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Gold on Gold – The Jerome contributes to workforce wellbeing for Koza Gold

Koza Gold, one of Turkey's leading gold mining companies, operates four mines across the country: Ovacik, Çukuralan, Kaymaz, and Himmetdede. With consistently low operating costs and a proven record of sustained profitability, Koza produced 128,000 ounces of gold in just the first half of 2015, generating revenues of TL 385.2 million.

Koza Gold also holds the distinction of being the first Turkish company in history to achieve gold production within the Republic. The opening of the Ovacik mine at Bergama marked a turning point, helping transform Turkey's significant gold potential into economic gain. However, with this success came the responsibility to manage one of the mining industry's most serious occupational hazards: mercury exposure.

The Challenge: Mercury in Gold Production

In small-scale and industrial gold production, mercury has long been used because of its unique properties. This transition metal forms alloys – called amalgams – with other metals, most notably gold. By creating a gold-mercury amalgam, miners can separate gold from surrounding ore. The amalgam is then heated, evaporating the mercury and leaving behind pure gold. While effective, this process carries serious health and environmental risks. At every stage of the gold recovery process, mercury vapours can be released into the atmosphere. Even at low levels, exposure to mercury is highly toxic and can cause significant damage to the nervous system. Protecting workers in critical areas such as the Gold Room, where amalgam heating occurs, is therefore essential.

Able Instruments supplied "fixed-point monitoring solution"

The Solution: Jerome 405

When Koza Gold evaluated their options for mercury monitoring, they knew that only an instrument with exceptionally low detection limits, rapid response, and unmatched specificity would be able to provide the protection their personnel required. Their search led them to Able Instruments & Controls, who recommended the Jerome 405 Gold Film Mercury Vapour Analyser. This advanced instrument was designed specifically to detect mercury vapours at the low concentrations necessary for safeguarding workers in industrial environments.

Able Instruments proposed a fixed-point monitoring solution, with the Jerome analyser installed in a protective environmental enclosure. The system included a local display for on-site readings and external visual alarms via beacon indicators. This ensured that personnel would be immediately alerted to any hazardous levels of mercury vapour, allowing prompt action to protect health and safety.

The Outcome

By adopting the Jerome analyser system, Koza Gold demonstrated its commitment to the safety and wellbeing of its workforce. The solution provided continuous, reliable monitoring of mercury vapours in the Gold Room, giving management and employees confidence in high standard risk management. The Himmetdede project illustrates how Koza Gold combines advanced technology with responsible practices, ensuring that Turkey's growing gold industry continues to deliver economic value without compromising worker safety.

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