (CH$_4$), middle left – chloride (Cl$^-$), middle right – bicarbonate (HCO$_3^-$), bottom left – sulfide (HS$^-$), bottom right – calcium (Ca$^{2+}$).
Figure 1S

- SO$_4^{2-}$ (mmol l$^{-1}$)
- CH$_4$ (mmol l$^{-1}$)
- Cl$^-$ (mmol l$^{-1}$)
- HCO$_3^-$ (mmol l$^{-1}$)
- HS$^-$ (mmol l$^{-1}$)
- Ca$^{2+}$ (mmol l$^{-1}$)

The diagrams show modeled and measured values of various ions as a function of depth (cmbsf).
Figure 3S

**SO$_4$$^{2-}$ (mmol l$^{-1}$)**

**CH$_4$ (mmol l$^{-1}$)**

**Cl$^-$ (mmol l$^{-1}$)**

**HCO$_3^-$ (mmol l$^{-1}$)**

**HS$^-$ (mmol l$^{-1}$)**

**Ca$^{2+}$ (mmol l$^{-1}$)**

- modeled
- measured
Figure 4S

- **$\text{SO}_4^{2-}$ (mmol l$^{-1}$)**
  - Modeled: Blue line
  - Measured: Red dots

- **$\text{CH}_4$ (mmol l$^{-1}$)**
  - Modeled: Blue line
  - Measured: Red dots

- **$\text{Cl}^{-}$ (mmol l$^{-1}$)**
  - Modeled: Blue line
  - Measured: Red dots

- **$\text{HCO}_3^{-}$ (mmol l$^{-1}$)**
  - Modeled: Blue line
  - Measured: Red dots

- **$\text{HS}^{-}$ (mmol l$^{-1}$)**
  - Modeled: Blue line
  - Measured: Red dots

- **$\text{Ca}^{2+}$ (mmol l$^{-1}$)**
  - Modeled: Blue line
  - Measured: Red dots