

P.1 ELECTRIC FIELD MEASUREMENT IN POOR GROUNDING CONDITIONS

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ABSTRACT

Electrical exploration on frozen or stony soil is associated with high difficulties in achieving good quality of electrode grounding. In such conditions, the results of high-frequency electric field measurements are often biased due to the electrode contact resistance (ECR) effects, i.e., the capacitive leakage between wires and ground and voltage division at the receiver's input. In this paper we discuss a method of full analytical correction of the ECR distortion implemented in the new magnetotelluric system NORD.

KEYWORDS: ECR effect, high electrode contact, electric line calibration