

Auriferous Limonitic Stalactites from the Bimbimbie Gold Mine, New South Wales

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ABSTRACT. The Bimbimbie gold mine is situated within a syntectonic granite mass that intrudes Ordovician metasediments 11 km south-west of Batemans Bay, NSW. Three gold-pyrite quartz veins occur within the mine area, the largest – the Bimbimbie vein – being the main producer.

On the backs of a large stope into the Bimbimbie vein numerous limonitic (goethitic) stalactites occur. Two of these were assayed for gold giving 26.1ppm and 16.2ppm respectively.

The chemistry of the process leading to the incorporation of gold in these stalactites is considered in terms of the solubility of gold in the thiosulphate ion.

LAWRENCE, L.J., 1992. Auriferous limonitic stalactites from the Bimbimbie gold mine, New South Wales. Records of the Australian Museum Supplement 15: 39–43.

The Bimbimbie gold mine is located near the settlement of Bimbimbie in the eastern foothills of the Great Divide some 11 km south-west of Batemans Bay and some 7 km west-north-west of Broulee on the south coast of New South Wales (Fig.1).

The mine is of medium size and was worked mainly just prior to and after World War I. Gold grades of up to 25oz/ton (775g/t) had been reported but there was no evidence of these grades during recent re-appraisal of the workings. It has been re-opened with additional development work and sampling preparatory to further mining.

The vein material was not amenable to free milling and the concentrate (mainly fine gold with much pyrite) had to be transported to Port Kembla for roasting to release the gold.

Mine Geology

The Bimbimbie area consists of Ordovician slates and phyllites with occasional arenaceous units strongly folded and cleaved along a dominant North-South axis. These metasediments can be seen at, and to the immediate south of, the portal of the adit (Fig.2).

The metasediments have been intruded by an apparently syntectonic granite pluton with a North-South elongation. The granite is not gneissic as are the more distinctly syntectonic intrusions further south; its syntectonic nature (or more appropriately late-tectonic) being inferred from its distinctive North-South elongation. The former biotite of the granite, in the vicinity of the mine, has been altered into somewhat diffuse patches of low-iron chlorite.