The Onto high sulphidation porphyry Cu-Au deposit (Indonesia).

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Biography

David Burt is an exploration geoscientist with over 35 years' experience in the mining industry across numerous countries and commodities with a strong focus on copper in the Americas and Asia Pacific. David has held senior technical roles in geophysics, project generation, project appraisal and exploration management for several large companies. With broad experience in mineral exploration and project generation, David has managed exploration teams across a diverse range of geographic and cultural environments. He was the Exploration Manager for Vale Exploration Indonesia during the discovery of the Onto copper-gold deposit. David has a B.App.Sc. degree in Geophysics and is a Member of The Australasian Institute of Geoscientists.

Abstract

The Onto deposit on Sumbawa Island, Indonesia, is a supergiant, high sulphidation, Cu-Au deposit situated along the Sunda-Banda volcano-magmatic arc which contains numerous other significant porphyry Cu-Au deposits including Batu Hijau

and Tujuh Bukit. Regional exploration in the 1980's first recognised the porphyry potential of the 4-5 Ma eroded strata volcano which hosts the deposit. However, exploration campaigns during the mid to late 1990's, which included regional airborne magnetics and extensive mapping and surface geochemical sampling, failed to define economic mineralization.

Vale recommenced exploration at the project in late 2010 largely utilizing the existing data to target porphyry style mineralization. This proved successful and the small Humpa Leu East (HLE) porphyry was discovered with the first drill hole which had targeted a discrete magnetic high with a coincident surface geochemical anomaly. Detailed heliborne magnetics was subsequently flown and along with surface geochemistry, geology and alteration mapping these data guided the ongoing porphyry copper exploration program. The Onto deposit was discovered in June 2013 when hole VHD034 intersected 287m containing 1.13g/t Au and 0.97% Cu from 548m to the end of hole at 835m.

Mineralization at Onto occurs within an extensive zone of advanced argillic alteration which overprints a large multi-phase porphyry intrusion. The deposit is overlain by andesites which predate the porphyry emplacement and the average depth to mineralization is around 500m. The mineralisation is dominated by covellite-pyrite. The most recent resource estimate completed in early 2025 reported 3.0 Bt containing 21.7 Mt of copper and 37.5 Moz of gold. The project is currently at the Feasibility stage.

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