The Geothermal system is an important source in terms of energy. In countries with high energy requirements, the term "hot dry rock" becomes even more important. In this study, in a place where it can be a hot dry rock, field survey was conducted by using radioactive data. For this purpose, the data of K, U and Th concentration, which is long term natural radioactive elements, were obtained with gamma-ray spectrometer device around Isparta-Yakaören. In the study area, in-situ spectrometric measurements were performed at 362 different points. Radiogenic Heat production values were calculated by using the values of U, Th and K concentration obtained as a result of these measurements. Then, maps to evaluate of the study area were generated by using U, Th, K concentration and radiogenic heat production values. The study area was discussed in terms of geothermal potential by interpreted maps. The average radiogenic heat production values of the trachyandesite tuff and alluvium units in the study area were obtained as 6.5µW/m^3, 4.2µW/m^3 and 3.8µW/m^3, respectively. It is thought that in the study area, especially from the high heat production of trachyandesite rock and this rock may have a potential to develop as a hot dry rock geothermal source if it is impermeable.