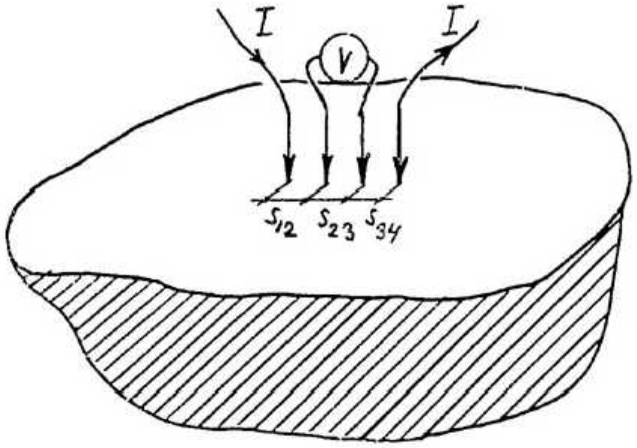
B. SEMI-INFINITE VOLUME.

Figure 4:



Semi-infinite volume of material.

We call a sample semi-infinite, if it extends to infinity in all directions below a plane, which is the plane on which the four probes are located. The resistivity of the sample is given by (a):

$$\rho = G \frac{V}{I},$$

$$\text{where } G = \frac{2\pi}{\frac{1}{s_{12}} + \frac{1}{s_{34}} - \frac{1}{s_{12} + s_{23}} - \frac{1}{s_{23} + s_{34}}} ; \qquad (4)$$

B.1) Equidistant Probes.

In this case (4) reduces to:

$$G = 2\pi s, \qquad \rho = 2\pi s \frac{V}{I}, \qquad (5)$$

where s is the probe distance.