

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

UNDERGROUND COAL MINE

Powered Haulage Accident  
June 1, 2005

North River #1 Underground Mine  
The Pittsburg & Midway Coal Mining Co.  
Tuscaloosa County, Alabama  
I.D. No. 01-00759

Accident Investigators

John R. Smoot  
Mine Safety and Health Inspector

Harry Wilcox  
Mine Safety and Health Inspector

Ronny E. Jones  
Education and Training Specialist

Kevin L. Hedrick  
Electrical Engineer

James Conaway  
Electrical Specialist

Originating Office  
Mine Safety and Health Administration  
District 11  
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Richard A. Gates, District Manager

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## OVERVIEW

At approximately 11:10 p.m. on Wednesday, June 1, 2005, a 42-year old electrician was pulled into the pick breaker of the Oldenburg Stamler Belt Feeder Breaker (feeder), sustaining injuries that resulted in his death. The victim had worked at the North River #1 Underground Mine (North River Mine) for 3 years and 8 weeks.

The accident occurred because existing written procedures that prohibit work on machinery unless power is removed and the machinery is blocked against motion were not followed.

## GENERAL INFORMATION

The North River Mine, I.D. No. 01-00759, is operated by the Pittsburg & Midway Coal Mining Co., whose parent company is ChevronTexaco Global Energy, Inc. The mine is located approximately 10.3 miles south of Berry, Alabama, on County Road 63. The mine employs, on average, 360 persons and produces approximately 3.5 million tons of bituminous coal annually from the Pratt seam. The mine has one retreating longwall unit and two continuous miner development units. The longwall unit normally operates three shifts per day, seven days a week. The continuous miner units normally operate two shifts per day, with one maintenance shift. The miners are represented by the United Mine Workers of America (UMWA).

The principal officers for the mine are:

Mark G. Premo..... Mine Manager  
Steve O. Green.....Manager of Safety and Security

A safety and health inspection was completed at the mine on March 31, 2005, and another was ongoing at the time of the accident. The Non-Fatal Days Lost (NFDL) injury incidence rate for North River Mine for the previous quarter was 5.81 compared to the national NFDL rate of 5.17.

## DESCRIPTION OF THE ACCIDENT

At approximately 9:55 p.m., on Wednesday, June 1, 2005, the midnight shift West 2 section crew entered the mine at the Tyro Creek portal. Robert Patilla (victim) was assigned as the section electrician on the West 2 section. The crew traveled by man buses to the section and arrived on the section at approximately 10:45 p.m. The crew went to the section dinner hole while Patrick Sullivan, section foreman, went to examine the faces. Sullivan returned to the dinner hole, briefed the crew concerning conditions, and made work assignments for the shift.

The crew left the dinner hole and went to their assigned areas. Patilla talked to Sullivan about repairs to the outby roof bolting machine. Patilla then walked to the power center in the #2 entry and closed the circuit breakers to energize the section equipment.

Patilla then went to start the feeder. However, brattice cloth was wrapped around the pick breaker. While attempting to remove the brattice cloth, the pick breaker was energized, pulling Patilla under the pick breaker. Sullivan found

him in the feeder shortly after 11:10 p.m. and shut the pick breaker off using the emergency stop button.

At this time a ram car pulled through the drop curtain. Sullivan flagged the car to stop, told the operator to go get the crew members, and that Patilla was in the feeder, caught between the pick breaker and the floor. Sullivan then went to the power center and shut off the power to the feeder. He then called the motor pit and told them what had happened and that an ambulance was needed.

Randall Denney, outby foreman, heard the call for help and went to the West 2 section. Denney arrived at the section and went to the feeder, checked Patilla and did not detect any vital signs. Patilla was removed from the feeder, transported to the surface, and turned over to waiting paramedics. He was pronounced dead at 2:30 a.m. by a representative of the Tuscaloosa County Coroner, investigator Gerald L. Howard.

### **INVESTIGATION OF THE ACCIDENT**

At approximately 12:30 a.m. on June 2, 2005, Terry Langley, MSHA Coal Mine Safety and Health Supervisor, was notified by Gary Willoughby, safety supervisor at the North River Mine, of the accident. An order pursuant to 103(k) of the Federal Mine Safety & Health Act of 1977 was issued to ensure the safety of the miners until an investigation could be conducted. The accident investigators made a physical examination of the accident scene, interviewed employees, and reviewed work conditions relative to the accident. MSHA conducted the investigation with the assistance of state investigators, mine management, miners' representatives, and employees. Fourteen persons were interviewed during the investigation.

## DISCUSSION

### Feeder

The feeder, an Oldenburg Stamler Belt Feeder Breaker, used a conveyor chain to transfer coal from ramcars to the conveyor belt. The feeder was also equipped with a pick breaker, a rotary drum with bits that was designed to break up oversized material before loading onto the belt. In the normal operating mode, the pick breaker would have to be energized before the conveyor chain could be started. The conveyor chain would then start when a photocell was activated. The start switches for the pick breaker were located on either side of the feeder and were the only switches that could start the pick breaker.

The investigators examined the feeder and pick breaker installation to determine how the pick breaker became energized:

- Independent start-up: The investigators conducted tests to determine if the pick breaker could have started without external influence, i.e. someone turning the power on. No mechanical or electrical deficiencies were detected that would cause the pick breaker to start. Examination and testing indicated that the pick breaker could only be started by actuation of a start button.
- Accidental start-up, at the feeder: The pick breaker could only be started at the feeder by one of two switches located at either sides of the feeder. Because investigators ruled out mechanical or electrical deficiencies, the pick breaker was evidently started by someone at the feeder.

### Physical Factors

The overall floor to roof height where the feeder was located was approximately 6 feet. With sideboards, the overall feeder height was approximately 5.5 feet.

A box-cutter and blade identified as Patilla's were found in the feeder.

The feeder was in the normal operating mode. Due to the position of the material (boxes, loose coal) on the conveyor chain and in the feeder, it was evident that the conveyor chain had not been activated.

## **Work History and Training**

Robert Patilla started work at this mine on April 1, 2002, as an inexperienced miner. Patilla was promoted to Electrical Trainee, Grade 2 on April 21, 2003. He bid to the 10 p.m. to 6 a.m. (midnight) shift on February 9, 2004, which is the position he held at the time of the accident. Records indicate Patilla had received all required training. No training deficiencies were found that would have contributed to the cause of the accident.

## **Accident Scenario**

While beginning work at the start of the shift, Patilla closed the circuit breakers to energize all of the section equipment. He then traveled to the feeder to check the feeder and start the pick breaker. Seeing the brattice cloth wrapped around the pick breaker, Patilla apparently decided to cut the cloth off prior to starting the pick breaker. Being positioned in the location of the pick breaker, Patilla could not be seen by anyone approaching the feeder unless they were coming directly from the #1 face area. Unaware that Patilla was in the feeder, someone started the pick breaker from one of the two switches located at the sides of the feeder, which pulled the victim under the breaker. See Appendices C and D.

Evidence supporting this scenario includes:

- Patilla was working in the feeder without the power being removed at the section power center. His box-cutter and an old blade were found laying beside him.
- A person kneeling or bending down at the pick breaker, could not be seen from the side of the feeder where the start button was located or from anyone approaching the feeder from the cross cut between the #1 and #2 entry. See Appendix B.
- All persons interviewed stated they saw no one in the area of the feeder prior to the accident.
- The conveyor chain had not been activated.
- MSHA Technical Support and District 11 electrical inspectors tested the electrical components on the feeder and found nothing wrong with the circuits or the switches that would have caused the pick breaker to start up independently.

## ROOT CAUSE ANALYSIS

An analysis was conducted to identify the basic cause of the accident that was correctable through reasonable management controls. During the analysis, a causal factor was identified that, if eliminated, would have prevented the accident.

1. Causal Factor: Maintenance work was conducted on a piece of machinery that was not blocked against motion and while the power was not off. While management had written procedures that required power to be removed and machinery blocked against motion, these procedures were not followed.

Corrective Action: The entire workforce has been retrained in the procedures for removing the power and blocking the machine against motion prior to maintenance or work being performed on the machinery. Management should periodically confirm that the procedures are being followed. Additionally, delayed startup and alarms have been installed on the section feeders.

## CONCLUSION

On Wednesday, June 1, 2005, at approximately 11:10 p.m., Robert Patilla was fatally injured as he was removing brattice cloth from the feeder pick breaker. The pick breaker, which was not blocked against motion, was started, pulling Patilla into the rotating drum. Management's written procedure, which prohibits work on machinery unless power is removed and the machinery is blocked against motion, was not followed.

**Approved by:**

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Richard A. Gates  
District Manager

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Date

## ENFORCEMENT ACTIONS

**§103(k) Order No. 7684186:** Issued to the Pittsburgh & Midway Coal Mining Company, North River #1 Underground Mine.

A fatal accident has occurred on the West 2 section at this operation at approximately 11:15 p.m. This order is issued to protect the health and safety of the miners until an accident investigation can be completed.

**§104(a) Citation No. 7684188:** Issued to the Pittsburgh & Midway Coal Mining Company, North River #1 Underground Mine, for a violation of §75.1725(c).

A fatal accident occurred on June 1, 2005. The results of the investigation revealed that power was not removed and the machine was not blocked against motion prior to maintenance or repair on the Oldenburg Stamler Feeder, serial number 13713, located on the West 2 section.

**APPENDIX A  
Persons Participating in the Investigation**

**THE PITTSBURGH & MIDWAY COAL MINING CO.  
NORTH RIVER #1 UNDERGROUND MINE**

<u><b>Name</b></u>	<u><b>Title</b></u>
Mark Premo.....	General Mine Manager
Steve O. Green.....	Manager of Safety and Security

**UNITED MINE WORKERS OF AMERICA**

<u><b>Name</b></u>	<u><b>Title</b></u>
Daryl Dewberry.....	Vice President, District 20
Mike Clements.....	Field Representative, District 20
Bill Abbott .....	President, Local 1926
Rodney McGough.....	Safety Committee

**ALABAMA DEPARTMENT OF INDUSTRIAL RELATIONS  
MINE SAFETY AND INSPECTION**

<u><b>Name</b></u>	<u><b>Title</b></u>
Gary Key.....	State Inspector
Don Keith.....	Chief, Mine Safety Inspector

**MINE SAFETY AND HEALTH ADMINISTRATION**

<u><b>Name</b></u>	<u><b>Title</b></u>
Johnny P. Calhoun.....	Supervisory Mine Safety and Health Specialist

John R. Smoot ..... Mine Safety and  
Health Inspector

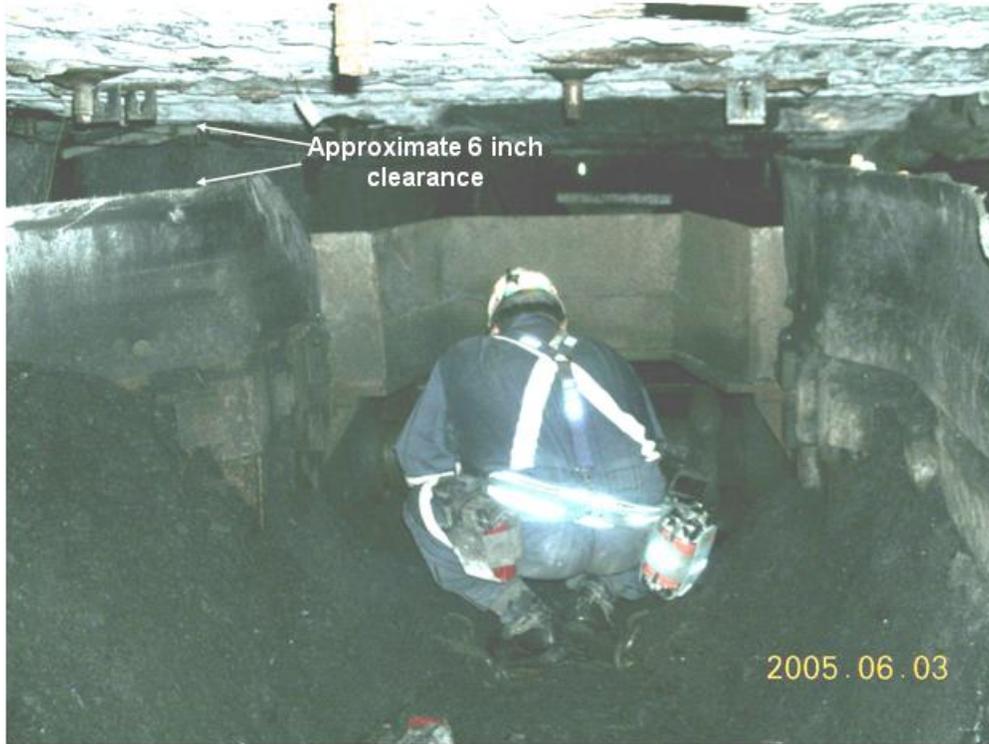
Harry Wilcox..... Mine Safety and  
Health Inspector

James Conaway..... Electrical Specialist

Ronny Jones..... Education and  
Training Specialist

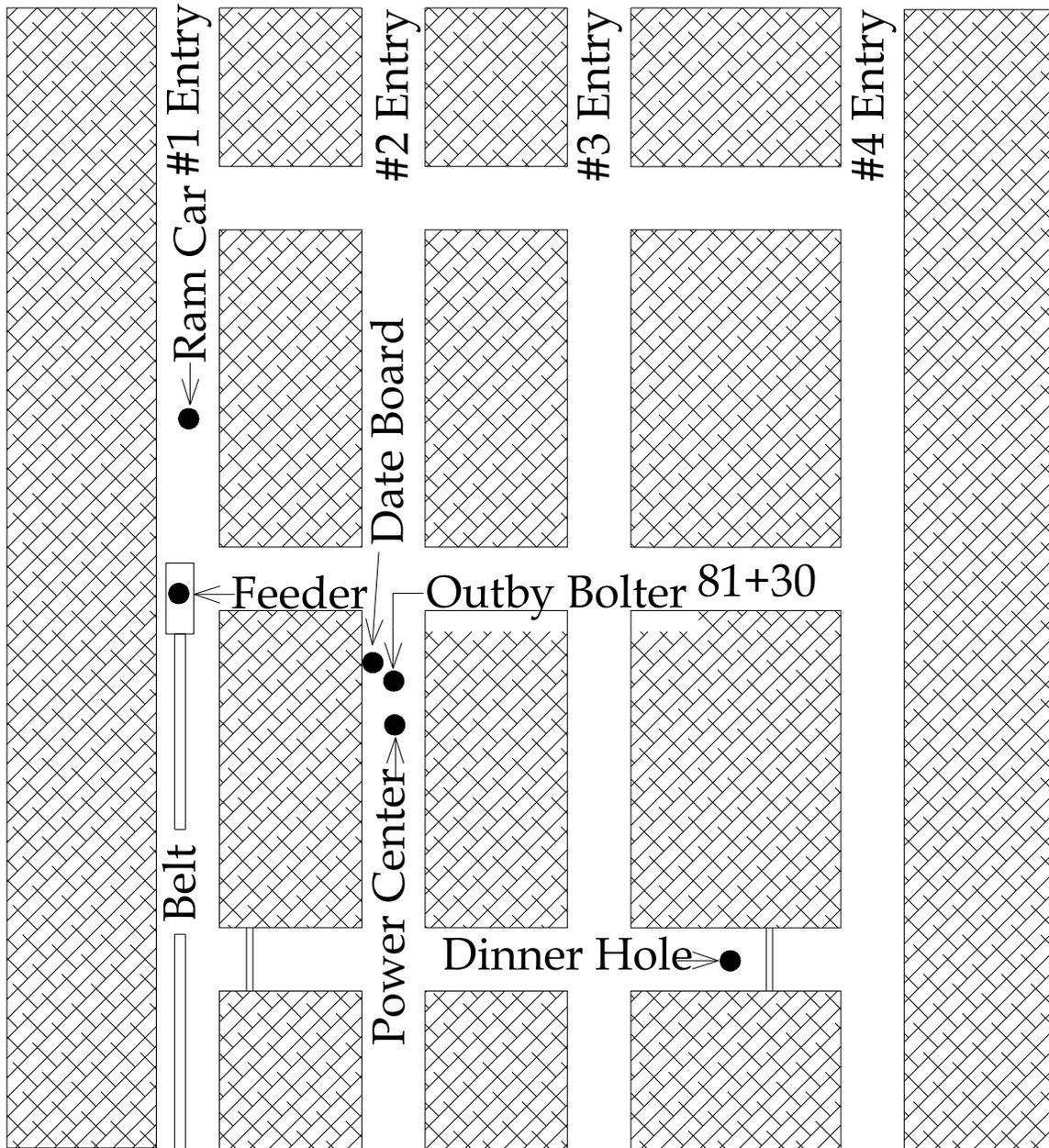
Kevin Hedrick..... Electrical Engineer  
Triadelphia, WV.

**APPENDIX B**  
**Photograph of feeder with person inside**



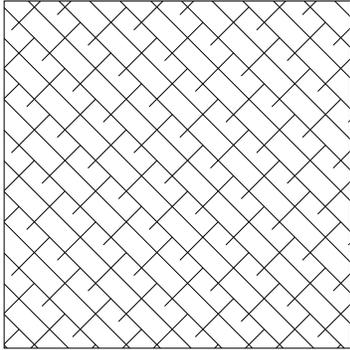
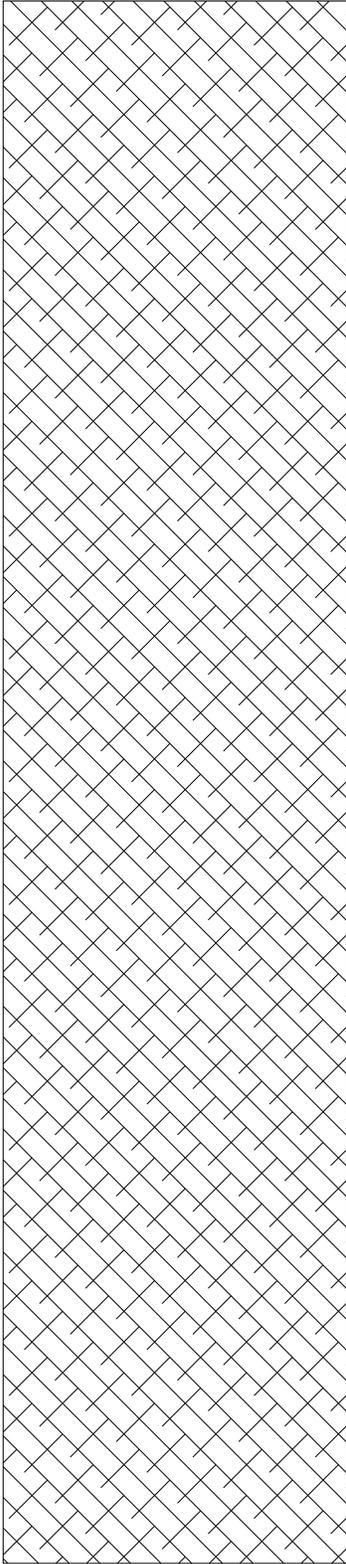
APPENDIX C  
Section Layout

West 2 Section Faces Approximately 100 feet Inby

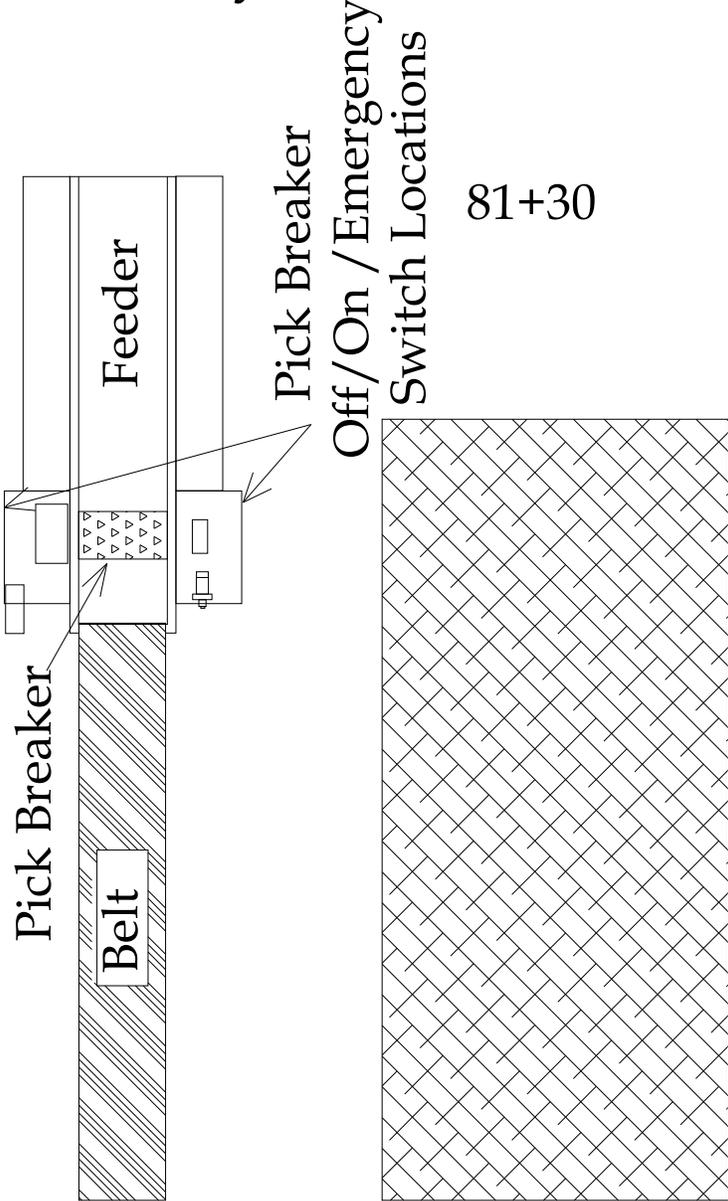


Not To Scale

APPENDIX D  
Section Feeder



#1 Entry



Not To Scale