

Figure F1. Locations of IODP Expedition 366 Sites U1491–U1498 and Site 1200 on South Chamorro Seamount superimposed on a regional bathymetric map. (From the Expedition 366 summary chapter [Fryer et al., 2018b].)

Figure F2. Pore water concentration depth profiles for Li, Rb, and Cs from Yinazao, Fantangisña, and Asùt Tesoro Seamounts. Solid symbols = summit data (Holes U1492C, U1497A, and U1496A), open symbols = data from the other summit and flank holes, black solid symbol = bottom seawater.

Figure F3. Pore water concentration depth profiles for V, Mo, U, and Ba from Yinazao, Fantangisña, and Asùt Tesoro Seamounts. Solid symbols = summit data (Holes U1492C, U1497A, and U1496A), open symbols = data from the other summit and flank holes, black solid symbol = bottom seawater.

Figure F4. Pore water concentration of sulfate plotted versus Ba from Yinazao, Fantangisña, and Asùt Tesoro Seamounts. Solid symbols = summit data (Holes U1492C, U1497A, and U1496A), open symbols = data from the other summit and flank holes, black solid symbol = bottom seawater.

Figure F5. Concentrations of deep-sourced fluids as a function of distance to the trench. A. Trends in Rb (green circles) and Cs (red squares) are similar, showing increased concentrations with distance and by supposition depth to the subduction channel and temperature within the subduction channel. B. Trends in sulfate (green circles) and Ba (red squares) show an inverse relationship.

Figure F6. Concentrations of K versus Rb and Ba versus V in deep-sourced fluids. The K-Rb trend is likely due to changes in reactions with increased temperature, and the Ba-V trend is likely redox related.

Figure F7. Pore water chemical data derived from the Mariana forearc during Expedition 366, data from this report, and data from two other serpentinite mud volcanoes at a greater distance from the trench (South Chamorro and Conical Seamounts) (Hulme et al., 2010). Bar graphs illustrate relative differences in concentrations among sites to highlight these differences. Depths are conceptual and for illustrative purposes only. (See the Expedition 366 summary chapter [Fryer et al., 2018b].)