Professor Richard (Rick) Sibson revolutionized structural geology by illustrating that fault rocks contain an integrated record of earthquakes. Fault-rock textures develop in response to geological and physical variables such as composition, environmental conditions (e.g. temperature and pressure), fluid presence and strain rate. These parameters also determine the rate- and state-variable frictional stability of a fault, the dominant mineral deformation mechanism and shear strength, and ultimately control the partitioning between seismic and aseismic deformation. This volume contains a collection of papers that address the geological record of earthquake faulting from field-based or theoretical perspectives. The papers cover observations in active fault zones, the relationships between fault rocks and fault-slip styles, interpretation of fault-rock textures from the base of the seismogenic zone, consideration of the effects of fluids on faulting, discussion of fault reactivation v. initiation, and a review of future directions in geological earthquake research by Professor Sibson.