



METAFLO
technologies™



ExtracTech Enhanced Gold Extraction in Refractory Ore

MetaFLO's ExtracTech biopolymer demonstrated substantial efficacy for the gold extraction process, supporting safe and sustainable practices.

CASE STUDY



PROJECT

EXTRACTECH – ENHANCED GOLD EXTRACTION IN REFRACTORY ORE

Conceição do Pará, MG - Brazil

EXTRACTECH

MetaFLO Technologies

Challenge

The process of leaching gold with cyanide is known to cause major environmental and human health impacts. Gold cyanidation, as this process is called, is used to extract gold from raw ore taken from the ground. Cyanide dissolves the gold within the ore, extracting it in liquid form. The gold is then treated to remove the cyanide to which it was exposed, but its efficient extraction from refractory ores is more difficult.

Solution

This study focused on extraction of gold on refractory ore with a high concentration of Arsenic using 240 g/ton of ExtractTech, MetaFLO's eco-friendly biopolymer additive for the gold extraction process. The biopolymer acts as a super-oxidant, it performs chemical reactions with the gold particles, leaving the metal of interest more exposed to react more easily with cyanide in the leaching process. No additional equipment is required for its application.

Outcome

- ✓ **PRECIOUS METALS RECOVERY**
The biopolymer was capable of increasing 0.23 g/ton in gold recovery compared to the current recovery method of the mining company, while enabling higher purity to the metal.
- ✓ **PRODUCTIVITY**
In this study, ExtractTech resulted in a gain of 5.34% more efficiency compared to other additives such as hydrogen peroxide and lime and had an increase of 5.7% on gold extraction compared to gravimetric concentration methods.
- ✓ **SUSTAINABILITY**
Besides being environmentally friendly, ExtractTech addition for extraction of precious metals process, it reduced cyanide consumption by 20% in the cyanidation process.

