Ground Penetrating Radar (GPR) is a non-invasive geophysical research method imaging subsurface structures. It expanded widely across geomorphologic investigation during last years because of its speed, low-cost, reliable and large-scale capability. GPR is especially useful in sedimentological studies. The thesis is focused on introducing the basics about the GPR method as it is not well-known in Czech geomorphologic scene. The physical background of the device and the electromagnetic waves is given. A research articles and books recherche helped in creating of a reflection summary amended with Czech terminology and graphic examples. The typical reflection answer of sedimentological features were documented and sorted according to the glacial, periglacial, fluvial, paleolake and slope geomorphologic environments. A sequence of steps for editing and interpreting a radargram was proposed and applied on three model radargrams.