High-Grade Exploration at Kensington Mine

Sam Kilfoyle and Trevor Nelson

Coeur Alaska - Kensington Mine

Coeur Alaska's Kensington Mine is located approximately 45 miles north-northwest of Juneau, Alaska. The property sits within the Berners Bay Mining District, at the northern-most edge of the Juneau Gold Belt. The Juneau Gold Belt is a 120-mile-long, 10-mile-wide structural zone hosting several major gold producers. Coeur Alaska has mined over 1,400,000 ounces from the property since beginning commercial production at Kensington in 2010.

The property lies to the west of the Coastal Megalinament, situated between the Wrangellia terrane and the Treadwell formation of the Gravina belt. The deposits are modeled as low-sulfide, mesothermal, gold-quartz veins with strict structural controls. The deposits have reportedly been restricted to a Cretaceous diorite intrusion, known as the Jualin diorite, which intrudes the Triassic basalts of the Wrangellia terrane and lies unconformably against the Gravina belt.

The Kensington Mine consists of multiple deposits including the Kensington, Elmira, Raven, Johnson, and numerous other prospective vein zones. The vein systems are generally shear hosted veins or vein packages composed of extensional vein arrays, sheeted extensional veins, and stacked, en-echelon, shear veins. The main deposits of the Kensington Mine strike to the north-northwest and dip moderately to the east. The mineralogy of the deposits varies between gold tellurides, most commonly calavarite ($AuTe_2$) and petzite (Ag_3AuTe_2), associated with pyrite-rich zones at Kensington, and coarse free gold (Au) commonly associated with galena, sphalerite, tennantite, and pyrite at Jualin.

In the upper area of the Kensington deposit, recent drilling has returned high grades over significant widths across the eastern veins Zone 30 and 30B. Drilling of Zone 10A, located on the west side of the vein system, has also yielded positive results. This zone represents a significant recent expansion at Kensington given its proximity to near-term planned production.

In the lower area of the Kensington deposit, recent drilling has targeted Zone 50, 10, and 10 HW from new exploration development. Intercepts confirm the continuity of mineralized zones previously identified and highlight continued mineralization at depth and in parallel zones.

The Elmira vein system shares similar vein style and mineralization characteristics with the Kensington deposit, lying 2,500 feet east of Kensington. Recent drilling has confirmed continuity across the upper portions of both the Main and South zones across substantial strike length. The Johnson vein system, lying 500 feet east of Elmira, remains a drill target with potential for future resource conversion.

Ongoing exploration is built upon previous drill programs, surface and underground geochemistry, surface and underground mapping, geophysical surveys, oriented core, and compilation of historic data. The program is focused on developing a stronger geological interpretation of the district and maintaining current mine life. This approach drives new interest in known prospects and positions scout drilling to build a pipeline of targets for future growth.