equipotential field. It is important to note that *(i)* this is *NOT* the same volume as the resistivity measurements and *(ii)* it is *NOT* the original IP signal as stored by the body, but a measurement distorted and processed by the environment through which it passes.

In the *magnetic mode* a very sensitive magnetometer (Scintrex MFM-3) is used to "sense" the current flow both *inside* and *outside* of the *source material*. This occurs because each electron which flows in the ground carries with it an associated magnetic field. This magnetic field will pass *unhindered* through the environment and thus both the discharge *internally* and *externally* to the source can be monitored on the surface.

The Form of MIP Anomalies:- The enclosed Figure 2 demonstrates the theoretical form of an MIP anomaly from a source which has no electrical contrast with the enclosing material, but has the property of retaining charge. (In nature such anomalies are in fact observed over heavy mineral deposits in beach sands)

Energisation is along strike, out of the plane of the paper, by a gradient array. All diagrams represent the current flow into (crosses) and out of (dots) the plane of the paper due to a storage of electrical charge in the source. In Figure 2 over the source, the magnetometer will "see" a surplus of internal (negative) current flow, while on the flanks of the body, the external (positive) current flow will become predominant. The *"head and shoulders"* MIP anomaly shown is *always* seen over all sources. It is the distortions in shape, form and zero level that yield vital information as to conductivity of the source, conductivity of the environment above and about the source, the depth to the source and the nature of the mineralisation in and around the source.