

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Underground Coal Mine

Fatal Fall of Roof Accident  
February 23, 2017

Mine No. 5  
C K Coal Corporation  
Delbarton, Mingo County, WV  
ID No. 46-09362

Accident Investigator

Ricky O. Runyon  
Coal Mine Safety and Health Roof Control Specialist

Originating Office  
Mine Safety and Health Administration  
District 12  
4499 Appalachian Highway  
Pineville, WV 24874  
Brian Dotson, District Manager

## TABLE OF CONTENTS

OVERVIEW.....	1
GENERAL INFORMATION .....	2
DESCRIPTION OF THE ACCIDENT .....	2
INVESTIGATION OF THE ACCIDENT .....	4
DISCUSSION .....	5
Accident Area .....	5
Roof Support and Roof Control Plan .....	6
Examinations .....	6
Company Investigation.....	7
Experience and Training.....	7
ROOT CAUSE ANALYSIS .....	8
CONCLUSION.....	9
ENFORCEMENT ACTIONS .....	10
APPENDIX A - Persons Participating in the Investigation .....	12
APPENDIX B - Sketch of Accident Scene.....	13
APPENDIX C - Victim Information .....	14



PHOTO OF ROOF AT ACCIDENT SCENE

#### OVERVIEW

On February 23, 2017, at approximately 9:30 p.m., Dennis J. Fillinger, a 62-year-old section foreman, was seriously injured when a portion of loose, inadequately supported roof rock fell, crushing him against the mine floor. He was working on the active section at the time. Due to complications resulting from the injuries he received in the accident, Fillinger died on April 6, 2017.

The accident occurred because examinations failed to identify loose, inadequately supported mine roof where miners are required to work and travel.

## GENERAL INFORMATION

Mine No. 5 is an underground coal mine owned by C K Coal Corporation and located in Delbarton, Mingo County, West Virginia. The mine operates a single mechanized mining unit (MMU) in the Coalburg coal seam (bituminous) with an average mining height of 105 inches. The mine operates two production shifts and one maintenance shift five days per week, utilizing the room and pillar mining method. The mine employs 43 miners and produces an average of 3,500 tons of raw material daily. Coal is extracted from the face using a continuous mining machine and hauled by shuttle cars to the dumping point. It is then transported to the surface on belt conveyors. The mine uses battery-powered track haulage systems and self-propelled rubber-tired personnel carriers (mantrips) to transport miners and materials in and out of the mine.

The principal officers for the mine at the time of the accident were:

Anthony P. Cline.....President  
Danny Robinette.....Vice President/General Manager  
John Sheppard.....Mine Superintendent  
Gilbert Sada.....General Mine Foreman  
Timothy Mark Blackburn..... Evening Shift Foreman

A regular (E01) safety and health inspection, initiated on January 10, 2017, was ongoing at the time of the accident. The previous E01 was completed on October 25, 2016. The Non-Fatal Days Lost (NFDL) injury incidence rate for the mine operator in 2016 was 0.00 as compared to a national NFDL rate of 3.19 for mines of this type.

## DESCRIPTION OF THE ACCIDENT

On February 23, 2017, at 3:00 p.m., Fillinger started his normal work activities as the evening shift section foreman for the working section. Shortly before 9:30 p.m., Shawn Kiser, Continuous Mining Machine Operator, completed a cut that was approximately 33 feet deep, in the No. 3 entry. Jason Cantrell, Shuttle Car Operator, assisted Kiser as he was tramming the continuous mining machine across the last open crosscut from the No. 3 entry to the No. 2 entry. Andrew Glycadgis, Shuttle Car Operator, and Fillinger then walked into the No. 3 entry to observe the cut, which had just been mined, and were standing just outby the reflectors, which marked the next to last row of roof bolts.

Glycadgis heard the roof “pop” and told Fillinger to “watch out” as he turned to his right to avoid the falling roof. Glycadgis tripped and fell, and when he got up, he saw a section of rock had fallen from the mine roof.

Three or more individual rocks had fallen, the largest of which had pinned Fillinger to the mine floor. Glycadgis lifted the large rock off Fillinger with the help of Gordon

Mills, Scoop Operator, who was in the area. While the rock was lifted, Fillinger was pulled out from under the rock by Robert Star Jr., Ventilation Man/General Laborer, who was also in the area. Kiser and Raymond Johnson Jr., Roof Bolter, traveled to the section loading point to retrieve the backboard and first aid supplies. Cantrell called the surface to inform Mark Morrison, Dispatcher, of the accident and to request an ambulance. Cantrell then traveled outby approximately four crosscuts to the No. 4 conveyor belt drive and informed Timothy Mark Blackburn, Evening Shift Foreman, of the accident.

Blackburn who is also an emergency medical technician (EMT) immediately traveled to the No. 3 entry to evaluate the accident and found Fillinger conscious and talking. Fillinger stated "I'm busted up bad" and identified pain locations in his side, rib, and abdomen area. Blackburn instructed the miners to handle Fillinger with care when moving him, and he called outside and verified an ambulance had been dispatched and instructed Morrison to inform John Sheppard, Mine Superintendent, and Danny Robinette, C K Coal Corporation Vice President/General Manager of the accident. Morrison contacted both J. Sheppard and Robinette at their homes.

Fillinger had no visible injuries other than a minor cut with minimal bleeding on his forehead. He was conscious and communicating as the miners at the scene administered first aid. Fillinger was having difficulty breathing with pain in his abdomen and upper leg. He was fitted with a cervical collar and placed on the backboard.

Fillinger was carried four crosscuts outby to the end of the track and transported to the surface on a track-mounted vehicle. Blackburn, Cantrell, Johnson, Mills and Steven Midkiff, Roof Bolter, accompanied Fillinger and continued to monitor his condition. Fillinger remained conscious while he was in their care. They reached the surface at about 9:57 p.m.

At 10:02 p.m., STAT Emergency Medical Service Unit (EMS) arrived at the mine. The EMS personnel evaluated Fillinger's condition and transported him by ambulance to an arranged landing point on Route 119 near Delbarton, West Virginia. At 11:10 p.m., Air Evac Lifeteam transported Fillinger to Pikeville Medical Center (PMC) located in Pikeville, Kentucky, arriving at 11:27 p.m.

J. Sheppard arrived at the mine just prior to Fillinger arriving on the surface. He spoke with Robinette and informed him of Fillinger's condition. Robinette traveled directly to PMC where he met Fillinger's family and was informed that Fillinger was in critical condition with severe internal injuries. Due to complications resulting from the injuries he received in the accident, Fillinger died on April 6, 2017.

## INVESTIGATION OF THE ACCIDENT

Early in the morning of February 24, 2017, Robinette left the PMC and traveled to the mine. When he arrived, he met with J. Sheppard and instructed him to report the accident. At 4:21 a.m., J. Sheppard called the Department of Labor (DOL) National Contact Center to report the accident. A noncontributory citation was issued for a violation of 30 CFR § 50.10(b), because the mine operator did not notify MSHA immediately, at once, without delay, and within 15 minutes once they knew of an injury to an individual at the mine, which had a reasonable potential to cause death.

At 4:39 a.m., the DOL National Contact Center called Nicholas Christian, Pineville Field Office Supervisor, to report the accident. Ricky O. Runyon, Coal Mine Safety and Health Roof Control Specialist/Accident Investigator, was directed to travel to the mine to investigate.

Runyon arrived at the mine at approximately 7:45 a.m., and issued a 103(k) order to preserve the accident scene and protect miners. Runyon traveled underground to investigate the accident scene. He was accompanied by personnel from the West Virginia Office of Miners' Health Safety and Training (WVOMHST), as well as by Robinette, J. Sheppard and Gilbert Sada, General Mine Foreman. WVOMHST and C K Coal Corporation personnel participated in the accident investigation (see Appendix A).

Runyon took photographs, obtained survey station numbers, and measured the installed roof supports and the mine entries. However, he was hampered in his efforts because the mine operator had altered the accident scene before an investigation could be started. This included supporting the No. 3 entry just inby the accident, cleaning the mine floor with a scoop, and removing the rock that had fallen onto Fillinger. As a result, Runyon was not able to obtain measurements or photos of the rock which fell, identify the exact location where the rock fell, or determine the exact location Fillinger was positioned when he was crushed by the rock. All references to locations or sizes and dimensions of the fallen rocks are based solely on the testimony of witnesses. A noncontributory citation was issued to the operator for failure to preserve the evidence at the scene in violation of 30 CFR § 50.12.

After completing the initial on-scene investigation, Runyon interviewed the miners who witnessed the accident. The witnesses gave similar accounts of the accident with varying recollections of the specific amount, dimensions, and sizes of the rocks which fell.

During this time, MSHA personnel, Clark Blackburn, Assistant District Manager (Enforcement), Jason D. Hess, Roof Control Supervisor, and Lawrence Mendez, Field Office Supervisor, arrived at the mine site to evaluate the mine roof. J. Sheppard and Sada from the company were present during the evaluation.

On February 28, 2017, Runyon and Hess returned to the mine to observe mine conditions for abatement of the outstanding citations and to conduct follow-up preliminary interviews with miners who engaged in roof bolting activities on the working section in the hours following the accident. Formal interviews were conducted on March 7, 2017 and March 9, 2017, at the MSHA Field Office located in Logan, West Virginia (see Appendix A).

## DISCUSSION

### Accident Area

The mine roof in the working section of the mine where the accident occurred had a bed of shale rock directly over the coal seam, which ranged from 4 inches to 2 feet in thickness. The main mine roof over the shale bed consisted of a sandstone bed, which ranged in thickness up to 76 feet.

In the working place where the accident occurred, the roof contained portions of shale rock in sporadic locations along its horizon. The shale rock ranged from less than 1 inch to 8 inches in thickness. In addition to the portions of draw rock, which fell during the accident, other portions of the shale had loosened and become draw rock, which was identified and pulled down during the investigation. The mine roof in this area was also severely fossilized, with numerous large fossils where the thin layers of shale had separated and fallen away from the sandstone bed. These fossils contained thin coal streaks and thin unconsolidated layers of shale rock at the transitioning point where they joined the sandstone.

The mining process consisted of cutting down the thin shale with the coal seam during development, leaving only the firm sandstone roof. However, as a result of varying transition points between the thin shale and the sandstone bed, the continuous mining machine was not able to excavate the entire shale layer in all areas. Numerous areas were identified on the working section where the continuous mining machine had engaged the sandstone bed over a portion of the entry, while engaging only the shale over the remainder of the entry.

As a result, the immediate mine roof contained portions of firm sandstone along with portions of thin, loose, and unconsolidated layers of shale, intermixed at the roof horizon. The thin shale layers had broken edges, which terminated at varying positions across the working place, and did not continue into the intersecting point of the coal pillar. This created a condition that reduced the self-supporting abilities of the shale roof rock. Without bearing plates to provide surface support, thin and incomplete layers of shale rock can become loose and fall from the roof, injuring miners who work and travel under it.

During the investigation, numerous areas of shale rock (draw rock) were visually identified by the broken and unconsolidated edges present on the horizon of the mine roof. A slate bar was used to confirm these portions of draw rock were loose and improperly supported. As each of the portions of loose rock was identified, the company representatives were alerted, the rock was scaled down, and the conditions were discussed. The portions of rock identified and scaled down varied in size measuring up to 3 to 5 feet in length and width, with thickness ranging from 1 to 6 inches.

All miners interviewed stated draw rock was common on the working section and loose rock was removed from the roof on a regular basis. The miners confirmed the presence of draw rock on the working section that began at the belt drive and extended inby for a distance of approximately 500 feet to the working face.

#### Roof Support and Roof Control Plan

Throughout the working section, the roof was supported by 48-inch, fully grouted rebar roof bolts. A 6-inch by 6-inch bearing plate was used with the roof bolts. At the time of the accident, the approved roof control plan required that under adverse conditions, supplemental roof supports must be installed in addition to primary support.

For supplemental support, some primary roof bolts were provided with a 17-inch by 17-inch roof mat known as a "pizza pan" in addition to the 6-inch bearing plates. The mine operator also installed bolt-to-bolt straps as supplemental supports across various portions of the mine entries. These straps are 4.5 inches wide by 14 feet in length and were installed with the 6-inch bearing plates. The roof where the accident occurred was supported in the manner shown in Appendix B.

The roof bolts in front of Fillinger and to his right did not have supplemental support. It was from this area of the mine roof from which the rock fell onto Fillinger.

#### Examinations

Pre-shift and on-shift examinations are required to be performed on the section. Records indicate the pre-shift examination was conducted between 2:00 p.m. and 2:30 p.m. by Gilbert Sada, General Mine Foreman, prior to Fillinger and his crew beginning their shift. No adverse roof conditions were reported during the examination.

The broken and unconsolidated edges of the shale roof rock could be seen and were present during the pre-shift examination. These areas were never properly supported. The examiner failed to identify and take appropriate corrective actions.

The State of West Virginia requires on-shift examinations to be conducted every two hours during the shift. Fillinger conducted on-shift examinations at approximately 3:30, 5:30 p.m., and 7:25 p.m. Glycadgis conducted another on-shift examination at 9:25 p.m. The same hazards that were present during pre-shift examination should have been identified, reported, and corrected as a result of the on-shift examinations.



### Company Investigation

Sheppard stated they conducted an investigation of the accident. However, even though company officials stated the largest rock appeared to be “about” 3 feet by 2 feet by 2 to 3 inches thick, no one had ever measured the fallen rock. In addition, the operator did not to create a sketch of the accident scene to depict the conditions present, dimensions specific to the accident scene, and landmarks. A noncontributory citation was issued to the mine operator for failing to conduct a proper investigation of the accident as required by 30 CFR § 50.11(b). Instead of performing a complete investigation, Sheppard and Blackburn filled out the company’s ‘Foreman’s Immediate Report of Accident Resulting in Injury’ form, which does not have all of the information required by 30 CFR § 50.11(b).

### Experience and Training

Fillinger had more than forty years of total mining experience. Training records indicate Fillinger received experienced miner training on December 14, 2016. He was assigned duties as a production foreman on the evening shift, including conducting examinations. Training records were reviewed and no training deficiencies were found.

At the time of the accident Fillinger held certifications as a:

- West Virginia Underground General Miner
- West Virginia Underground Foreman
- Shot Firer
- Certified Instructor

## ROOT CAUSE ANALYSIS

MSHA conducted an analysis to identify the most basic causes of the accident that were correctable through reasonable management controls. A root cause was identified that, if eliminated, would have either prevented the accident or mitigated its consequences.

Listed below is the root cause identified in the investigation and the operator's implemented corrective action to prevent a reoccurrence of this type of accident.

1. Root Cause: The mine operator failed to identify adverse roof conditions and take appropriate actions to support and/or control the mine roof where miners were required to work and travel.

Corrective Actions: The operator implemented a corrective action plan, which included installing additional roof supports on the active working section to provide the appropriate level of support and control; revising the approved roof control plan to include minimum support systems for future developments; requiring mine examiners to perform sound and vibration tests when evaluating the roof and removing loose unsupported mine roof from safe locations; and training all miners and examiners on the corrective action plan, roof control plan revisions, and adequate examinations.

## CONCLUSION

The section foreman was seriously injured when a portion of loose, inadequately supported roof rock fell, crushing him against the mine floor. Due to complications from the injuries received during the accident, the section foreman died on April 6, 2017. The accident occurred because examinations failed to identify loose, inadequately supported mine roof where miners are required to work and travel.

Signed by:

---

Brian M. Dotson  
District Manager

---

Date

## ENFORCEMENT ACTIONS

1. Section 103(k) Order No. 9064395 was issued on February 24, 2017, to CK Coal Corporation, Mine No. 5.

An accident has occurred at this operation on 02/23/2017 at 21:30 pm. This order is 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 and prevent the destruction of any evidence which would assist in the investigation of the cause and or causes of this accident. It prohibits all activity on the active 001 MMU from the section loading point to the coal faces in number 1 to 7 entries until MSHA has determined that it is safe to resume normal mining operations in the area. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or restore operations to the affected area.

2. A section 104(a) Citation No. 9064396 was issued for violation of 30 CFR § 75.202(a) issued to C K Coal Corporation.

The mine roof was not properly supported or controlled where miners were required to work and travel on the 001 MMU. On February 23, 2017, a section of loose draw rock fell from the mine roof in the #3 entry 1 crosscut inby SS 804 (on the active 001 MMU) and fell onto a miner working on the section. The miner died from these injuries on April 6, 2017. The loose section of roof was approximately 3' by 2' by 3" thick (based on company testimony). The rock falling on the miner resulted in serious injuries to the miner resulting in immediate hospitalization. Upon MSHA arrival on the 001 MMU to investigate the accident, numerous portions of loose draw rock were identified on the working section up to the approximate size of the rock involved in the accident. Each of these sections of rock was pulled down with little effort using a slate bar. The mine operator has developed a corrective action plan to include installing additional roof support on the working section to prevent reoccurrence.

3. A section 104(a) Citation No. 9064410 was issued for violation of 30 CFR § 75.360(b) issued to C K Coal Corporation.

A serious injury accident occurred at this operation on February 23, 2017, subsequently resulting in the death of a miner on April 6, 2017. It was determined during the investigation of this accident that the operator failed to conduct an adequate preshift examination of the 001-0 MMU prior to miners entering or remaining on the active working section on the evening of February 23, 2017.

Based on the operator's exam records, an examination was conducted February 23, 2017, 2:00 p.m. to 2:30 p.m., for the areas miners were required to work and travel on the active 001-0 MMU, with no adverse roof conditions reported. It was determined during MSHA's investigation of the accident, that adverse roof conditions would have been present during the time frame in which the examination was conducted.

Based on conditions cited on February 24, 2017, in MSHA citation 9064396, loose unconsolidated draw rock was present in numerous locations along the 001-0 MMU in addition to the section of loose roof involved in the February 23, 2017, fall of roof accident. The loose unconsolidated draw rock was the result of portions of thin shale roof rock which remained on the roof horizon during the mining cycle, and was never properly supported. Therefore the conditions would have been present during the time frame in which the examination was conducted.

See MSHA citation 9064396 issued in conjunction with this issuance for failure to comply with 30 CFR 75.202(a).

4. A section 104(a) Citation was issued for violation of 30 CFR § 75.362(a)(3)(i) to C K Coal Corporation.

A serious injury accident occurred at this operation on February 23, 2017, subsequently resulting in the death of a miner on April 6, 2017. It was determined during the investigation of this accident that the operator failed to identify, correct, and report adverse roof conditions which would have been present during the evening shift of February 23, 2017, when on shift examinations were conducted. The operator reported conducting these onshift examinations of the 001-0 MMU at 3:30 p.m., 5:30 p.m., 7:25 p.m. and 9:25 p.m.

Based on conditions cited on February 24, 2017, in MSHA citation 9064396, loose unconsolidated draw rock was present in numerous locations along the 001-0 MMU in addition to the section of loose roof involved in the February 23, 2017, fall of roof accident. The loose unconsolidated draw rock was the result of portions of thin shale roof rock which remained on the roof horizon during the mining cycle, and was never properly supported. Therefore the conditions would have been present during the time frame in which the examinations were conducted.

See MSHA citation 9064396 issued in conjunction with this issuance for failure to comply with 30 CFR 75.202(a).

APPENDIX A

Persons Participating in the Investigation  
(Persons interviewed are indicated by a \* next to their name)

C K Coal Corporation

\*Danny Robinette ..... Vice President/General Manager  
\*John Sheppard ..... Mine Superintendent  
\*Gilbert Sada ..... General Mine Foreman  
\*Timothy Mark Blackburn ..... Evening Shift Foreman  
\*Matt Sheppard ..... Owl Shift Foreman  
\*Mark Morrison ..... Dispatcher  
\*Jason Cantrell ..... Evening Shift Shuttle Car Operator  
\*Andrew T. Glycadgis ..... Evening Shift Shuttle Car Operator  
\*Shawn Kiser ..... Evening Shift Continuous Mining Machine Operator  
\*Thomas Simpkins ..... Evening Shift Roof Bolter  
\*Justin Whisman ..... Evening Shift Roof Bolter  
\*Steven Midkiff ..... Evening Shift Roof Bolter  
\*Raymond Johnson, Jr. .... Evening Shift Roof Bolter  
\*Gordon Mills ..... Evening Shift Scoop Operator  
\*Robert Star, Jr ..... Evening Shift Ventilation Man/ General Labor  
\*Nathan Browning ..... Owl Shift Roof Bolter  
\*Charlie Fouch ..... Owl Shift Roof Bolter  
Erwin Conrad ..... Attorney

West Virginia Office of Miners Health Safety and Training

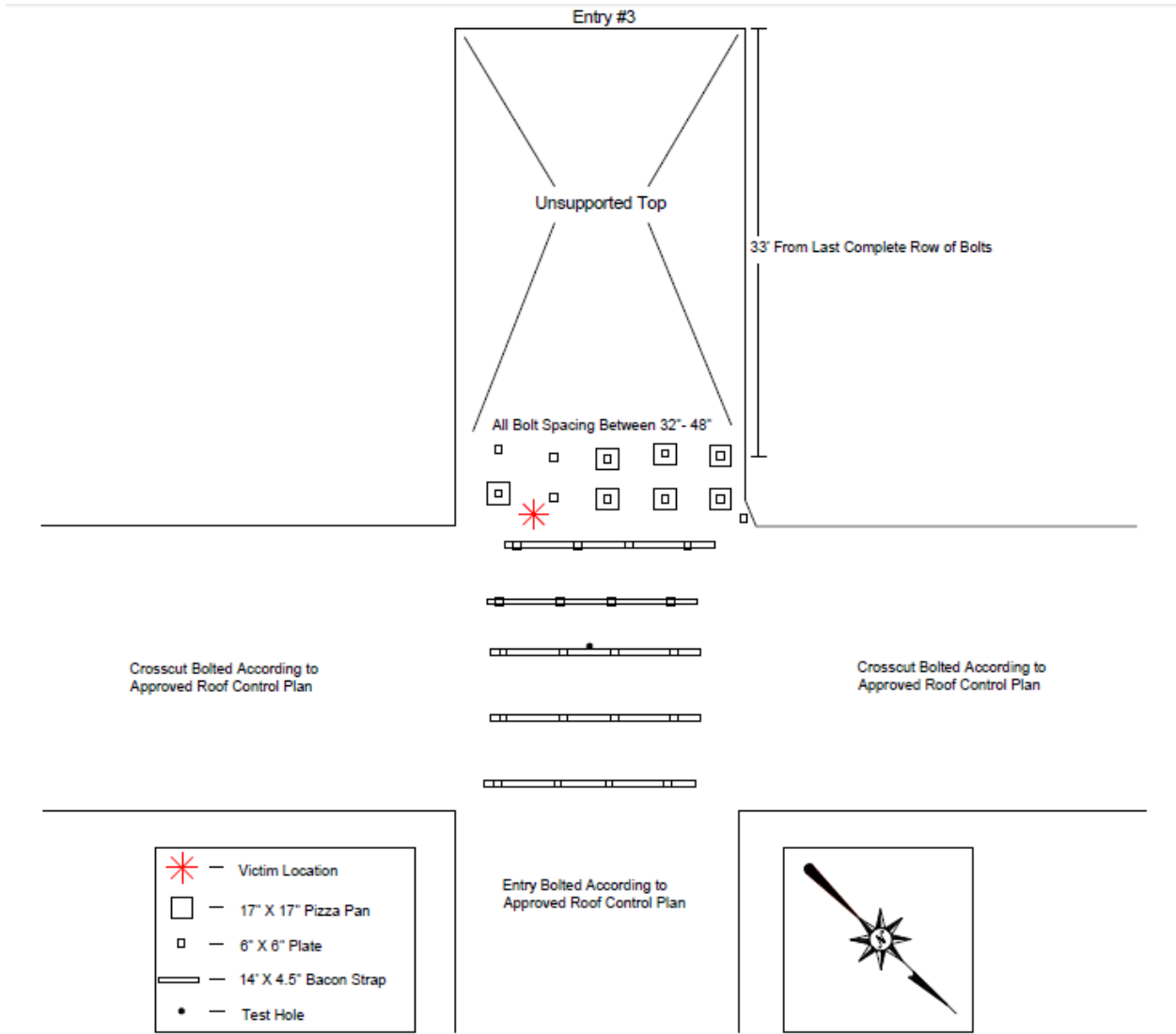
John Kinder ..... Inspector at Large  
Wayne Pauley ..... Assistant Inspector at Larger  
Randy Carter ..... Roof Control Specialist/ Accident Investigator

Mine Safety and Health Administration

Clark E. Blackburn ..... Assistant District Manager (Enforcement)  
Lawrence Mendez ..... Field Office Supervisor  
Jason D. Hess ..... Roof Control Supervisor  
Ricky O. Runyon ..... Roof Control Specialist/ Accident Investigator

# APPENDIX B

## Sketch of Accident Scene



# APPENDIX C

## Victim Information

**Accident Investigation Data - Victim Information**

**U.S. Department of Labor**  
**Mine Safety and Health Administration**



Event Number:

**Victim Information: 1**

1. Name of Injured/Ill Employee: <i>DENNIS FILLINGER</i>		2. Sex <i>M</i>	3. Victim's Age <i>62</i>	4. Degree of Injury: <i>01 Fatal</i>												
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 04/06/2017 b. Time: 16:45</i>				6. Date and Time Started: <i>a. Date: 02/23/2017 b. Time: 15:00</i>												
7. Regular Job Title: <i>049 FOREMAN</i>			8. Work Activity when Injured: <i>087 supervisor duties</i>		9. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
10. Experience a. This		Years	Weeks	Days	b. Regular	Years	Weeks	Days	c. This	Years	Weeks	Days	d. Total	Years	Weeks	Days
Work Activity:		<i>38</i>	<i>0</i>	<i>0</i>	Job Title:	<i>0</i>	<i>12</i>	<i>0</i>	Mine:	<i>0</i>	<i>12</i>	<i>0</i>	Mining:	<i>0</i>	<i>12</i>	<i>0</i>
11. What Directly Inflicted Injury or Illness? <i>083 FALLING ROOF ROCK</i>						12. Nature of Injury or Illness: <i>370 MULTIPLE INJURIES</i>										
13. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>																
14. Company of Employment: (If different from production operator) <i>Operator</i>						Independent Contractor ID: (if applicable)										
15. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input checked="" type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input checked="" type="checkbox"/> Medical Professional: <input checked="" type="checkbox"/> None: <input type="checkbox"/>																
16. Part 50 Document Control Number: (form 7000-1)						17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>										