

Broken Hill Mineralisation – Observations from Outside the Box

Ian Pringle

22 October, 2015

SMEDG Presentation

The geology, geochemistry, mineralogy and structure of the Broken Hill orebody, by far the world's largest deposit of lead-zinc-silver mineralisation, have been studied by thousands of scientists since the deposit's discovery in 1883. Most researchers during the last couple of decades have concluded that the deposit, although now considerably changed through metamorphic and structural processes, was formed near the water interface within surficial and shallow sediments of a marine basin (SEDEX type deposit).

However, despite the numerous detailed geological research and scientific papers, very little consideration has been given to the environment in which the Broken Hill ore body formed. My presentation will consider the atmosphere, hydrosphere, climatic conditions and other environmental factors which were likely to have influenced the deposition of this colossal deposit and which were undoubtedly all major influencers on its origin. My presentation will also attempt to shed some light on why most of our planet's other large Paleoproterozoic SEDEX deposits are clustered in eastern Australia.