



# mine survey *PLUS+*

## CASE STUDY

### A NOVEL APPROACH TO SHAFT PLUMBING

#### CLIENT

Philsaga Mining Corporation

#### LOCATION

Co-O Mine, Philippines

#### DURATION

May 2018

#### PROJECT SCOPE

Mine Survey Plus was engaged by Philsaga Mining Corporation to provide mine survey services in relation to the E15 Shaft at the Co-O mine site in The Philippines.

Mine Survey Plus took a novel approach to executing the scope across seven levels by utilising prisms on the plumb lines, a gyroscopic theodolite and least square adjustment for all observations.

National staff played an important role in data collection and training was conducted on new instruments and hardware.

The survey was completed safely ahead of schedule, with control marks installed on each level for setting out of critical shaft infrastructure.

