

**Title:****Timing is everything: Applications of new dating methodologies and other developments to the mineral systems of NSW.****Author:**

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**Summary:**

The Minerals program at the Geological Survey of NSW is undertaking studies in the New England, Nymagee–Cobar–Girilambone, Wagga and Broken Hill regions to better understand the timing of mineralization processes and the sources of fluids and metals at regional to deposit scales. We are using a combination of new dating, mineral scale trace element analysis, isotopic tracers and the systematic hyperspectral scanning of deposits and their respective alteration envelopes to develop new ideas about the timing and formation of key systems across NSW. Mineral potential modelling, using GSNSW-developed mineral system models, is also being undertaken to develop predictive maps and tools for a range of applications from land use planning to exploration. The expanded range of dating, isotopic and mineral trace element techniques and their application to understanding mineral systems, will be the focus of this presentation using examples and new results from across NSW.

**Bio:**

Dr Phillip Blevin is manager of the Minerals program at the Geological Survey of NSW and has 36 years of professional experience in postgraduate, postdoctoral, industry, academic and government geology. Phil graduated from UNE and undertook PhD studies with Dr Roger Taylor at JCUNQ on W-Mo-Bi mineralisation in far north Qld. He worked with Bruce Chappell at the ANU on a series of AMIRA projects developing metallogenic fertility indicators for granites and related igneous rocks and also with Gregg Morrison (Klondyke) on intrusion-related Cu- and Au-systems of eastern Australia. He subsequently consulted in Australia and overseas for industry as well as state, federal and overseas government agencies before joining the Geological Survey of NSW in 2006. He has published in the international peer reviewed literature, is currently a special foreign editor of *Resource Geology*, and was an invited author on the granite and pegmatite chapter in the 100<sup>th</sup> anniversary volume of *Economic Geology*.

Dr Phillip Blevin is the manager of Minerals program at the GSNSW.

recent work undertaken by the NSW Minerals program at GSNSW, and how new dating techniques

...how new dating on mineral systems, granites and other stuff is changing our views on NSW geology.