The deadly and damaging Christchurch Earthquake of February 22, 2011 (23:51, 21/02/11 UTC) is part of the Canterbury earthquake sequence started by the Mw 7.1 Darfield Earthquake in September of 2010. This sequence occurred on previously unrecognized fault(s) and significantly distant from the main components of the plate boundary system through South Island, New Zealand. The initial rupture of the September event and subsequent aftershocks have delineated a linear (nearly east-west in orientation) trend extending over 80 km from the foothills of the Southern Alps to the Pacific coast, east of the city of Christchurch. Understanding the relationships among fault segments, regional geologic structure, and crustal stresses associated with regional plate interactions is key to placing these events into a context that allows us to apply lesson learned elsewhere. Here we focus on the seismo-tectonics of the sequence to address the following: 1) How does the February 22 event’s fault relate to the September 3 fault system both physically and through stress conditions; 2) Are there gaps in moment release between main rupture segments and what role have aftershocks played in modifying any gaps; 3) Are there other faults capable of hosting moderate but damaging earthquakes in the region; and 4) Can we say anything about the potential for future events such as the February 22 earthquake? This last point is the fundamental question that Christchurch residents would like answered and is diagnostic of the issues that mark the global significance of this and similar events.