

## **Retracing the Systematic Steps in a Voyage of Scientific Discovery**

John Elliston has been involved in mineral exploration and research for over 50 years. After early experience as a chemist and consulting geologist he joined a successful mining company in 1956. Studies with the support of leading academic consultants and a talented exploration team led to developing an understanding of the nature and origin of the source rocks and mineral deposits.

The most interesting conclusion from the research is that liquefaction of wet sediments allows the high-energy colloidal particles to reduce surface energy by re-arranging themselves. The essential mechanism is the collapse of flocculated and randomly precipitated natural particles to form separate denser aggregates ('clots' or accretions) in the shear regime. This gives rise to the observed metamorphic, porphyroidal and granitoid textures.

His work is a major step forward in the science and knowledge of how mineral deposits were formed and how to more effectively find new ones.

**5:30pm, Thursday 27th October, Rugby Club**