

Geophysics and Geology

Detection vs. Definition

In selecting a geophysical method, it is important to distinguish between two objectives, detection and definition. Some geophysical methods may be used for both objectives.

Detection surveys are used where only the location of an anomaly is of importance. These methods are typically rapid and inexpensive, but lack detail. Detection geophysical investigations are almost universally qualitative in nature, and are also known as "reconnaissance" surveys."

Definition surveys are applied when additional detail about a targets is required. Those surveys are used when, in addition to detecting a target, specific imaging or quantitative property of the feature is required. Definition surveys are more expensive because they are more labor-intensive and time-consuming, but the results contain more detail and are still cost-effective compared to destructive sampling techniques, such as drilling and excavation.



More information is available from the Federal Highway Administration at the following link:

<http://www.cflhd.gov/resources/agm/engApplications/SubsurfaceChartacter/index.cfm>