

Workshop D

Hydrogeology in Slope Stability

Hydrogeological Techniques and Water Management for Slope Stability in Mining

Friday, October 30, 2026

Duration: Full Day (approx. 8 hours)

Language: Spanish / English

Chair: TBD

Instructors:

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Course Details:

Introduction

1. Hydrogeological Techniques for Drainage in Calcareous Materials

- 1.1 Hydraulic characterization and behavior
- 1.2 Sedimentary structures as hydrogeological controls
- 1.3 Calculation and estimation of water flows
- 1.4 Drainage and depressurization strategies

2. Hydrogeological Techniques for Drainage in Unconsolidated Materials

- 2.1 Characterization and hydraulic behavior in unconsolidated materials
 - 2.2 Groundwater dynamics in unconsolidated materials
 - 2.3 Drainage and water management strategies
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**“SLOPE FOR SAFETY
PERFORMANCE”**

3. Slope Depressurization Techniques in Low-Permeability Media

3.1 Definition of drainage objectives

3.2 Use of 2D and 3D models to track drainage objectives

3.3 Design of sub-horizontal drains

4. Planning and Implementation of Dewatering Systems for Open Pits

4.1 Design and sizing of drainage systems

4.2 Surface water management

4.3 Cost optimization of drainage systems

4.4 Open pit water balance

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