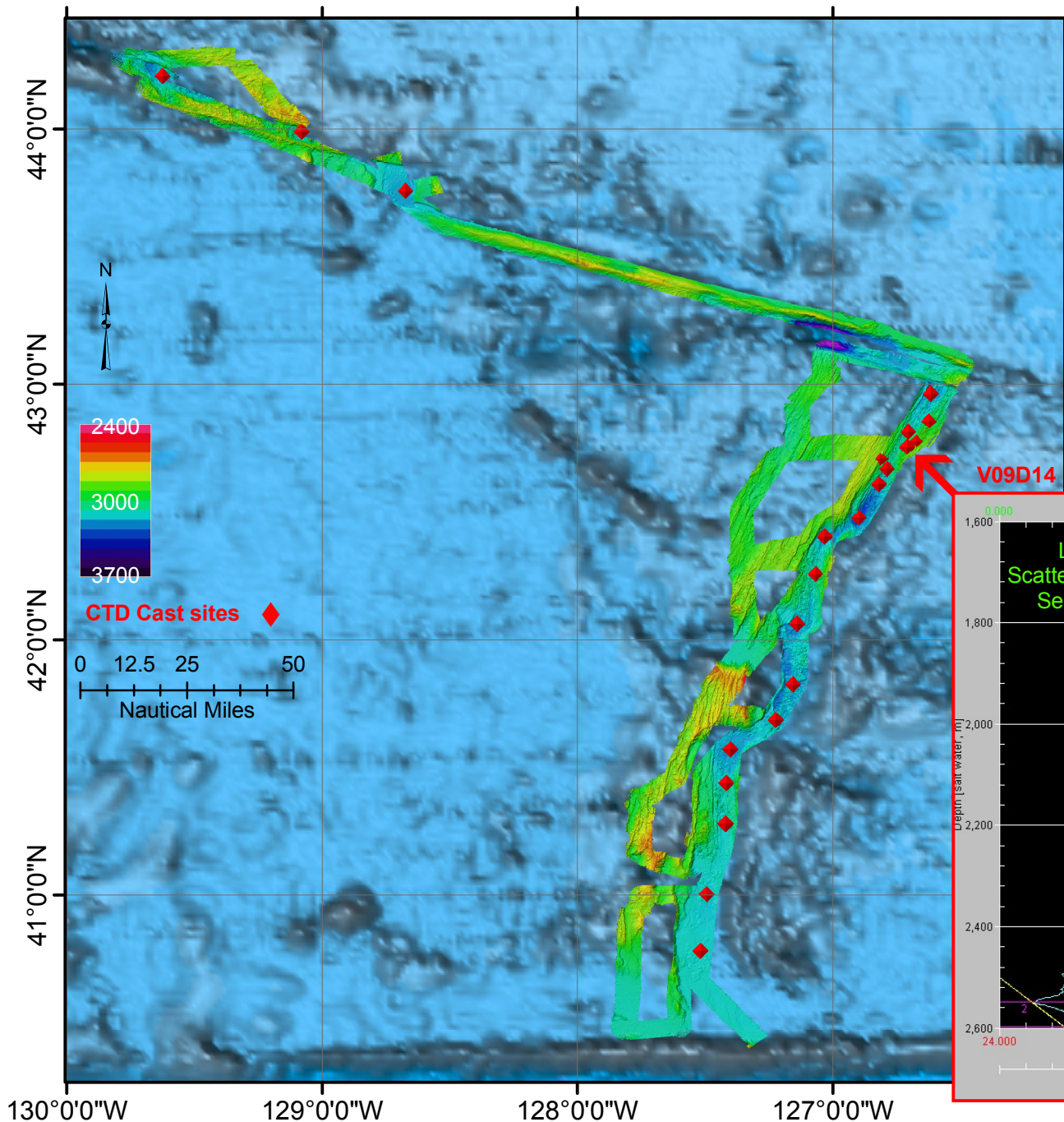


EX0904 Water Column Exploration Gorda Ridge and East Blanco Fracture Zone June 1-12, 2009



Vertical cast V09D-14 was positioned at the Sea Cliff hydrothermal field. Evidence of hydrothermal venting was seen in this area during the first water column survey of the Gorda Ridge in 1985, and high-temperature vents were located at this site with the Navy's Sea Cliff submersible in 1988. The image shows the profile with depth of data from sensors on the CTD. The particle anomaly began as the CTD descended past 2250 m, and increased dramatically along with the onset of the ORP anomaly at 2350 m. The plume was present nearly all the way to the seafloor (2610 m), and density inversions below 2500 m suggest we were sampling within the buoyant plume. All indications are that we were very close to the source, and that this site is still quite active after 25 years!

