



# E&MJ

ENGINEERING AND  
MINING JOURNAL

INCORPORATING:

**World Mining Equipment**

## Landslide at Bingham Canyon

—A prolific mine deals  
with an epic failure

*Mine Water Management*

**Codelco Ramps Up  
Ministro Hales**

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### Careful Monitoring: The Key to Pit-wall Safety

*As mines get deeper, and economic pressures provide an incentive for steeper pit walls, the potential for instability increases. E&MJ looks at some of the systems that can help mine engineers keep an eye out for signs that all may not be well within the wall.* .....32

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A pit-wall failure at Rio Tinto Kennecott Utah Copper's Bingham Canyon mine released an estimated 150 million tons of material, filling the pit bottom and burying a number of trucks and shovels. The company had been aware of and was monitoring ground slippage long before the slide, and evacuated the mine in advance. For details of the event and its aftermath, please turn to p. 4. For a closer look at the methods used to detect and monitor the slide, turn to our coverage of slope-stability technology on p. 32. (Photo courtesy of Rio Tinto Kennecott Utah Copper)

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