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Discovery of the Öksüt Million-Ounce High-Sulfidation Gold Deposit, Turkey

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The Öksüt deposit was discovered following reconnaissance evaluation of the Miocene volcanic belts of central Turkey in early 2007 by Stratex's General Manager in Turkey (BY). This led to identification of a partially eroded andesitic stratovolcano that hosts a number of silicic ledges exposed on a steep hillside. Five outcrop samples returned a maximum value of 0.11 g/t Au, showing that the prospect merited systematic evaluation. Following granting of tenure over the volcanic complex, further sampling of the silicic ledges returned multiple gold assays of >0.1 g/t and highly anomalous trace elements, including As (to 1,020 ppm), Hg (to 9.6 ppm), Sb (to 71 ppm), Mo (to 70 ppm), and Cu (to 346 ppm). Subsequent chip-channel sampling delineated a gold-enriched area 200 × 300 m in size, with individual channels including 21 m at 2.91 g/t Au and 21 m at 2.67 g/t Au. These early results were confined to one area of silicic ledges—Ortaçam—but mapping had also identified another zone of interest a few hundred meters north—Ortaçam North. Diamond drilling commenced in August 2008, but the first hole failed to intersect mineralization. Holes 2, 3, and 4 confirmed a project of interest (19.30 m at 2.96 g/t Au; 62.45 m at 2.16 g/t Au; 73.30 m at 1.36 g/t Au), but hole 8, regarded as the discovery hole, returned 270.20 m at 1.22 g/t Au from surface and was still in oxidized material at a vertical depth of >100 m. Seeking to manage risk in the difficult days after the GFC, Stratex established a joint venture with Centerra Gold to fund US$6 million of ongoing exploration, managed and driven by Stratex. Ultimately, this led to Stratex declaring a mineral resource of 1.05 million ounces (Moz) of gold in early 2012 and then outright purchase of the project by Centerra at the end of the same year.

The oxidized gold mineralization at Ortaçam occurs in ledges composed of quartz-alunite and quartz-kaolinite as well as in more conventional vuggy residual quartz. The supergene sulfide oxidation ranges from 50 to 150 m in depth but has a highly irregular base. Patchy quartz-kaolinite alteration between the northeastern and southwestern ledges at Ortaçam is underlain at depths of 100 to 150 m by a magmatic-hydrothermal breccia displaying potassic alteration and containing consistent low-order gold values. The breccia is intermineral in timing and may overlie porphyry gold mineralization. Critical to the eventual definition of a million-ounce resource was the recommendation by one of us (RS) to step out and drill Ortaçam North, where gold mineralization was perceived to be hosted by intermineral breccias filling a phreatic vent. This drill program led to definition of gold mineralization hosted by silicic breccias extending over an area of 600 × 250 m as well as by a >50-m-wide quartz-alunite halo. Importantly, much of the silicic ledge is covered by porphyritic andesite that may have acted as a top seal to the mineralization. This ledge hosts 89% of the 1.16-Moz reserve confirmed to date by Centerra.