



S . M . E . D . G .



SYDNEY MINERAL EXPLORATION DISCUSSION GROUP NOTICE OF MEETING

- DATE:** Thursday 25th October 2001 - 5.30pm for 6pm
- VENUE:** 1st Floor, Rugby Club, Rugby (Crane) Place, Sydney
- SPEAKER:** Steve Castor - Nevada Bureau of Mines and Geology
- TOPIC:** “Carlin Gold Deposits - Nevada USA”

Nevada, with production of 8.6 million ounces of gold in 2000, is nearly as productive as Australia (9.5 million ounces). Most of Nevada’s current gold production is from Carlin-type deposits. Extraction of gold from such deposits is generally considered a modern phenomenon, although regional production from Carlin-type ore preceded that at the Carlin Mine by as much as 70 years. Gold has been produced from more than 40 Carlin-type deposits in Nevada and Utah, but the northern Carlin trend, an area of about 4x35 km, accounts for 66 million of the 120 million ounces (production + reserves) estimated for all such deposits.

Carlin-type deposits are characterized by relatively high Au/Ag, enrichment in As, Sb, Hg, and Tl, and by the dominance of “invisible gold” as ions or submicron-sized particles in iron sulfide. The deposits are generally but not always hosted by Paleozoic carbonate rocks, and it has been proposed that they are largely controlled by deep-seated, ancient structures. Recent research indicates formation from relatively low temperature (150-250°C), low pH, and low- to moderately-saline fluids of mixed meteoric and magmatic or metamorphic origin. The age of ore deposition has been a matter of some speculation, but new data constrains most Carlin-type mineralization in north-central Nevada, site of more than 98% of Carlin-type ore, to the late Eocene, suggesting a genetic relationship with coeval regional magmatism. This has provided ammunition for the magmatist crowd; however, some researchers continue to advocate an amagmatic origin.

Future meetings: 29th November - Jane Barron - Garnets, Diamonds, Diatremes and Subduction at Bingara, in the New England Orogen of New South Wales.

Mini symposium: SMEDG in association with Exploration NSW and CRCLEME will be holding a Mini Symposium ‘The Regolith - Broken Hill and Cobar’ on Wednesday 14th November - 4:30 till 7:30pm at North Sydney Anzac Memorial Club
Please check the SMEDG web site further information <http://smedg.org.au>

Organising Committee:

Steve Collins Lindsay Gilligan Phil Hellman Cay Mims Bernard Rowe Kim Stanton-Cook Chris Torrey

9489 6836 9901 8301 9858 3863 0403 043642 9460 4100 0411 504512 9482 8833