

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Underground Mine
(Anthracite)

Fall of Roof or Back Accident
October 27, 2020

Williamstown Mine #1
Kimmel's Mining, Inc.
Williamstown, Dauphin County, Pennsylvania
Mine ID No. 36-09435

Accident Investigators

Jason Boring
Mine Safety and Health Inspector

Michael Dudash
Mine Safety and Health Inspector

Thomas Leshko
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
East Region - Mt. Pleasant District
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Mt. Pleasant, Pennsylvania 15666
Michael P. Kelley, District Manager

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OVERVIEW

On October 27, 2020, at 12:45 p.m., Daniel F. Shoener, a 37-year-old miner with approximately seven years of mining experience, died from a roof fall. At the time of the accident, the victim was installing a wooden post for roof control.

The accident occurred when the roof fell while miners were in the process of installing roof support.

GENERAL INFORMATION

Kimmel's Mining, Inc. owns and operates the Williamstown Mine #1 in Williamstown, Dauphin County, Pennsylvania. The underground mine operates one eight-hour shift, five days per week, and employs eight miners. Miners access the mine by a slope opening into the 41-inch Lykens Valley #3 Anthracite coal seam which is on a 15 to 20 degree grade. Coal is extracted by drilling and blasting the face with explosives. The broken anthracite is transported from the face by cable drag along the entry to a chute. The cable drag pulls it down the chute to the track haulage entry on a lower level, referred to as the gangway. See Appendix A for a general layout of the mine. The coal flows out of the chute into coal cars that a locomotive delivers to the slope hoist, where the coal is hoisted to the surface.

The principal officers for Kimmel's Mining, Inc. at the time of the accident were:

Scott B. Kimmel
Darryl Koperna

President
General Manager

The Mine Safety and Health Administration (MSHA) conducted the last regular inspection at this mine on August 25, 2020. The 2019 non-fatal days lost (NFDL) incident rate for the Williamstown Mine #1 was zero, compared to the national average of zero for mines of this type.

DESCRIPTION OF THE ACCIDENT

On Tuesday, October 27, 2020, at 7:00 a.m., the 5th Breast section crew, including Daniel F. Shoener, Justin Koperna, Foreman, and Kody Troutman, Drag Operator, began their regular production shift. The miners entered the #3 slope and arrived at the working section at approximately 7:30 a.m. Shoener and J. Koperna began drilling and preparing the pillar in the 5th Breast, between the 1st and 2nd miner heading. At approximately 10:00 a.m. Shoener and J. Koperna shot a block of coal from the pillar. After the smoke from the shot cleared, Shoener and J. Koperna began removing rock from the loose coal and setting wooden posts. Darryl Koperna, General Manager, arrived in the area, examined the roof, and helped remove rock from the loose coal pile before continuing on to the 6th West Breast, 2nd miner heading. The 5th Breast crew began removing coal from the pillar with the cable drag and began setting wooden posts as the coal was removed.

At approximately 12:45 p.m., Shoener was digging a “hitch”, or hole in the mine floor, in preparation to install a wooden post for ground support. The hitch helps keep the wooden post from slipping out from the slanted, slick mine floor. While he dug the hitch, a rock measuring nine feet, by five and half feet, and up to two feet thick fell from the mine roof onto Shoener.

J. Koperna was setting a wooden post about 20 feet away from Shoener when he heard the rock fall. J. Koperna saw Shoener under the rock, tried to talk to him and checked for a pulse. Shoener was unresponsive but had a pulse. J. Koperna, realizing that he could not remove the rock alone, yelled for help and rang the communication buzzer four times in a prearranged signal to the miners underground that a problem had occurred. J. Koperna then hurried to the 6th West Breast, 2nd miner heading where D. Koperna and Kasey Kroh, Miner, were working to get help.

J. Koperna, D. Koperna, and Kroh traveled back to the 5th Breast and reassessed Shoener, who had a weak pulse. They attempted to remove the rock from Shoener using wooden posts and boards as levers. Troutman and Allen Lucas, Miner, heard the alarm and traveled to the 2nd miner heading to assist. Troutman went for additional help and found Clair Kimmel, Miner, who ran to get a rail road jack. Kimmel informed Mathew Fidler, Miner, of the accident in the 2nd miner heading. Fidler called on the intercom to Ricky Lucas, Hoistman, and told him to call 911.

J. Koperna, D. Koperna, Kroh, and A. Lucas removed Shoener from underneath the rock, began cardiopulmonary resuscitation (CPR) and transported him to the surface. Michael Dudash, Mine Safety and Health Inspector, was inspecting on the surface of the mine and orally issued a 103(k) order to the mine operator at 1:25 p.m. to secure the accident scene. Zachery Smeltz, Dauphin County Deputy Coroner, arrived at the mine and pronounced Shoener dead at 3:19 p.m.

INVESTIGATION OF THE ACCIDENT

On October 27, 2020, at 1:33 p.m., J. Koperna called the Department of Labor National Contact Center (DOLNCC) to report a possible fatal accident. DOLNCC notified Michael P. Kelley, District Manager. Kelley notified Kerry Miller, Roof Control Supervisor, who contacted Jason Boring, Mine Safety and Health Inspector, and dispatched him to the accident scene. Dudash also notified Patrick Boylan, Supervisory Mine Safety and Health Inspector, of a possible fatal accident. Boylan contacted Thomas Leshko, Mine Safety and Health Inspector, and Christian Epting, Mine Safety and Health Inspector, dispatching them both to the accident scene. At approximately 3:00 p.m., Leshko arrived at the mine site. Epting joined Leshko and Dudash and they gathered preliminary information from the operator and miners.

On October 28, 2020, Boring and Kelley arrived at the MSHA's Frackville field office and Boylan updated them on preliminary accident information. Boring, Kelley, and Dudash traveled to the mine and met with D. Koperna and J. Koperna. The inspection party along with Troy Wolfgang, Pennsylvania Bureau of Mine Safety (PABMS) Supervisor, and Terry Wolfgang, PABMS Inspector, traveled underground and took photographs and measurements of the accident scene and conducted interviews. See Appendix B for a list of persons participating in the investigation.

DISCUSSION

Location of Accident

The accident occurred at the 5th Breast, between the 1st and 2nd miner heading West pillar section. The mining height is 3.0 feet, the area is dry. The seam is on a 15 to 20 degree grade.

Mining Method – Pillaring on Advance

To pillar on advance, a portion of a remaining coal block is drilled, loaded with explosives and detonated or shot. A cable connected to a blade known as a drag is pulled through the broken coal and then pulled into a chute to the track entry or gangway. The coal is loaded into a rail car and transported to the slope. The material is then hoisted up the slope to the surface.

As the coal is removed from the area of the shot, miners examine the roof and install wooden posts. D. Koperna told investigators that when he examined the roof after the shot, the roof sounded solid and he did not expect it to fall.

To install the wooden posts, miners first use a tool to dig a small hole, or hitch, in the slippery rock that makes up the mine floor. The wooden posts are pointed on one end and these ends are placed into holes so the wooden post will not slip out after it is installed. The top of the wooden post is wedged to the mine roof.

Roof Control Plan

The approved Roof Control Plan requires two rows of single props (wooden posts) installed on five foot centers in all directions. The exception is drag areas, where wooden posts are required to be installed on seven foot centers crosswise to allow adequate clearance for the drag bucket. The operator was in compliance with the Roof Control Plan.

Geology

The mine roof immediately over the coal seam consists of a layer of rock ranging from several inches to one foot in thickness. This layer of rock, referred to as “false roof,” either falls out when the coal is shot (miners cast it aside or pull it down if it is loose and hanging), or it remains on the roof and wooden posts are set for support. Rock had fallen out in areas around the accident scene. The remaining roof was being supported with wooden posts when the accident occurred. Investigators also saw cracks in the roof in the area of the accident which was a common occurrence in sections of this mine that has adverse roof conditions.

Examinations

Adequate on-shift and pre-shift examinations were made on the 5th Breast, between the 1st and 2nd miner heading West section as required. No hazardous conditions related to the roof conditions were recorded in the examination records for the day of the accident and previous shifts.

Training and Experience

Daniel Shoener had approximately seven years of mining experience with two years at this mine. Investigators determined Shoener received all required Part 48 training.

ROOT CAUSE ANALYSIS

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

Root Cause: The mine operator did not adequately support or otherwise control the mine roof.

Corrective Action: Mine management revised, and MSHA approved, changes to the Roof Control Plan. New or revised statements and provisions in the roof control plan include the following:

- Descriptions of adverse roof conditions and specific actions when these are encountered.
- Specific safety provisions and requirements when pillaring, including a requirement to leave a block of solid coal between the miner heading and the pillaring face.
- Requirements to use metal jacks (minimum of 5-ton capacity) as temporary roof support prior to installing a wooden post as permanent support in areas with adverse roof conditions. Temporary supports will be installed within 3 feet, on each side, of where permanent support will be installed.
- Additional instructions on proper methods to examine the roof, including a requirement to examine the roof after blasting.
- Specific instruction on how to correct and record roof hazards.
- Requirements to post warning signs or other devices when hazards are encountered.

All miners were trained in the new statements and provisions.

CONCLUSION

On October 27, 2020, at 12:45 p.m., Daniel F. Shoener, a 37-year-old miner with approximately seven years of mining experience, died from a roof fall. At the time of the accident, the victim was installing a wooden post for roof control.

The accident occurred when the roof fell while miners were in the process of installing roof support.

Approved By:

Michael P. Kelley
District Manager

Date

ENFORCEMENT ACTIONS

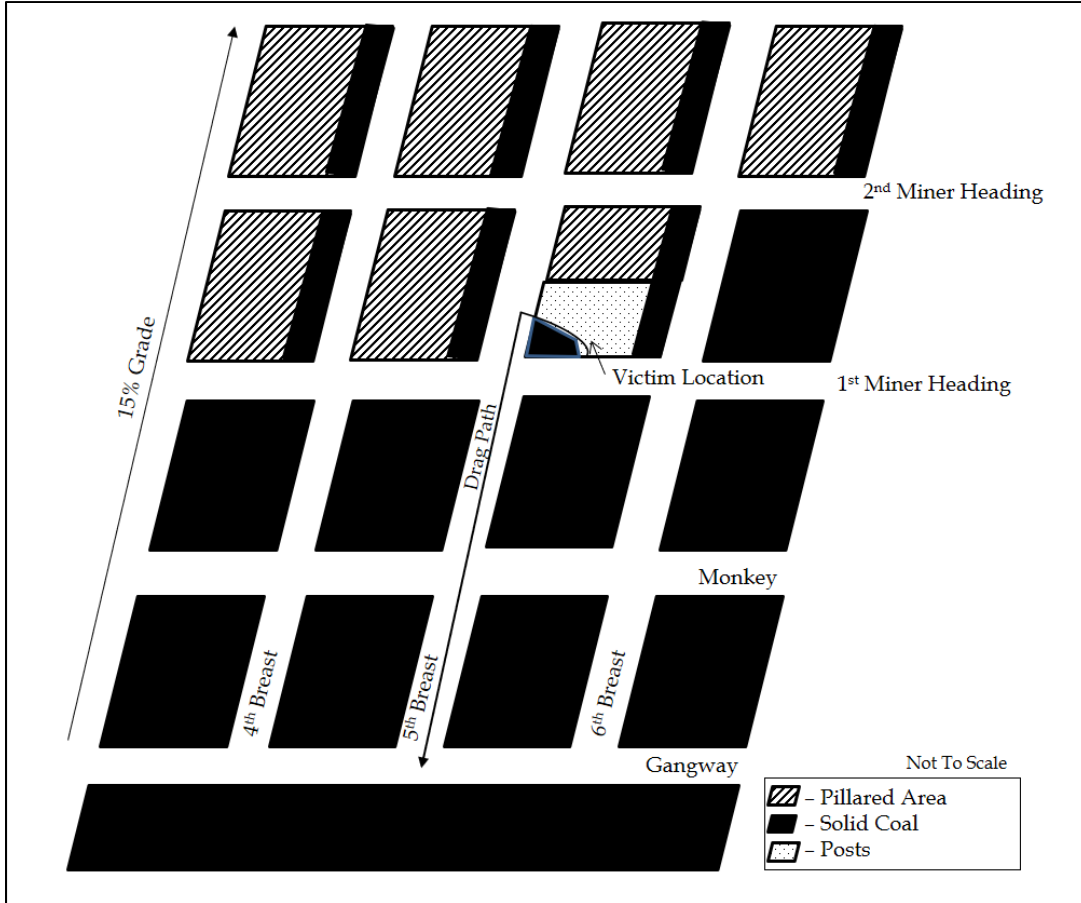
1. A 103(k) Order No. was issued to Kimmel's Mining, Inc:

An accident occurred at this operation on October 27, 2020, at approximately 12:45pm. As rescue and recovery work is necessary, this Order is being issued, under Section 103(k) of the Federal Mine Safety and Health Act of 1977, to assure the safety of all persons at this operation. This Order is also being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at the underground portion of the mine until MSHA has determined that it is safe to resume normal mining operations in the underground mine. This Order applies to all persons engaged in the rescue and recovery operation and any other persons on site. This Order was initially issued to the mine operator at 1:25pm and has now been reduced to writing.

2. A 104(a) Citation was issued to Kimmel's Mining, Inc for a violation of 30 CFR § 75.202(a):

On October 27, 2020, a miner was fatally injured as he was digging the bottom to set a wooden post in the 5th Breast Pillaring Section between the 1st and 2nd miner headings and was struck by a section of mine roof. The mine operator did not adequately control the roof to protect persons from hazards related to falls of the roof. The section of roof that struck the miner measured 9 feet by 5.5 feet and up to 2 feet thick in the center.

Appendix A – Mine Map



Appendix B – Persons Participating in the Investigation

Kimmel's Mining, Inc

| | |
|----------------|-----------------|
| Mathew Fidler | Miner |
| Clair Kimmel | Miner |
| Darryl Koperna | General Manager |
| Justin Koperna | Foreman |
| Kasey Kroh | Miner |
| Allen Lucas | Miner |
| Ricky Lucas | Hoistman |
| Kody Troutman | Drag Operator |

Pennsylvania Bureau of Mine Safety

| | |
|----------------|------------|
| Terry Wolfgang | Inspector |
| Troy Wolfgang | Supervisor |

Mine Safety and Health Administration

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|------------------|--|
| Jason Boring | Mine Safety and Health Inspector |
| Patrick Boylan | Supervisory Mine Safety and Health Inspector |
| Michael Dudash | Mine Safety and Health Inspector |
| Christian Epting | Mine Safety and Health Inspector |
| Thomas Leshko | Mine Safety and Health Inspector |