FAI-F010C87-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Underground

(Crushed, Broken Limestone)

Fatal Fall of Roof Accident
September 2, 2025

Torrance Mine (UG)
Heidelberg Materials Northeast LLC
Torrance, Westmoreland County, Pennsylvania
ID No. 36-08484

Accident Investigators

Steven Pentz
Mine Safety and Health Inspector

Benjamin Butcher
Mine Safety and Health Specialist

Originating Office
Mine Safety and Health Administration
Mt. Pleasant District
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Michael Kelley, District Manager

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OVERVIEW

On September 2, 2025, at approximately 3:30 p.m. James Gershman, a 61-year-old blaster with approximately 10 years of underground mining experience, was fatally injured when he was struck by a piece of rock that fell from the roof.

The accident occurred because the mine operator did not properly identify and address hazardous ground conditions before performing work in the area.

GENERAL INFORMATION

Heidelberg Materials Northeast LLC owns and operates the Torrance Mine (UG) (Torrance Mine). The mine is an underground stone mine providing crushed, broken limestone and located in Westmoreland County, Pennsylvania. The Torrance Mine employs 55 miners and operates one 10-hour shift, 5 days a week. The Torrance Mine uses explosives to mine limestone from the Loyalhanna limestone seam. Front-end loaders and off-highway trucks haul the limestone from underground to an onsite processing plant.

The principal management officials at the Torrance Mine at the time of the accident were:

Aaron George	Plant Manager
David Gamble	Senior Quarry Supervisor

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on August 19, 2025. The 2024 non-fatal days lost incident rate for the Torrance Mine is zero, compared to the National Average rate of 1.93 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On September 2, 2025, at approximately 7:00 a.m., Gershman started his shift and entered the mine to begin his task of loading explosives into previously drilled holes of six faces and connect them to be detonated in one shot after the end of the shift. Accompanied by Ashton Dougherty, blaster laborer, they loaded five of the six faces with explosives. At 10:30 a.m., Kenneth Shields, lead blaster, examined the roof and hand-scaled the M43 faces and ribs. At approximately 2:30 p.m., Gershman and Dougherty began to load explosives into the predrilled shot holes in the M43 and M43-F crosscut faces. According to interviews and examination records, no adverse conditions were observed in this area.

Dougherty was in the elevated personnel lift of the Fletcher ANFO loading machine to complete the loading of explosives in the third and fourth rows of predrilled shot holes above the mine floor. Gershman was on the ground loading explosives at the bottom of the rib in the first and second rows of predrilled shot holes and was positioned to the right-hand side of the personnel lift basket, which was between 4 and 7 feet off the mine floor prior to the accident.

At approximately 3:30 p.m., a rock, measuring 74 inches by 60 inches with a thickness of 8 to 16 inches, fell from the roof above the miners. The rock first hit the right side of the boom of the personnel lift but did not hit the basket. No marks were found on the top of the basket. After hitting the boom, the rock struck Gershman. It could not be determined if the rock fell straight down or at an angle, but it did land to the right side of the basket. Dougherty immediately lowered the personnel lift and found Gershman unresponsive. Dougherty called for help on the company radio and did not receive a response. Dougherty ran outby and met Shields in the escapeway at the S7 crosscut.

Dougherty and Shields traveled outside to the underground mine trailer to call 911. Joseph Baum, maintenance supervisor; Joshua Miller, scaler operator; and David Grubel, drill operator travelled to the M43-F face. Baum, Miller, and Grubel provided first aid and cardiopulmonary resuscitation to Gershman and transported him to the surface. At 3:56 p.m., Braden Volunteer Fire Department and Mutual Aid Emergency Medical Services arrived to care for Gershman. Russell Morgan, Westmoreland County deputy coroner, arrived on scene and pronounced Gershman dead at 5:47 p.m.

INVESTIGATION OF THE ACCIDENT

On September 2, 2025, at 4:03 p.m., James White, area health and safety manager, called the Department of Labor National Contact Center (DOLNCC) to report a serious accident. The DOLNCC notified Kevin Honeycutt, staff assistant in the Warrendale District. Honeycutt contacted Michael Wess, staff assistant in the Mt. Pleasant District. Wess informed Michael Kelley, district manager; Jeremy Williams, assistant district manager; and Dennis Zeanchock, field office supervisor. Zeanchock sent Steven Pentz, mine safety and health inspector, to the mine. Kelley sent Todd Anderson, assistant district manager, and Ben Butcher, mine safety and health specialist, to the mine.

At 6:00 p.m., Pentz and Butcher arrived at the mine and issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and the preservation of evidence. MSHA Technical Support assisted in the investigation of the accident. The MSHA accident investigation team, along with the Pennsylvania State Police and the Pennsylvania Bureau of Mine Safety, conducted an examination of the accident scene, interviewed mine management and miners, and reviewed geological conditions and work practices relevant to the accident. See Appendix A for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred in the advancing M43 main heading. This heading is being developed from 40 to 45 feet wide and 25 to 30 feet high. The rock fell 31 feet outby the M43 main heading face and against the right-hand rib line of the M43-F crosscut; this area was measured at 27 feet high. See Appendices B and C.

Equipment Involved

The blasters were loading predrilled shot holes with blasting caps, boosters, and ammonium nitrate/fuel oil (ANFO) by using a Fletcher ANFO Powder Loader, Model 37-LAD (personnel lift) when the event occurred. The personnel lift is used to load holes that are above reach from the ground. The equipment was not identified as a contributing factor to the accident.

Scaling

The M43 heading was mechanically scaled approximately 2 weeks before the accident. Bryn Enoch, haul unit operator, conducted an examination and "scratch" test of the roof on August 29, 2025. Enoch initialed and dated on the roof that the examination was completed. At approximately 10:30 a.m. on September 2, 2025, Shields hand-scaled the drilled faces and visually examined the M43 heading. The mine operator did not adequately take down or support roof conditions which created a hazard to persons before work or travel was permitted in the active M43 heading. Investigators determined that inadequate scaling contributed to the accident.

Blasting Procedures

Predrilled shot holes are typically loaded by one or two miners who work on multiple faces daily. The shot holes in the M43 heading were drilled on August 29, 2025. The upper rows of predrilled shot holes in the faces are typically loaded from the top down. The lower rows of

predrilled shot holes are typically loaded by a single miner or pair of miners; however, they are loaded from the ground because they are not accessible from the personnel lift basket. Production shots consisted of multiple faces wired together for a single detonation at approximately 4:30 p.m., after the end of the shift at 4:00 p.m. Post blast inspections are conducted at the same time as the following workplace examination by Gamble, who is also a licensed blaster. Investigators determined the blasting procedures did not contribute to the accident.

Examinations

On September 2, 2025, Gamble conducted the workplace examination of the M43 heading. Gamble recorded no defects or hazards observed. Shields conducted a visual examination of the ground conditions in the M43 heading at approximately 10:30 a.m. and hand-scaled the ribs using a personnel lift as needed. He drilled the faces at approximately 10:30 a.m. Shields recorded no defects or observed hazards. Gamble stated the blasters conduct a visual examination of their work areas before they begin to work. Dougherty stated he and Gershman visually examined the M43 heading before they began to load the explosives. Doughtery used the personnel lift to conduct the visual examination. The blasters began loading the predrilled shot holes in the two faces of the M43 heading at approximately 2:30 p.m. Due to the geologic conditions around the accident, investigators determined it would have been difficult for examiners to specifically identify separations bounding the rock that fell. Investigators determined examinations did not contribute to the accident.

Training and Experience

Gershman had approximately 10 years of mining experience, all at Torrance Mine. Gershman worked as a blaster from 2005 until 2007 at Torrance Mine. Gershman returned to Torrance Mine as a blaster in May 2017. Gershman was provided with newly employed miner training when hired. Gershman received task training for scratch testing on April 17, 2018, and operation of the Fletcher Powder Loader on September 4, 2018. Gershman was a certified blaster in Pennsylvania. Gershman received Part 48 annual refresher training on February 3, 2025.

Dougherty was task trained on the Fletcher Powder Loader on July 14, 2025. Dougherty received newly employed inexperienced miner training on March 14, 2025. Investigators determined training did not contribute to the accident.

Geology

General conditions in the M43 heading and in the surrounding area were characterized by extensive jointing. Joints are naturally occurring fractures in the limestone that are planes of weakness and are typically seen in parallel sets with regular spacing. As observed in the accident location, multiple joint sets may be present at different orientations. Multiple joint sets may intersect to form blocks. In the M43 heading, joints were spaced 4 to 10 feet apart, defining a rock mass composed of multi-faceted blocks. The documented orientations placed joints parallel to headings and crosscuts, as well as diagonally through opposing corner pillars. Joints were generally iron-stained and often contained deeply weathered gouge, indicating that the rock mass was weak and weathered. The rock mass appeared much more degraded compared to conditions observed two to three crosscuts to the east, where joints were tight and generally lacked iron staining. It appears that the geological conditions had become more adverse as the mining front

advanced toward the outcrop where the rock mass was more easily affected by weathering. The mine began mining in the M43 heading past the E crosscut on January 28, 2025 (Appendix B).

The M43 heading had been mined 26 to 29 feet high, depending on the presence of limestone beds in the roof that had either been removed by mining, scaling, or remained in place. The 3-foot difference in roof elevations is due to a series of brows that exposed individual bedding layers that were commonly highlighted by iron staining (Appendix C). Brows and bedding were not present in the roof two to three crosscuts east of the faces that included M43. The mining horizon had risen in the Loyalhanna Limestone while at the same time ground conditions became more degraded due to weathering. The upper portion of the Loyalhanna Limestone is composed of thin beds that are individually too thin and weak to span the width of the mine opening without the aid of roof bolts. In contrast, areas located three crosscuts to the east were in a lower level of strata characterized by a more massive texture without thin bedding planes, which was able to span the mining width without the aid of roof bolts. At the same time as the mining horizon rose into the weaker, bedded layers, iron-stained joints dissected the layers and made them even more susceptible to failure.

The cavity left by the fallen rock involved in the accident was bounded by joints on two sides, open at an exposed brow on the third side, and separated along a tensile crack at the rib line on the fourth side (Appendix D). The top of the piece of rock that eventually fell was represented by delamination from a bedding plane that hosted iron-stained limestone. The fallen rock separated from a layer of limestone that remained in the roof and was exposed at the brows. Most of the layer adhered to the roof, but the bounding joints allowed an individual block to separate and fall.

ROOT CAUSE ANALYSIS

The accident investigation team conducted an analysis to identify the underlying causes of the accident. The team identified the following root causes, and the mine operator implemented the corresponding corrective actions to prevent a recurrence.

Root Cause: The mine operator's policies and procedures were not adequate to take down or support ground conditions that created a hazard to persons before work or travel commenced in this area.

Corrective Action: The mine operator developed a written policy and procedure. On the same day a blast will be conducted, a miner who is experienced in examining and testing for loose ground will test and conduct a visual examination of the roof, ribs, face, and geological conditions. An experienced scaler will then perform hand-scaling of the roof, ribs, and face before blasters go in to load holes, and will perform mechanical scaling as required. The mine operator will install roof support for certain mining and geological conditions, and for loose ground conditions, where it cannot be scaled down. The mine operator trained all miners on the policy and procedure.

CONCLUSION

On September 2, 2025, at approximately 3:30 PM, James Gershman, a 61-year-old blaster with approximately 10 years of underground mining experience, was fatally injured when he was struck by a piece of rock that fell from the roof.

The accident occurred because the mine operator did not properly identify and address hazardous ground conditions before performing work in the area.

Approved By:

_____ _____

Michael Kelley Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Heidelberg Materials Northeast LLC.

   A fatal accident occurred on September 2, 2025, at approximately 3:30 p.m. This order is being issued under the authority of the Federal Mine Safety and Health Act of 1977, under Section 103(k) to insure the safety of all persons at the mine, and requires the operator to obtain the approval of an authorized representative of MSHA of any plan to recover any person in the mine or to recover the mine or affected area. This order prohibits any activity in the affected area. The operator is reminded of the obligation to preserve all evidence that would aid in investigating the cause or causes of the accident in accordance with 30 CFR 50.12.

2. A 104(a) Citation was issued to Heidelberg Materials Northeast LLC. for a violation of 30 CFR 57.3200.

   On September 2, 2025, a blaster was fatally injured when he was struck by a piece of rock that fell from the roof. The mine operator did not take down or support ground conditions which created a hazard to persons before work or travel was permitted in the active M43 heading. A rock measuring 74 inches long, 60 inches wide, and 8 to 16 inches thick, fell from a height of 25 feet.

APPENDIX A – Persons Participating in the Investigation

Heidelberg Materials Northeast LLC.

Jay Mizak	Vice President/General Manager
Aaron George	Plant Manager
James White	Area Health and Safety Manager
Ronald Clister	Senior Mining Engineer
David Gamble	Senior Quarry Supervisor
David Assalone	Senior Associate General Council
Phillip Kontul	Outside Council, Ogletree Deakins
Joseph Baum	Maintenance Supervisor
Joshua Miller	Scaler Operator
David Grubel	Drill Operator
Kenneth Shields	Lead Blaster
Ashton Dougherty	Blaster Helper

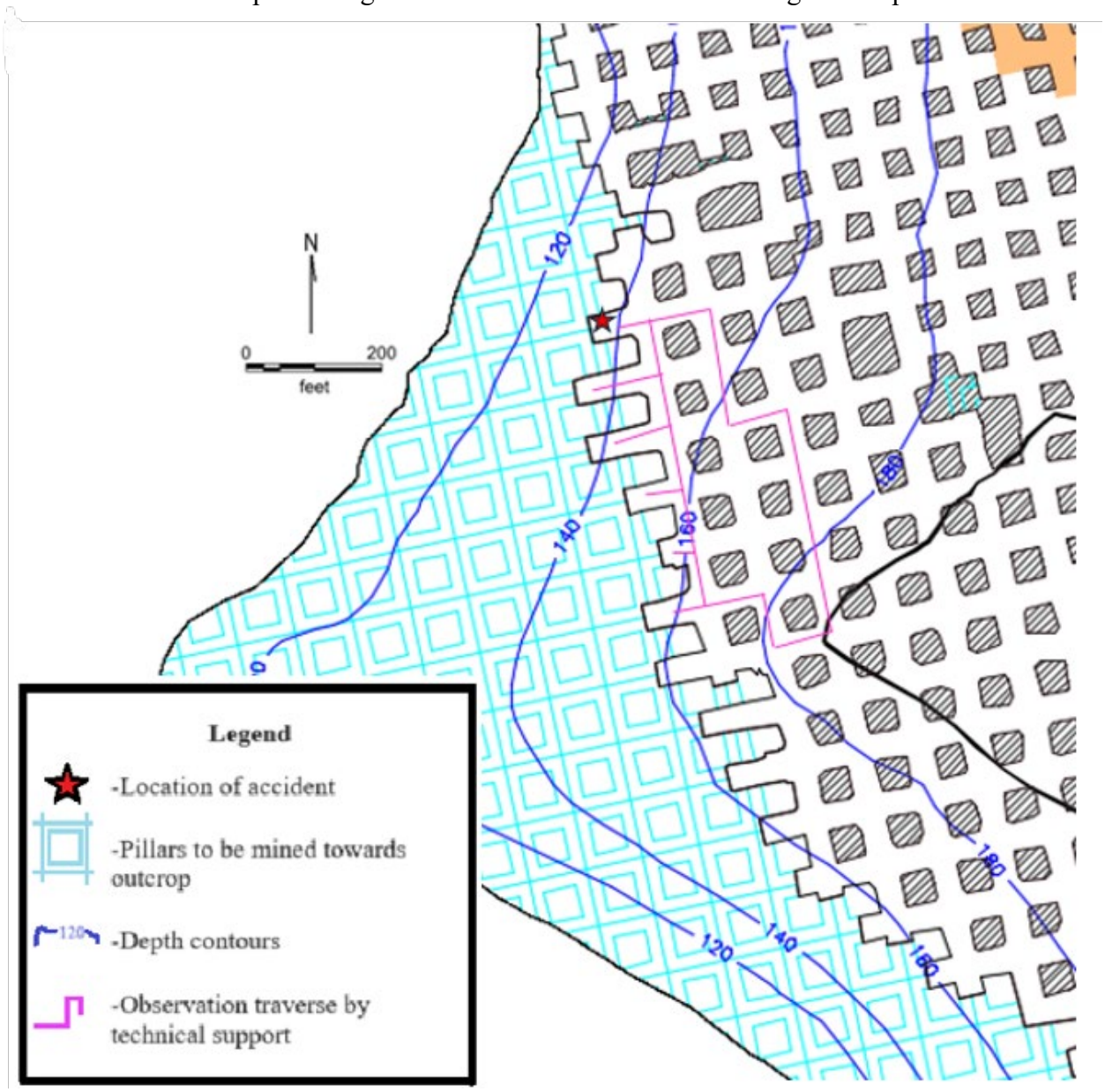
Pennsylvania Bureau of Mine Safety

Scott Shilling	Program Manager, Industrial Minerals
Shane Holsopple-Walsh	Mine Inspector, Industrial Minerals
Robbie Reese	Mine Inspector, Industrial Minerals
Chris Yakmack	Mine Inspector, Industrial Minerals
William Hudak Jr.	Engineering Manager
Joshua Chlopek	Mining Engineer Consultant
Kerry Spelling	Geologist Consultant

Mine Safety and Health Administration

Michael Kelley	District Manager
Todd Anderson	Assistant District Manager
Michael Wess	Staff Assistant
Steven Pentz	Mine Safety and Health Inspector
Benjamin Butcher	Mine Safety and Health Specialist
Gregory Rumbaugh	Roof Control Division Chief, Technical Support
Emily Muto	Supervisory Geologist, Technical Support
Sandin Phillipson	Senior Geologist, Technical Support

APPENDIX B – Map Showing Accident Location in M43-F heading with depth contour lines

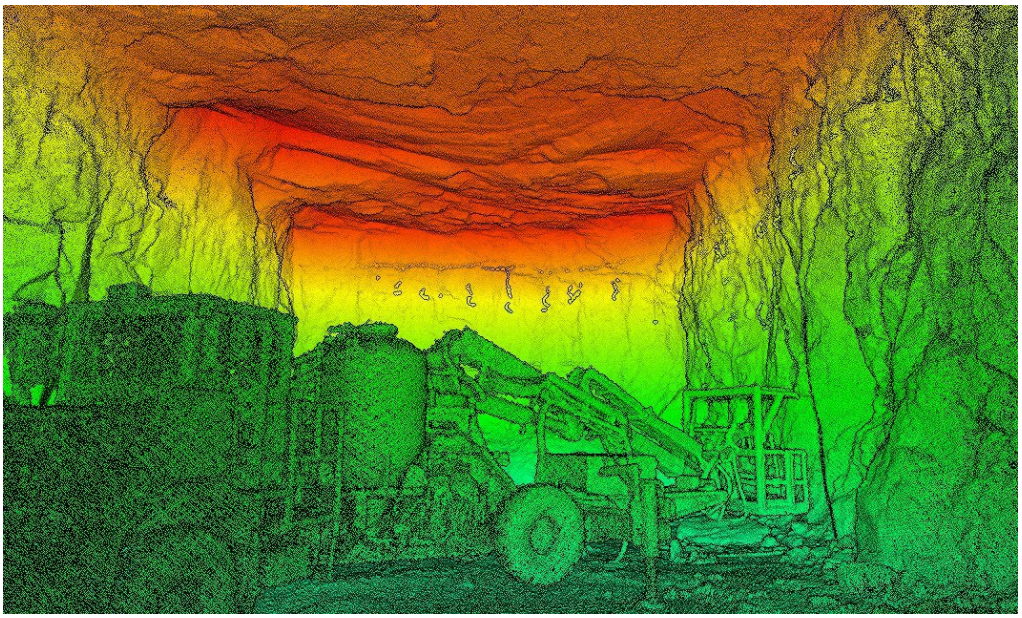


General map of showing observation traverse in magenta. Projected pillars are shown in cyan. Accident location represented by red star.

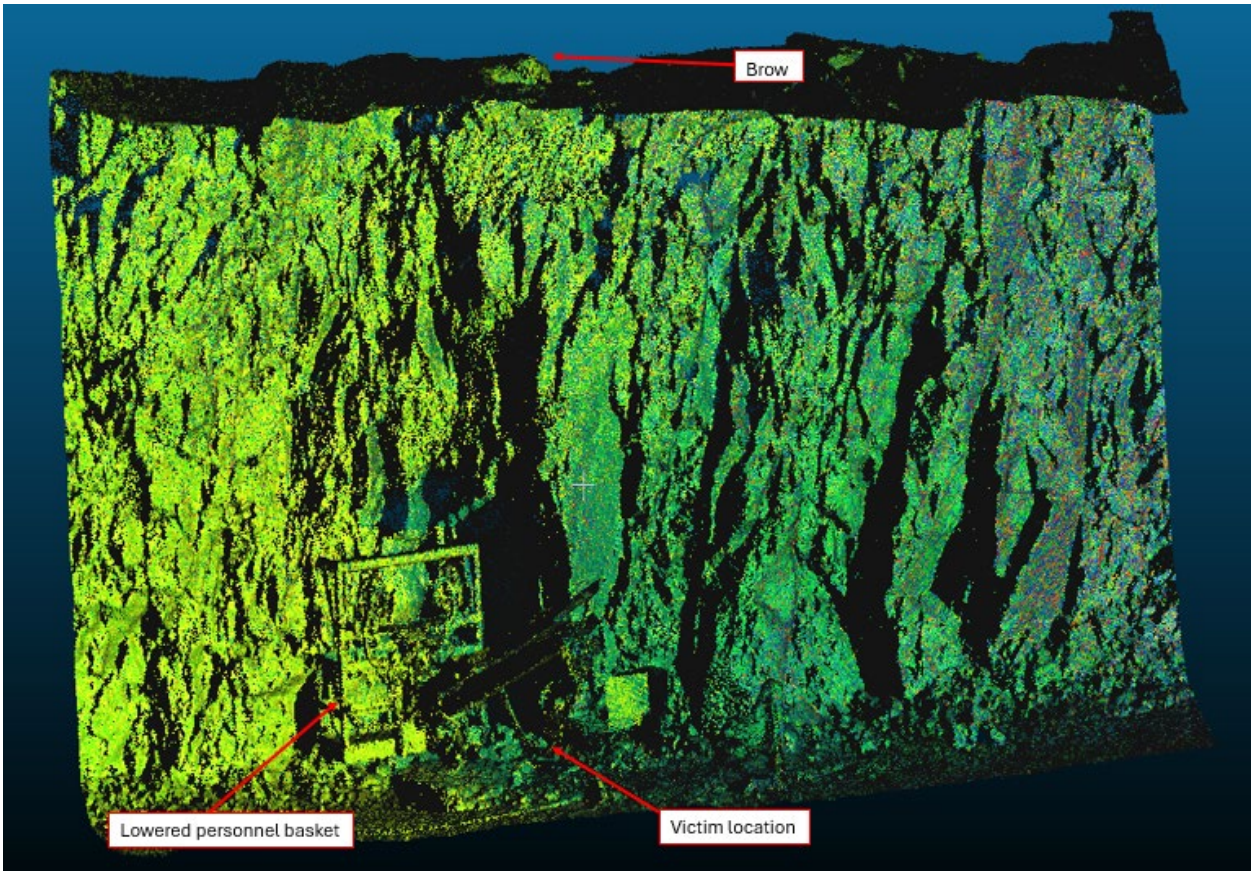
APPENDIX C – Mining Map

General map of showing observation traverse in magenta. Projected pillars are shown in cyan. Accident heading, as mined when the accident occurred, outlined in orange with the personnel lift shown in black and fallen material shown in yellow. The loaded faces are numbered in red.

APPENDIX D – LiDAR Scans in M43 Heading



Point cloud generated from the LiDAR scan taken at the accident site. The fallen material and lowered personnel lift can be seen adjacent to the right rib.



Point cloud generated from the LiDAR scan taken at the accident site showing the brows observed in the roof horizon, the location of the victim and the personnel basket.

APPENDIX E – Photo of Rock Cavity at Accident Site

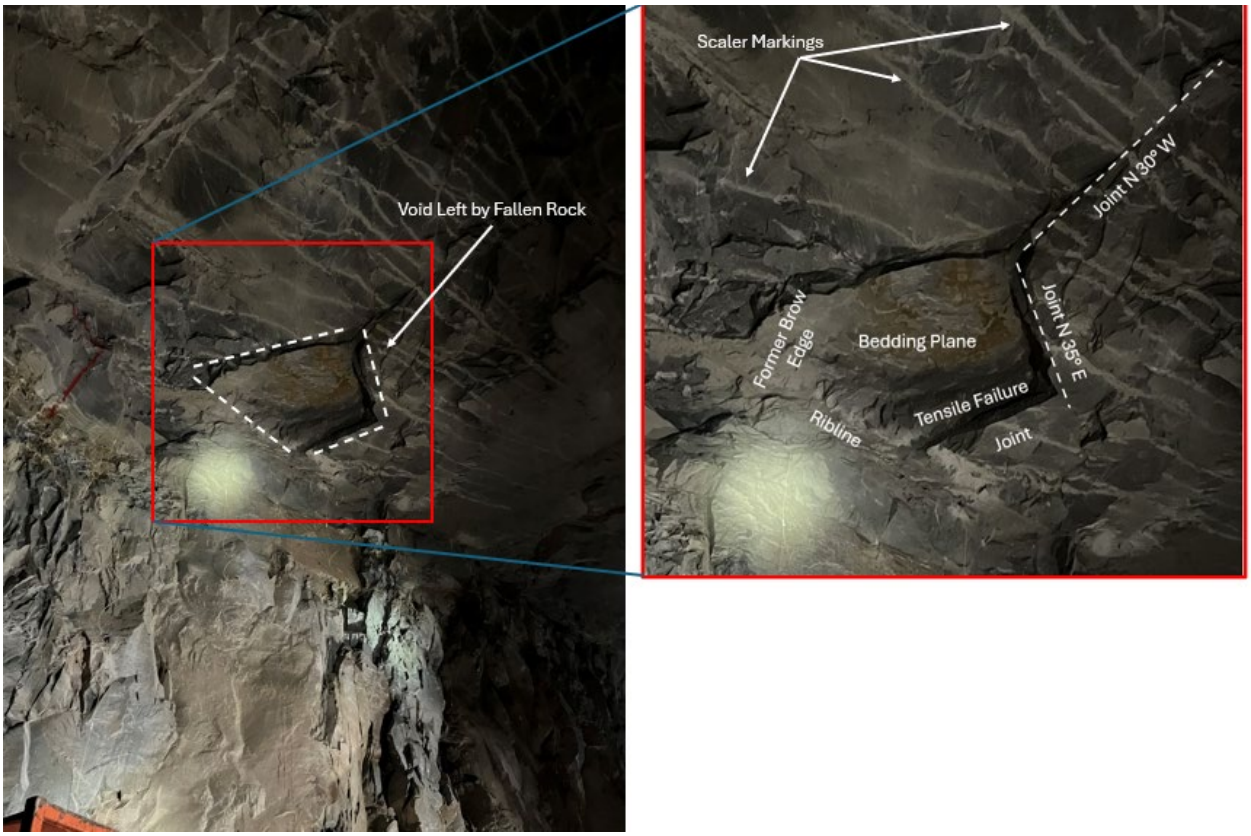


Photo of cavity that hosted fallen rock with bounding planes highlighted, with annotations.