The Tongariro Volcanic system is a composite andesitic cone complex, located at the southern end of the Taupo Volcanic Zone in the central North Island of New Zealand. Here we use data from an initial profile of 22 broad band magnetotelluric soundings to construct an image of the magmatic structure along a single profile near Mount Ngauruhoe, the most recently active vent of the system. Phase tensor analysis indicates that the data response is quasi 2-D for most of the profile, although the response in the area adjacent to Mount Ngauruhoe has a significant 3-D component. 2-D inverse modelling of the MT data show a narrow (1 km), vertical conductive zone located under Mount Ngauruhoe which is interpreted to represent the ascent path of magmatic fluids from a deeper source region located ~10km below the volcano. To image the underlying magmatic system more thoroughly we have expanded the survey to a 25 x 35 km$^2$ area covering the volcanic system, bringing the total number of soundings to 128.