

*Indian Standard*

**HYDROMETRY — GEOPHYSICAL LOGGING OF  
BOREHOLES FOR HYDROGEOLOGICAL PURPOSES —  
CONSIDERATIONS AND GUIDELINES FOR  
MAKING MEASUREMENTS**

**1 SCOPE**

**1.1** This standard is a summary of best practice for those involved in geophysical borehole logging for hydrogeological purposes. It describes the factors that need to be considered and the measurements that are required to be made when logging boreholes. There can, however, be no definite standard logging procedure because of great diversity of objectives, groundwater conditions and available technology. Geophysical logging of boreholes is an evolving science, continually adopting new and different techniques. Every application poses a range of problems and is likely to require a particular set of logs to gain maximum information. This standard therefore provides information on field practice with the objective of how variations in measured parameters may be useful to take account of particular local conditions. It deals with the usual types of logging carried out for delineation of aquifer boundaries; mapping aquifer geometry; assessing the chemical quality and quantity of groundwater; water-supply purposes; landfill investigations and contamination studies; borehole construction and conditions; and subsurface lithological information. A basic geophysical logging system is shown in Fig. 1.

**1.2** Applications not specifically considered in this standard include mineral and hydrocarbon evaluation and geotechnical and structural engineering investigations. However, this standard may be a source of general information for any borehole geophysical logging effort.

NOTE—Interpretation of the data collected during logging is referred to in this standard only in a general way. For full details of the analysis and interpretation of geophysical logs, reference should be made to specialized texts.

**2 REFERENCE**

The standard listed below contains provisions, which through reference in this text, constitutes provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision and parties to agreements based on this standard is encouraged to investigate the possibility of applying the most recent edition of the standard indicated below:

<i>IS No.</i>	<i>Title</i>
4410 (Parts 1 to 20)	Glossary of terms relating to river valley projects