Pillar Collapses in Underground Limestone Mines

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August 2021 Pillar Collapse

Airblast

Surface Sinkhole
Additional Pillar Collapse Events: October and November 2020, July 2021

PA Limestone Mine: Newly Benched Area (October 2020)

PA Limestone Mine: Legacy Area (November 2020, July 2021)
Hazards to Miners

-Ground Fall
Total collapse of the overburden
Rock falls from the roof and ribs
Ejection of rock from collapse area into travelways

-Airblast
Miners in the pathways at risk from high velocity air
Airblast Hazards

Miners may be exposed in or near:

Haul roads and travel roads.

Crushers, shops, explosive magazines, and other underground infrastructure.
Common aspect of all recent collapse events—tall, slender pillars
Assessment of “legacy” areas

- Evaluate the likelihood of collapse
- Evaluate the consequence of a collapse