



**OBJECTIVE**

Reduce metallurgical interference of copper to improve gold doré purity and comply with cyanide levels in tailings

**TECHNOLOGY**

SART

**PLANT CAPACITY**

2,880 m<sup>3</sup>/day

**LOCATION**

Gümüşhane, Turkey

**BQE WATER SCOPE**

Process design, HAZOP, equipment specifications and sizing, construction review, commissioning, plant optimization, operator training, operation manuals and standard operating procedures, on-going technical support

**Project Overview**

BQE Water worked with the mine owner to design, construct and commission a SART plant in a tight nine month schedule to allow this active gold mine to process all its ore and avoid stockpiling high-grade ore with copper mineralization.

Elevated cyanide-soluble copper in the ore interfered with efficient and cost-effective gold recovery, and cyanide destruction prior to discharge into tailings pond that presented a challenge for cyanide limits.

The SART plant treats barren leach solution (BLS) containing up to 1,500 mg/L of dissolved copper. On average, 87% of the copper is recovered and up to 80% of the cyanide regenerated. The copper is recovered from the BLS as a commercial grade concentrate, generating an incremental revenue stream, and the regenerated cyanide is recycled to the leach operation, reducing overall cyanide consumption.

Cyanide discharge limits in the tailings pond are also met and copper interference in the adsorption/desorption (ADR) circuit is minimized, resulting in improved gold doré purity.

**Process Flowsheet**

