will be characteristic of the *medium* and *not the source.* However, as the intrinsic chargeability and resistivity of the medium approaches zero, the observed decay *will approach that of the source.* The decay form observed in the electric mode in highly conductive areas of intense oxidation such as Cobar New South Wales and Kalgoorlie, Western Australia approaches that of the source mineralisation, while over normal resistive cover the observed EIP decay form is always "normal". Therefore, only when induced polarization measurements are taken in the magnetic mode can the nature of the causative mineralisation's decay form be identified.

How Decay Information is Obtained:- The Scintrex IPR-8 induced polarization receiver is used in the time domain. This instrument records the chargeability at various times *after* the energising current is switched off and in this way records the rate at which the stored energy is discharged. The resultant recorded slices M_1, M_2, M_3, M_4, M_5, M_6 are then "normalised" by the receiver in such a way as to read $M_1 = M_2 = M_3 = M_4 = M_5 = M_6$ *if* the decay form is normal. Chargeable responses from finely grained mineral assemblages will be indirectly shown up in the field as $M_1 > M_2 > M_3 > M_4 > M_5 > M_6$, while coarser grained mineral assemblages will be shown up as $M_1 < M_2 < M_3 < M_4 < M_5 < M_6$.

In the display of the data ΔM is plotted where $\Delta M = |M_6| - |M_1|$. In this shortened presentation ΔM will be positive and large when "coarse grained" material is the source, 0 for "normal grain" size sources and large and negative for "fine grained" mineral assemblages.

The Importance of Frequency:- When induced polarization is carried out over a range of frequencies in the magnetic mode whether in terms of chargeability (time domain) or phase angle or frequency effect (in the frequency domain), a band of frequencies