CAI-2018-05

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Underground Coal Mine

Fatal Powered Haulage Accident
June 4, 2018

Morgan Camp Mine
Carter Roag Coal Company
Mill Creek, Randolph County, West Virginia
ID No. 46-08656

Accident Investigators

Jeffrey Channell
Coal Mine Safety and Health Inspector

Derek Bragg
Coal Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
District 3
604 Cheat Road, Morgantown, West Virginia 26508
Carlos T. Mosley, District Manager

Table of Contents

OVERVIEW

On Monday, June 4, 2018, at approximately 11:40 p.m., Ronald R. Taylor, a 43-year-old shuttle car operator with 10 years of mining experience, was seriously injured when the personnel carrier he was riding in contacted a roof-to-floor support lying in the roadway. The base of the support was propelled into the passenger compartment and struck him. The personnel carrier was travelling from the section to the surface when the accident occurred. The victim died as a result of the injuries sustained. The accident occurred because the mine operator did not maintain the roadway free of extraneous material.

GENERAL INFORMATION

The Morgan Camp Mine is located near Mill Creek, Randolph County, West Virginia. The Carter Roag Coal Company operates the underground mine in the Sewell coal seam. The mine opened in 2017 and employs 135 persons, 111 of which are underground miners working two production shifts, five days a week. The midnight shift is a maintenance shift. The mine produces 2,950 tons of raw coal per day from four mechanized mining units (MMUs). The coal is transported to the surface via a conveyor belt system. Rubber-tired diesel and battery-powered personnel carriers are used to transport miners in and out of the mine. The mine is ventilated with a blowing fan. Laboratory analysis of air samples indicated no measureable amount of methane liberation in a 24-hour period.

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

Brad Phillips…… Mine Manager
Brad Summerfield ……. General Mine Foreman
Kelvin Napier……..…. Safety Manager

Appendix A lists the persons interviewed and those participating in the accident investigation. At the time of the accident, a regular (E01) safety and health inspection was in progress. The previous E01 inspection was completed on March 21, 2018. The Morgan Camp Mine began production on October 3, 2017. The non-fatal days lost (NFDL) incidence rate for the mine for 2017 was 0 compared to the national average of 3.50 for mines of this type.

DESCRIPTION OF ACCIDENT

On Monday, June 4, 2018, Ronald R. Taylor started his shift at 3:15 p.m. Taylor was a shuttle car operator on the West Mains 2 super section which had crews on the left and right sides of the section. Taylor, who worked on the right side, entered the mine with both crews at approximately 3:20 p.m. to produce coal and perform normal duties.

Both crews completed their shift and departed for the surface at approximately 11:30 p.m. The left side crew departed first in a 10-person battery-powered personnel carrier. The right side crew followed them in a 10-person diesel-powered personnel carrier with Zechariah Wright, Section Foreman, as the driver.

At approximately 11:40 p.m., the diesel personnel carrier contacted a roof-to-floor support (see Appendix B) lying in the South Mains haulage roadway at 3 block. The support base was propelled into the passenger compartment and struck Taylor in the head. Taylor was sitting in the right front passenger seat when he was struck. After striking Taylor, the support base struck Wright on the arm and then landed on the mine floor (see Appendix C). Wright was sitting in the driver's seat when he was struck.

Zachary Haddix, Scoop Operator, was sitting directly behind Taylor. Wright stopped the personnel carrier and Haddix asked Taylor if he was ok, but Taylor was unresponsive. Taylor gained consciousness about 10 seconds later. Wright walked around the personnel carrier and determined Taylor had been struck on the right side of the head. Wright yelled to the left side crew for additional help. The left side crew was waiting in their personnel carrier at the airlock doors, approximately one block outby the scene of the accident. Wright also radioed Joshua Mathews, Shift Foreman, and asked him to call for an ambulance. Scott Sublett, Safety Technician, was outside and heard the request over the radio and called 911 at 11:48 p.m.

Nicholas Wood, Continuous Mining Machine Operator and Emergency Medical Technician (EMT), and the rest of the crew got off the personnel carrier to assist. Wood began treating Taylor. Some of the left side crew went to the surface to obtain first aid supplies. They returned along with Timothy Cogar, Outby Foreman and EMT. Wood and Cogar placed a cervical collar on Taylor and placed him on a backboard. Taylor was transported on the battery-powered personnel carrier, which arrived on the surface at approximately 12:10 a.m. Taylor was then taken to the cap lamp trailer. He was given oxygen and first aid was continued.

The Randolph County Emergency Medical Services (EMS) ambulance arrived at the mine at 12:35 a.m. and took control of Taylor. Taylor was conscious when the ambulance arrived. After evaluating Taylor, EMS requested a medical helicopter. A HealthNet medical helicopter landed at the mine site and took control of Taylor. He was transported to Ruby Memorial Hospital in Morgantown, West Virginia, at approximately 2:00 a.m. Later on this date, June 5, 2018, Taylor succumbed to the injuries sustained in the accident and was pronounced dead by Dr. Charles Whiteman, M.D. at 6:06 p.m.

INVESTIGATION OF ACCIDENT

Jeffrey Channell, Coal Mine Safety and Health Inspector, was at the mine conducting a regular inspection and was notified of the accident at 11:50 p.m. on June 4, 2018. Channell instructed the mine operator to contact the Department of Labor National Contact Center. Scott Sublett, Safety Technician, called the Contact Center on June 5, 2018, at 12:32 a.m. to notify them of the accident.

The Contact Center notified Jeffrey Maxwell, Supervisory Special Investigator. Maxwell called the mine and spoke to Channell concerning the accident. Channell issued a 103(k) order to insure the safety of persons in the mine.

The accident investigation was conducted by Mine Safety and Health Administration (MSHA) personnel in conjunction with the West Virginia Office of Miners Health Safety and Training (WVOMHST) and mine management. The investigation team traveled underground and took pictures and measurements of the scene. The mine operator asked their surveyors to create a drawing of the accident scene (see Appendix D).

Investigators asked persons having knowledge of the facts and circumstances surrounding the accident to provide written statements of what happened. Investigators conducted formal interviews on June 13, 2018, at the WVOMHST Westover, West Virginia office.

DISCUSSION

Inspection Activities of Roadway Conditions before the Accident

At approximately 4:00 p.m. on June 4, 2018, Channell and Richard Tackett, Safety Technician, entered the mine portal. They walked toward the personnel carrier charging area located at 3 block South Mains haulage. Upon arrival, Channell observed a scoop pulling a diesel-powered personnel carrier out of the mud. There was also a battery-powered personnel carrier stuck in the mud just inby. Channell determined that ruts and excessive mud in the roadway from 2 block to 4 block caused the personnel carriers to become stuck. This condition was created when heavy rainfall caused excess water to enter the portal and accumulate in the 3 block area. Channell issued safeguard notice No. 9128681, which stated:

> *The rubber tired haulage roadways at this mine are not being maintained as free as practicable from bottom irregularities and wet or muddy conditions that affect the control of the equipment. On June 4, 2018 between 2 and 4 block in the #4 entry of the South Mains #1 belt haulage roadway bottom irregularities, water and muddy conditions existed in the roadway measuring approximately 150' in length by 16 feet wide by 10 to 16 inches in depth. A diesel powered and a battery powered mantrip became stuck by these conditions and required assistance from a battery powered scoop to be freed. This is a notice to provide a safeguard requiring that the rubber tired roadways at this mine be*

maintained free of bottom irregularities, debris, and wet or muddy conditions that affect the control or prevent passage of the rubber tired equipment.

At 9:45 p.m., Channell arrived at 4 block to conduct a follow-up on the roadway safeguard issued earlier in the shift. He observed Mathews, the shift foreman, using a scoop to remove the mud and ruts. Mathews had already removed several loads of mud and other roadway material and put down gravel. As a result, personnel carriers could easily travel through the roadway without getting stuck.

Accident Site

When investigators arrived at the accident scene, they found that the haulage roadway repair work had been completed. However, the roof-to-floor support installed under the outby end of a beam at 3 block was missing. The top of this support was found approximately 7 feet from where it had been installed and the base was located next to the personnel carrier. The roadway condition at the time of the accident and original location of the roof-to-floor support are shown in Appendix E. Investigators were not able to determine what caused the roof-to-floor support to fall into the roadway.

Roof Control

The roof control plan approved on August 29, 2017, required the installation of the beams with roof-to-floor support. Surface cracks were encountered during initial mine development which left separations in the roof. In compliance with the roof control plan, steel beams were bolted to the mine roof and the roof-to-floor supports were placed under the beams to help support the roof. These additional supports were installed on four (4) foot centers. Longer beams were used to support crosscut openings.

Diesel Personnel Carrier

The ten-person diesel personnel carrier was inspected and function tested during the investigation. No violations were observed.

Training Records

William K. Roberts, MSHA Training Specialist, reviewed the training records. Taylor had 10 years of mining experience. He was employed at this mine on April 14, 2018, as a shuttle car operator. He received comprehensive experienced miner training on April 14, 2018. His required task training was up-to-date. A random sample of other miner training records, including Wright's diesel personnel carrier training, was reviewed and was in compliance with 30 CFR § Part 48.

ROOT CAUSE ANALYSIS

MSHA conducted an analysis to identify the most basic cause or 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 during the analysis and the corresponding corrective actions which were implemented to prevent a recurrence of this type of accident.

Root Cause: The mine operator did not maintain the haulage roadway free of extraneous material.

Corrective Actions: All extraneous material was removed from the haulage roadway. The mine operator developed and implemented a policy to secure roof-to-floor supports, located in haulage roadways, to the ribs. This is designed to prevent the supports from becoming dislodged and lying in the haulage roadway (see Appendix F). The miners were trained in this new policy.

CONCLUSION

On Monday, June 4, 2018, at approximately 11:40 p.m., Ronald R.Taylor, a 43-year old shuttle car operator with 10 years mining experience, was seriously injured when the personnel carrier he was riding in contacted a roof-to-floor support lying in the roadway. The support was propelled into the passenger compartment and struck him. The personnel carrier was travelling from the section to the surface when the accident occurred. The victim died as a result of the injuries sustained.

The accident occurred because the mine operator did not maintain the roadway free of extraneous material.

Signed by:

_____ _____

Carlos Mosley Date
District Manager

ENFORCEMENT ACTIONS

1. A Section 103(k) Order No. 9128334 was issued to Morgan Camp Mine, Carter Roag Coal Company. I.D No. 46-08656.

   At approximately 11:40 p.m. on June 4, 2018, this mine experienced an accident with potentially life threatening injuries to a miner along the south mains haulroad between 2 and 4 block. This order is issued to assure the safety of persons along this roadway.

2. A 314(b) safeguard notice was issued to Carter Roag Coal Company, Morgan Camp Mine, pursuant to 30 CFR § 75.1403.

   On June 4, 2018, a serious accident occurred at this coal mine when a diesel personnel carrier ran over a roof-to-floor support, causing it to enter the passenger compartment of the personnel carrier and strike a miner who was a passenger. The accident occurred between 2 and 3 blocks in the No. 4 heading of the South Mains 1 (haulage roadway). Extraneous material present in the active roadways utilized by rubber-tired mobile equipment including personnel carriers, scoops, and shuttle cars, creates a hazard where the equipment operator, passengers, or bystanders can be struck by the material that is contacted by the mobile equipment and could cause serious injury. This is a Notice to Provide Safeguard requiring all off-track haulage roadways where mobile equipment is operated to be maintained free of extraneous materials which could be contacted by the mobile equipment and cause injury to the equipment operators or other miners. These extraneous materials include, but are not limited to, wooden posts and planks, roof-to-floor supports, roof bolts, roof straps, metal piping and beams, conveyor belt structures, conveyor drive structures, and conveyor takeup structures.

APPENDIX A

Persons Participating in the Investigation

(Persons interviewed are indicated by a * next to their name)

Carter Roag Coal Company

Brad Phillips…….……..…… Mine Manager
Brad Summerfield…….....General Mine Foreman
Kelvin Napier…….…...Safety Manager
Scott Sublett.……...Safety Technician
Don Jones…….....Vice President of Safety
*Joshua Mathews…….……..……..…Shift Foreman
*Zechariah Wright……..……..…….Section Foreman
*Timothy Cogar……Outby Foreman/EMT
*Ernest Cunningham…….……...…….Section Foreman
*Richard Tackett…….…….……Safety Technician
*Jameson Silmon…….……..Electrician
*William Varner…….……..Scoop Operator
*Charles Ford…….…….…Apprentice Electrician
*Bruce Payne……..…..……Shuttle Car Operator
*Mark Champ…..……..…..Shuttle Car Operator
*Zachary Haddix…..……...……Scoop Operator
*Justin Pritt…….……..……Roof Bolter
*Thomas "TJ" Gray…….…..……..Roof Bolter
*William Haddox……....Shuttle Car Operator
Nicholas Wood…….Continuous Mining Machine Operator/EMT

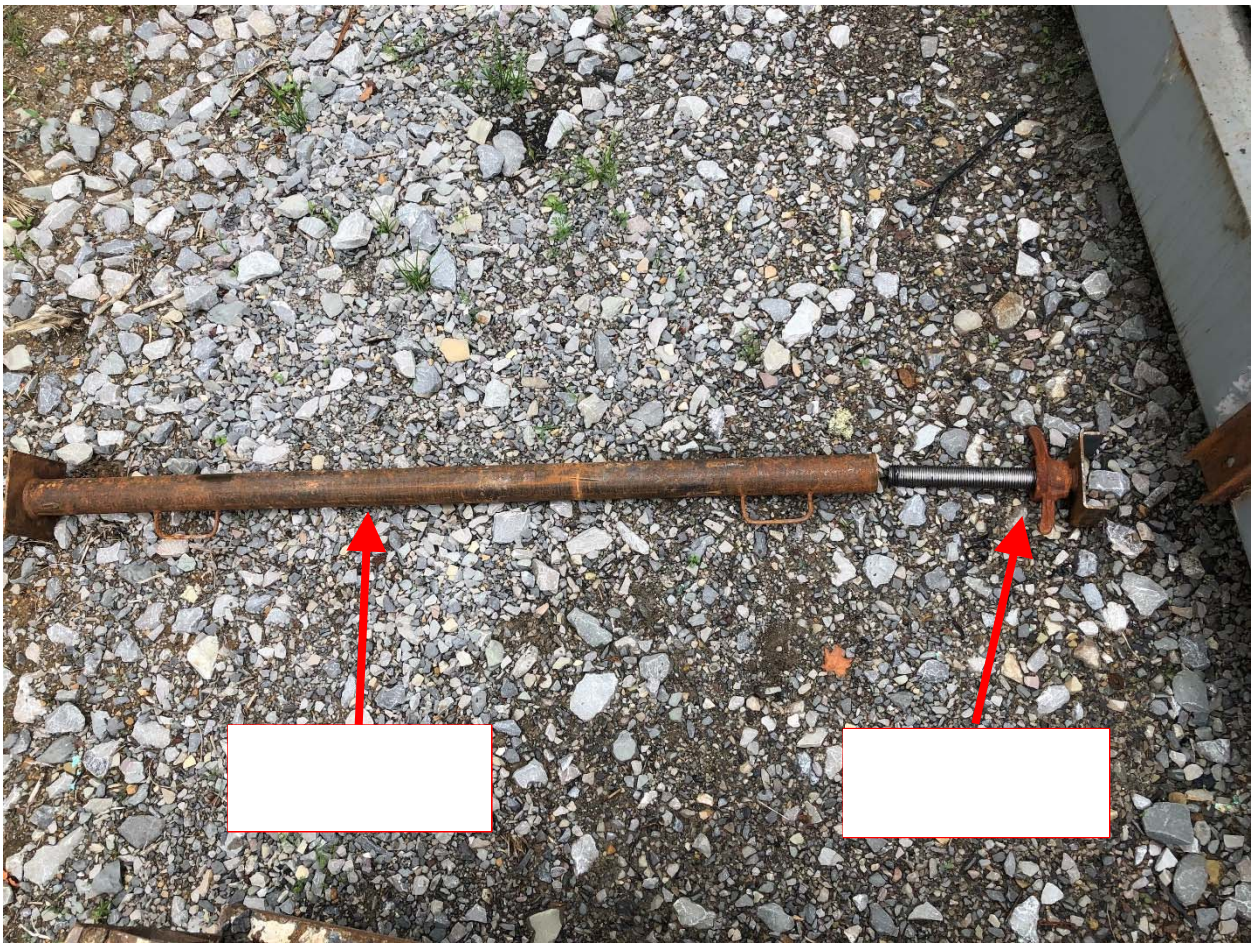
West Virginia Office of Miners Health Safety & Training

Jeff Bennett…….....District Inspector
Greg Norman……..……..…….....Director
Ed Peddicord……...……..Inspector at Large
Nathan Sharp……..……District Inspector
Brent Colvin……...…….District Inspector
Allen Nestor……...……District Inspector
Barry Koerber……...……...……..Attorney

Mine Safety and Health Administration

Jeffrey Channell ....……..…….Coal Mine Safety and Health Inspector
Derek Bragg……..…… Coal Mine Safety and Health Inspector
Michael Stark ..……Staff Assistant
William K. Roberts……...……..MSHA Training Specialist

APPENDIX B
Photograph of a Roof-to-Floor Support

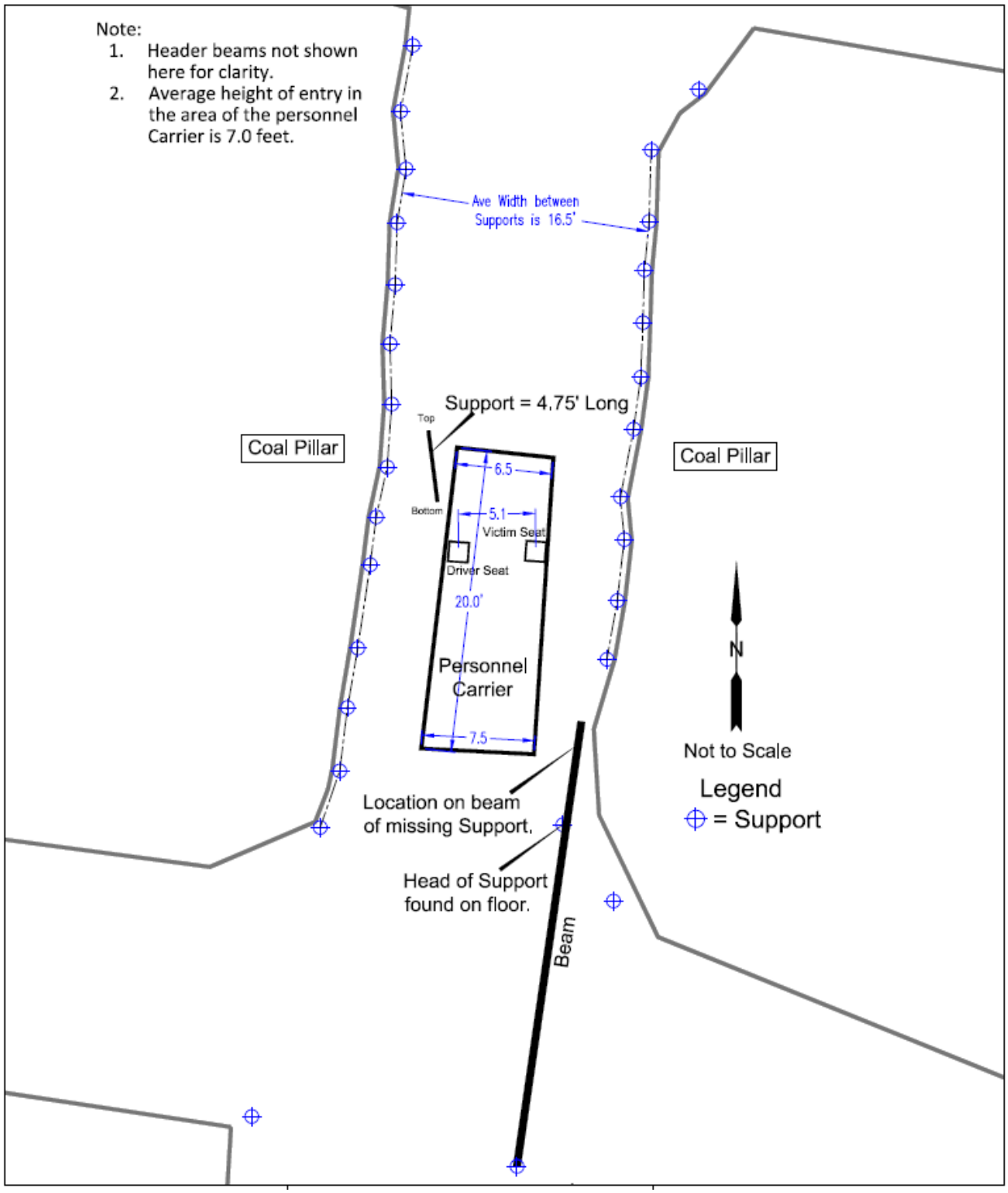


APPENDIX C

Accident Scene Photograph - Diesel Personnel Carrier and the Roof to Floor Support.

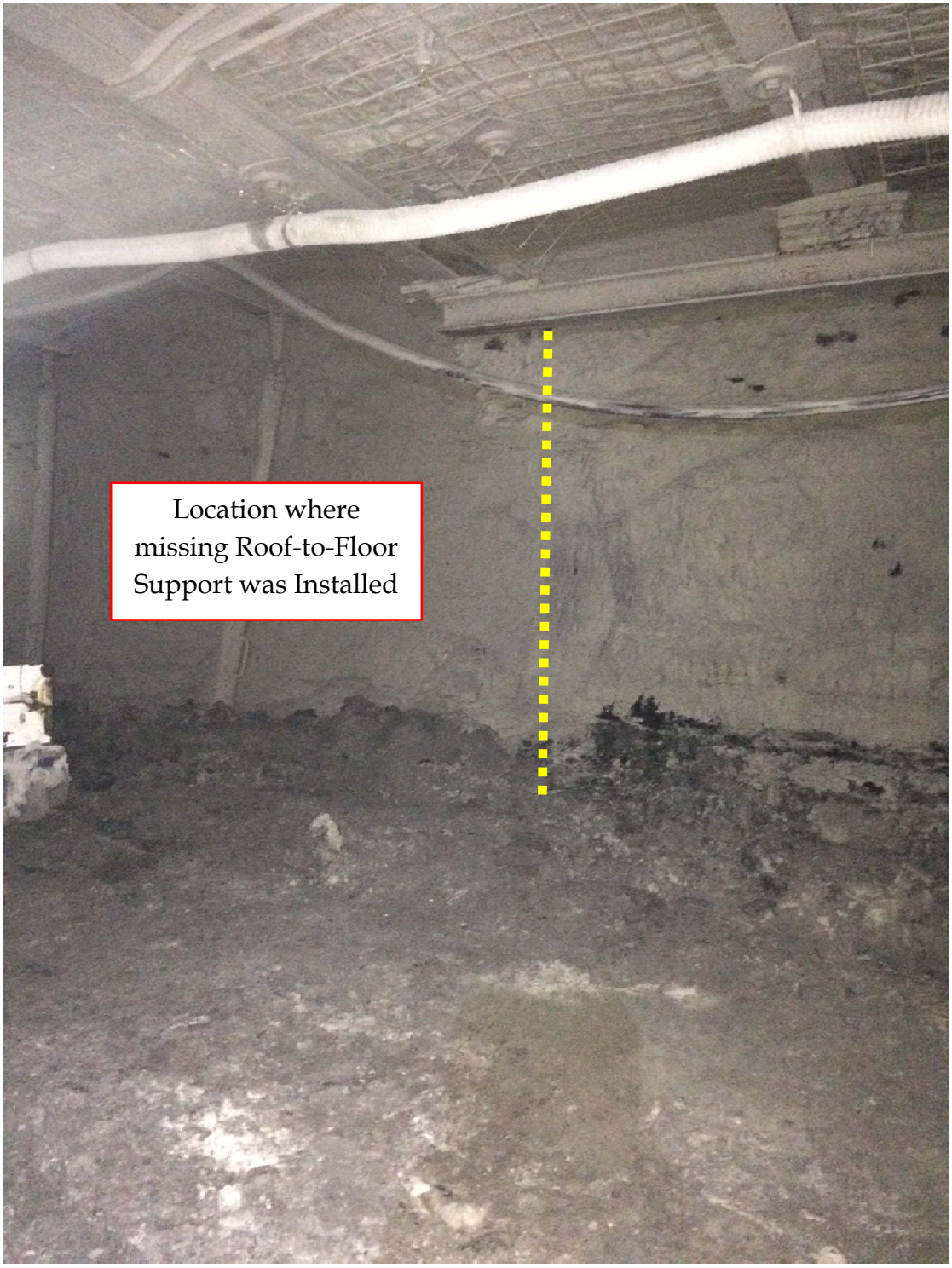
APPENDIX D

Drawing of the Accident Scene.



APPENDIX E

Photograph of Accident Scene



APPENDIX F

Photo of Supports that were Secured after the Accident

APPENDIX G

Victim Information

Accident Investigation Data - Victim Information
Event Number: 6 2 7 8 6 5 2

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

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Degree of Injury:
Ronald R. Taylor	*M*	*43*	*01 Fatal*

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 06/05/2018 b.Time: 18:06	*a. Date: 06/04/2018 b.Time: 15:15*

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
050 Shuttle car operator	*062 Operate/ride in/ride on mantrip*	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	*10*	*0*	*0*	b. Regular Job Title:	*1*	*0*	*0*	c: This Mine:	*0*	*7*	*2*	d. Total Mining:	*10*	*0*	*0*

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
108 Mine jeep/car; kersey/jitney/S&S tractor	*370 Multiple injuries*

13. Training Deficiencies:
Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

14. Company of Employment: (If different from production operator)
Operator
Independent Contractor ID: (if applicable)

15. On-site Emergency Medical Treatment:
Not Applicable: | First-Aid: X | CPR: | EMT: | Medical Professional: | None:

16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim:

Victim Information: