



Dr. Drummond Matthews F.R.S.

The Leg 173 *Initial Reports* volume is dedicated to the memory of Drum Matthews, who died in July 1997 shortly after Leg 173 ended. Drum Matthews was a very distinguished and dedicated marine earth scientist who left an indelible legacy to marine geoscience. By coincidence, many of his major contributions to our science relate to the background and objectives of Leg 173. In 1962, with Fred Vine, he proposed the Vine-Matthews hypothesis of seafloor spreading that led to plate tectonics and revolutionized the earth sciences. In 1981 he set up the British Institutions Reflection Profiling Syndicate (BIRPS), which used multichannel seismic profiling at sea to image the deep continental crust and mantle around the British Isles. These images revealed tectonic and other reflectors even more dramatic than some of those that underlie the southern Iberia Abyssal Plain. Drum also became involved in the Deep Sea Drilling Project (DSDP) when he planned the execution of the first downhole seismic experiment during DSDP Leg 52. This pioneering work has been followed by many others in DSDP and the Ocean Drilling Program. Perhaps the strongest link of all to Leg 173 was the fact that in 1958 Drum Matthews began his Ph.D. research on a large dredge haul of highly altered basalts from Swallow Bank, only 170 km west of Site 1070. These ocean crustal rocks, collected during the “heroic age” of deep-sea marine geophysics, complement the suite of basement rocks drilled during ODP Legs 149 and 173 and remain the only samples of unequivocal oceanic crust adjacent to the ocean/continent transition at the latitude of the southern Iberia Abyssal Plain. The Leg 173 Shipboard Scientific Party was truly following in the footsteps of an outstanding and inspirational scientist.