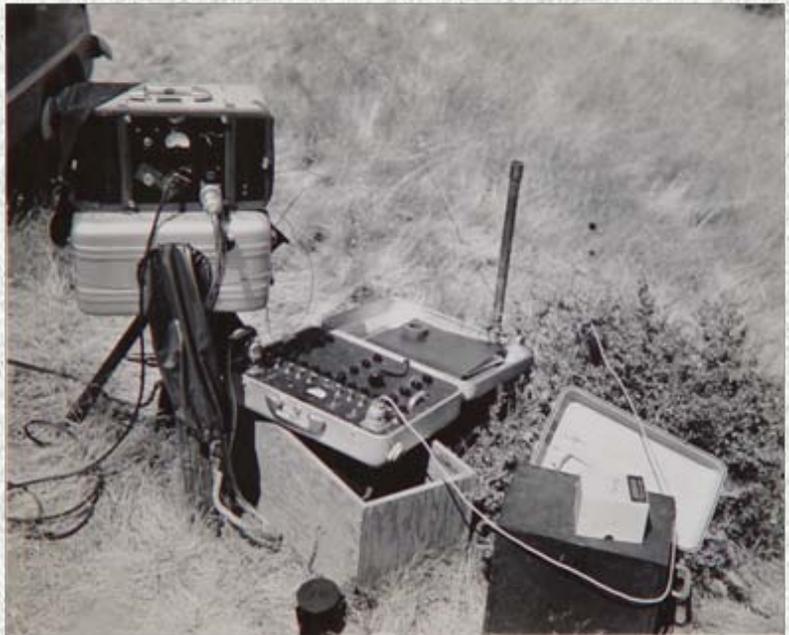


Geophysics and Geology

Verification of Geophysical Interpretations

Although some quantitative geophysical data can be used to directly calculate engineering properties of materials, geophysical data are typically interpreted to provide a geological or physical model of the subsurface. Unfortunately, geophysical data interpretation does not always provide a unique solution. Often, several possible geologic or physical models can produce equivalent geophysical signatures. Therefore verification of the interpretation for adequacy is almost always required. This is often referred to as providing “ground truth”.



Ground-truth for geophysical interpretations uses comparisons of the geologic or physical models with other available information, such as aerial photographs, test borings, well logs, geologic maps and field observations. Such comparisons are used to validate the geophysical interpretation, identify areas of discrepancy and provide bases for model revisions where necessary. Depending on the complexity of the investigation and the degree of accuracy required, two or more ground truth iterations may be employed to refine the geophysical model.