# Cinthia Maldonado



# **Senior Geomechanics Engineer**

**Expertise** Geomechanics, Microseismics, Numerical Modeling, Underground Mining

**Education** B.Eng. (Mining), 2018

Laurentian University, Sudbury, Ontario, Canada

**Registration** Registered Professional Engineer in the province of Ontario, Canada

#### **Professional Experience**

2025 – Present ITASCA Canada

Senior Geomechanics Engineer

2021 – 2025 ITASCA Canada

Geomechanics Engineer

2020 – 2021 ITASCA Canada

Rock Mechanics - EIT

2019 – 2020 Alamos Gold Inc., Island Gold Mine, Dubreuilville, Ontario, Canada

Ground Control - EIT

2018 – 2019 KGHM Morrison Deposit, Levack, Sudbury, Ontario, Canada

**Ground Control Coordinator** 

2017 – 2018 Kirkland Lake Gold Macassa, Kirkland Lake, Ontario, Canada

Technical Clerk

### **Project Experience**

### Mining:

# **Itasca Consulting Canada Inc.**

Geomechanical Modeling & Site Support

- Performed geotechnical assessments at different stages of Pre-Feasibility and Feasibility Studies.
- Assess numerical model output to provide geotechnical recommendations on production sequence, infrastructure placement, seismic risk, subsidence limits, and overall stability of the mine design.
- Conducted statistical analysis of geotechnical core logs and strength testing data for QA/QC and numerical modeling input.
- Utilized Rhino 7 and Griddle 2.0 to clean and generate mine geometries for advanced modeling.
- Built and calibrated FLAC3D (v7.0 and v9.0) numerical models for both mine-wide and infrastructure-specific applications using field data, seismicity, and site observations.
- Performed stope stability analyses and developed geomechanical recommendations for sequencing, stope sizing, and hazard mitigation.
- Provided ground control training, conducted underground tours, and supported site operations with hands-on geomechanical expertise.
- Created software tutorials and technical content to support user training for Itasca software.

8/28/2025



#### Alamos Gold Inc. - Island Gold Mine

Ground Control & Microseismic Monitoring

- Updated and authored ground control procedures and contributed to the Ground Control Management Program.
- Performed daily ground control inspections, backfill evaluations, and cable bolt support design.
- Managed the Ground Control Logbook and coordinated monthly QA/QC testing.
- Oversaw the daily operation and expansion of the site's microseismic system to monitor ground behavior.
- Collaborated with operations teams on geotechnical investigations and site-based planning.

# **KGHM – Morrison Deposit**

Underground QA/QC & Support Inspection

- Conducted underground inspections and issued rehab prints based on observed ground conditions.
- Performed pull tests on ground support elements and maintained backfill testing records.
- Assisted in managing and maintaining the underground microseismic system for ground movement tracking.

#### Kirkland Lake Gold - Macassa Mine

Resource Model Refinement

- Worked with geology and engineering teams using Deswik to repair block model solids.
- Supported the transition of geological resources to mineable reserves through data cleanup and model refinement.

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