

## **Bowdens Silver Deposit - A New Chapter under Silver Mines Limited.**

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### **Abstract**

The Bowdens Silver Deposit (BSD) is a Middle Permian low sulphidation, carbonate-basemetal associated epithermal silver deposit. The deposit is located approximately 180 kilometres northwest of Sydney between the townships of Mudgee and Rylstone in central New South Wales.

The deposit was discovered by CRAE in 1988 by following up regional stream sediment sampling. By 1992 CRAE had defined an Inferred Resource of 6.2Mt @ 85g/t silver, 0.52% zinc and 0.28% lead. In 1994, GSM Exploration Pty Ltd purchased the project and in 1997 GSME was purchased by Silver Standard Resources Inc of Vancouver (SS). SS completed a substantial amount of additional drilling along with several scoping studies before selling the project to Kingsgate Consolidated Limited in 2011. In 2012, Measured and Indicated Resources were estimated to total 52Mt @ 52g/t silver, 0.40% zinc and 0.30% lead with an additional Inferred Resource of 36Mt @ 41g/t silver, 0.40% zinc and 0.30% lead for a combined total of 134 million ounces of contained silver. In 2016 the BSD was purchased by Silver Mines Limited (Silver Mines) where it is finalising a Definitive Feasibility Study for a 2Mt per annum open pit operation producing separate silver-lead and silver-zinc concentrates. Silver Mines is also undertaking an expansive exploration program.

Regionally, the BSD is located on the north-east margin of the Lachlan Fold Belt, referred to as the Northern Capertee High and intimately associated with volcanics deposited in response to the Early Permian East Australian Rift System. Locally, the BSD is hosted by the Early Permian Rylstone Volcanics and unconformably underlying Ordovician Coomber Formation. The Rylstone Volcanics occur as a stratified sequence of shallow dipping felsic tuff, ignimbrite and rhyolite lava. The Coomber Formation is a deep water sequence of fine grained mafic volcanogenic sediment.

The silver mineralisation occurs as flat to shallow north dipping zones of disseminated and silicic fracture-filled silver minerals closely associated with sulphides of iron, arsenic, lead and zinc. High grade silver mineralisation is also hosted in steeply-dipping fracture zones which host banded sulphide veins.

It is Silver Mine's view that the BSD forms part of a larger, currently unrecognised, hydrothermal mineral system. Work is currently underway for an improved understanding of the BSD and its regional context with other Permian metalliferous systems throughout eastern Australia in an effort to better effectively explore the deposit surrounds. This work includes the commencement of post-graduate research at the University of New South Wales combined with Silver Mines application of modern geochemical and geophysical exploration techniques.