where ρ is the resistivity in ohm-cm, V is the potential difference measured across the two voltage probes in volts, I is the current being passed through the two current probes in amperes, t is the sample thickness in cm, and F_1 is the correction factor given in table I. Factor F_1 applies when either the two outer probes, or the two inner probes, are being used to pass current, with the two remaining probes being used to measure voltage.

F_1 is given as a function of the dimensionless parameters s over r and Δ over r, where s is the probe spacing, r is the sample radius, and Δ is the probe displacement off center, as defined in figure 1. A sub-table is given for each value of s over r from 0.01 to 0.66 in steps of 0.01. Each sub-table gives the factor F_1 for values of Δ over r from 0.00 to 0.99 in steps of 0.01. For example, when s over r is 0.02 and Δ over r is 0.81, F_1 is 4.49925. When the value 0. appears in the table for F_1, the value of Δ over r is such that the probe is no longer completely on the sample.

TABLE II

This table applies to the case shown in Figure 2. The sample resistivity is given by

$$\rho = \frac{V}{I} t F_2 \qquad (2)$$

where ρ is the resistivity in ohm-cm, V is the potential drop measured across the two voltage probes in volts, I is the current being passed through the two current probes in amperes, t is the sample thickness in cm, and F_2 is the correction factor given in table II. Factor F_2 applies when either the two outer probes, or the two inner probes, are being used to pass current, with the two remining probes being used to measure voltage.

F_2 is given as a function of the dimensionless parameters s over r and Δ over r, where s is the probe spacing, r is the sample radius, and Δ is the probe displacement off center, as defined in figure 2. A sub-table is given for each value of s over r from 0.01 to 0.66 in steps of 0.01. Each sub-table gives the factor F_2 for values of Δ over r from 0.00 to 0.99 in steps of 0.01. For example, when s over r is 0.02 and Δ over r is 0.81, F_2 is 4.49961. Where the value 0. appears in the table for F_2, the value of Δ over r is such that the probe is no longer completely on the sample.

TABLE III

This table applies to the case shown in Figure 3. The sample resistivity is given by

$$\rho = \frac{V}{I} t F_3 \qquad (3)$$