

Titles and captions for supplementary files for GRAVITY COMPLEXES AS A FOCUS OF SEAFLOOR FLUID SEEPAGE: THE RIO GRANDE CONE, SE BRAZIL by Ketzer et al.

**Supplementary data 1 – Chloride concentration profiles.**

Chloride concentration (pore water) vs. depth for three piston cores obtained in the studied pockmarks of the Rio Grande Cone (PC71, PC76, PC83). Note that the concentrations vary between 11,643-27,000 ppm (up to ca. 40% higher than standard seawater). Chloride concentration was obtained via ionic chromatography (Thermo Scientific, Dionex ICS-5000 dual pump system) after dilution with deionized water.

**Supplementary data 2 – Chemical and isotopic composition of gases.**

Methane and ethane + propane concentrations, and carbon isotopic values of methane for vent bubbles, gas hydrate and pore gas samples (see Figure 3 for location).

**Supplementary data 3 – Temperature vs. depth profile of the water column.**

Temperature vs. depth profile of the water column obtained in pockmark PC83 (see Figure 3 for location) with a conductivity, temperature, depth (CTD) cast.

**Supplementary video 1 – Gas flare.**

Video showing gas flare with several bubble streams in pockmark PC83 (see Figure 3 for location). Note hydrate coating on bubbles as they rise in the water column (26-36 seconds).

**Supplementary video 2 – Details of bubble streams in gas flare.**

Video showing details of bubble streams in a gas flare in pockmark PC83 (see Figure 3 for location).