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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
February 17, 2006

Mettiki Mine
Mettiki Coal LLC
Oakland, Garrett County, Maryland
ID No. 18-00621

Accident Investigators

Michael P. Stark
Civil Engineer

Michael Brooks
Coal Mine Safety and Health Inspector, Ventilation

Originating Office
Mine Safety and Health Administration
District 3
604 Cheat Road
Morgantown, West Virginia
Kevin G. Stricklin, District Manager

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OVERVIEW

On Friday February 17, 2006, at approximately 9:30 pm, Willard J. Miller, a 35-year old roof bolting machine operator with five years mining experience, was fatally injured while operating a diesel-powered locomotive during a longwall move. The locomotive he was operating struck a parked lowboy rail car that was loaded with a longwall shield. The victim was crushed between the locomotive control panel and the tip of the longwall shield, which projected past the end of the lowboy.

The direct cause of the accident was the method in which the longwall shield was carried on the low-boy, which permitted the load to extend beyond the limits of the car and into the roadway where it could be contacted by other vehicles.

GENERAL INFORMATION

The Mettiki Mine is an underground coal mine, owned and operated by Mettiki Coal LLC, which is a subsidiary of Alliance Resource Partners LLC. The mine is located in Oakland, Garrett County, Maryland. Coal is mined from the 8 ½-foot thick Freeport coal seam on one advancing continuous mining machine section and one retreating longwall section.

The Mettiki Mine employs 108 underground personnel and 6 on the surface. The average production is approximately 23,000 tons/day. The mine typically operates 8 hours per shift, 3 shifts per day, and 5 days per week schedule. The mine is near the end of its mining life, with two longwall panels, located near the drift openings, left to finish the mine. Several continuous mining machine units and employees had been reassigned to a nearby mine, also operated by Mettiki Coal LLC.

Coal is removed from the mine by a belt conveyor system. Diesel-powered haulage equipment, including both rubber-tired and track-mounted vehicles, is used to transport materials and personnel underground. The mine is accessed by drift openings into a steeply inclined portion of the coal seam. A hoisting facility, located on the surface and similar to a slope hoist, is used to assist track-mounted haulage equipment through the initially steep portion of the mine (ranging from 4% to 16% grade).

At the time of the accident, the longwall was being removed from the 46 Panel teardown room and moved to the 47 Panel setup room (see Appendix B). Shields were loaded on track-mounted low-boy carriers in the 38 Butt track entry and moved in the E-1 Submains, with the assistance of a diesel-powered helper locomotive, to the 66 Break spur. The 66 Break spur consisted of two lines of track: a loaded track and an empty track (see appendix C). Here, the trips were hooked to the mine hoist and raised to the #2 Submains, where they were moved by locomotive to the setup room located at the inby end of 39 Butt entries. The hoist was also used to return the trips of locomotives and empty cars to the 66 Break spur.

The principle officers for the Mettiki Mine are:

Dwight Kreiser.....Manger of Operations
Al Smith.....Manager of Underground Operations
Jody Theriot.....Manager of Safety and Human Resources
Terry Savage.....Safety Director

The last regular inspection of this operation was completed on December 30, 2005. A regular inspection was ongoing at the time of the accident. The Non-Fatal Day Lost (NFDL) incident rate for the month prior to the accident was 6.21 and 4.26 for calendar year 2005 at the Mettiki Mine. The average for the nation's underground coal mines was 5.02.

DESCRIPTION OF THE ACCIDENT

On Friday, February 17, 2006, Willard J. Miller (roof bolting machine operator and victim) started his shift at approximately 3:00 p.m.. He was assigned to operate the #7 Motor (Jeffery Diesel Locomotive, Model # 15 HIE) during the longwall move. Miller's assignment during past longwall moves included similar duties. This was the second day that his shift had worked on the longwall move. However, before hoisting longwall shields could begin on this shift, several trips of supplies needed to be delivered to the teardown area.

Later that evening, three trips loaded with longwall shields were parked in the 66 Break spur loaded track, waiting to be hoisted to the #2 Submains. Each of these trips consisted of a locomotive, followed by a single low-boy car that was loaded with a longwall shield. The shields were positioned with their tips pointing away from the locomotive, extending beyond the back of the low-boy car. The locomotives were connected to the cars at the end opposite the operator's deck, which placed the locomotive operators at the leading end of each trip. The first locomotive in line was operated by Steve Raider, the second by Phil Saville, and the third (#7 Motor) by Miller. Ricky Brandau was operating an empty locomotive trip that had just been dropped into the area. The helper locomotive, operated by Jason Kelley, was parked in the loaded track near the E1 Submains switch. Kelley helped Brandau supply his locomotive with sand as Raider positioned his trip for hoisting.

At approximately 9:30 p.m., Kelley began walking toward his locomotive. After Kelley cleared Saville's trip, Saville moved his locomotive forward, intending to stop about 5 feet from the switch in the hoist entry, leaving room for the next empty trip to pass. As Saville started to move his trip, Kelley heard Miller release his brakes. Miller was standing in his operator's compartment, facing the rear of his trip (toward Kelley and away from Saville) as he slowly followed Saville. When Saville stopped, Miller's locomotive continued forward, running into the trailing end of Saville's trip. Miller's windshield first struck the longwall shield tip, which extended from Saville's trip. Miller's locomotive continued forward for 67 inches before stopping. As he passed beneath the shield tip, Miller was caught between the shield tip and his locomotive control panel.

Kelley, who was still walking toward his locomotive, heard the sound of Plexiglas breaking. Unsure of the situation, he turned around and walked back toward Miller. Saville also heard the breaking Plexiglas and moved his locomotive farther forward. When Kelley reached Miller's trip, he stepped onto the low-boy and looked over the shield (see Appendix D). He observed Miller lying between the locomotive and the longwall shield. Kelley ran to the operators' side of Miller's locomotive, set the air brake and asked Saville to move forward to remove the shield tip from the victim.

Kelley then radioed for help. Perry Mercure, Motor Crew Coordinator, heard the call and was the first EMT at the scene. He found the victim slouched down in the operator's chair. Mercure checked for vital signs, found none, and started administering Cardio Pulmonary Resuscitation (CPR). The victim was then removed from the locomotive. William Cain, supervisor in charge of the longwall teardown, heard the radio call and traveled to the scene via a diesel powered Hummer. The miners at the accident scene, including Kelley and Brandau, went to get the EMT

supplies and the Automated External Defibrillator (AED) located near 4 Break in the E-1 Submains. The victim was transported outside, accompanied by Mike Former, EMT, Butch Tasker, EMT, Sencil Brown, former EMT, and Doug Corbin. Brandau chained both locomotives down in place and everyone proceeded outside. The victim arrived outside at 9:55 p.m. The Ambulance arrived at 10:05 p.m. and left for the helicopter pad at 10:15 p.m. He was pronounced dead at 10:34 p.m.

INVESTIGATION OF THE ACCIDENT

At approximately 10:02 p.m. on Friday, February 17, 2006, Jody Theriot, Manager of Safety and Human Resources for Mettiki Mine, notified Kevin G. Stricklin, District Manager that a potentially fatal powered haulage accident had occurred. Stricklin dispatched investigators to the scene. A 103(k) order was issued to ensure the safety of persons at the mine until an investigation of the accident scene could be completed. Preliminary information was gathered from management, interviews were conducted with five persons, and then the accident scene was examined.

On Saturday February 18, 2006 MSHA examined and tested both the victim's locomotive and the locomotive that was operated by Saville, which was connected to the load that the victim contacted. Additional interviews were conducted on February 24, 2006.

DISCUSSION

The accident scene was surveyed and the rail grade in the affected area was calculated. The slope in the entry ranged from 2.5% to 3.2% (see Appendix F). Motormen interviewed stated that they believed that this area was nearly flat, and that a locomotive pulling a longwall shield would not drift forward. However, the survey confirmed that the part of the track where the victim's trip started and eventually stopped dipped in the direction of travel. During the investigation, the victim's trip was repositioned to its parked location prior to the accident. When the air brake was released, the loaded trip accelerated forward, reaching a sufficient momentum to result in the accident without engaging the locomotive engine. A mechanical inspection of the locomotive found no mechanical defects that could have contributed to the accident.

Mercure stated that he pulled a fresh rub of snuff (smokeless tobacco) out of the victims' mouth to initiate CPR. An open can of smokeless tobacco was spilled in the operator's deck of the victim's locomotive. This indicated that the victim may have been attempting to close or stow the can of tobacco at the time of the accident.

The operator's policy prohibited persons from moving haulage equipment and their loads while persons are standing or traveling adjacent to motor and load where they can be contacted. Miners and mine management demonstrated familiarity with this policy and confirmed that it had been discussed during meetings. Kelley had just walked by the victim's trip prior to the motorman releasing his brakes; it could be possible that the victim was watching to ensure that the load did not strike Kelley. A review of the training records did not reveal any deficiencies.

ROOT CAUSE

A root cause analysis was conducted and the following were identified.

Root Cause: An effective procedure was not in place to protect miners from hazards during transportation of items such as longwall shields. The longwall shields were loaded on the low-boys in a manner that permitted the tip of the shield to overhang the car by approximately 8 feet and come into contact with the operator of another motor. There was no method of alerting the operator of the locomotive of the load sitting on the track in front of him

Corrective Action: Two 314(b) Notices to Provide Safeguard were issued: (1) requiring longwall shields or other loads to be safely positioned; and (2) requiring the use of trip lights on all loads which do not use tailmotors. All underground employees were hazard/task trained in the plain meaning of the safeguard.

CONCLUSION

A 35-year old miner received fatal crushing injuries when the locomotive he was operating struck a longwall shield being pulled by another locomotive. The direct cause of the accident was the method in which the longwall shield was carried on the low-boy, which permitted the load to extend beyond the limits of the car and into the roadway where it could be contacted by other vehicles. Practical means for increasing the victim's awareness of his proximity to the lead trip, such as by use of a trip light or by facing in the direction of travel, could have also prevented the accident. An effective procedure was not in place to protect miners from hazards during transportation of items such as longwall shields.

_____ _____

Kevin G. Stricklin Date
District Manager

ENFORCEMENT ACTIONS

A 103(k) order, No. 7148872, was issued to Mettiki Coal LLC to ensure the safety of all persons until an investigation was completed and the area and equipment deemed safe.

A 314(b) safeguard, No. 7148875, was issued to Mettiki Coal LLC. This is a Notice to Provide Safeguard requiring the operator end of the locomotive to be positioned on the opposite end away from the contact zone of the equipment or materials being transported. This notice to provide safeguard also requires that longwall shields and other transported equipment and other materials be transported in such a manner that the tips of the longwall shield or other materials and equipment are positioned towards the locomotive pulling the shield with the operator end of the motor on the opposite end away from the contact zone of the shield or other material and equipment being transported. No material or equipment shall protrude beyond the last car of a trip of cars.

A 314(b) safeguard, No. 7148878, was issued to Mettiki Coal LLC**.** This is a Notice to Provide Safeguard requiring the operator to utilize a permissible trip light on the rear of trips pulled and on the front of trips pushed. Trip lights are not required when the trip being hauled is between locomotives.

APPENDIX A

Persons Participating in the Investigation

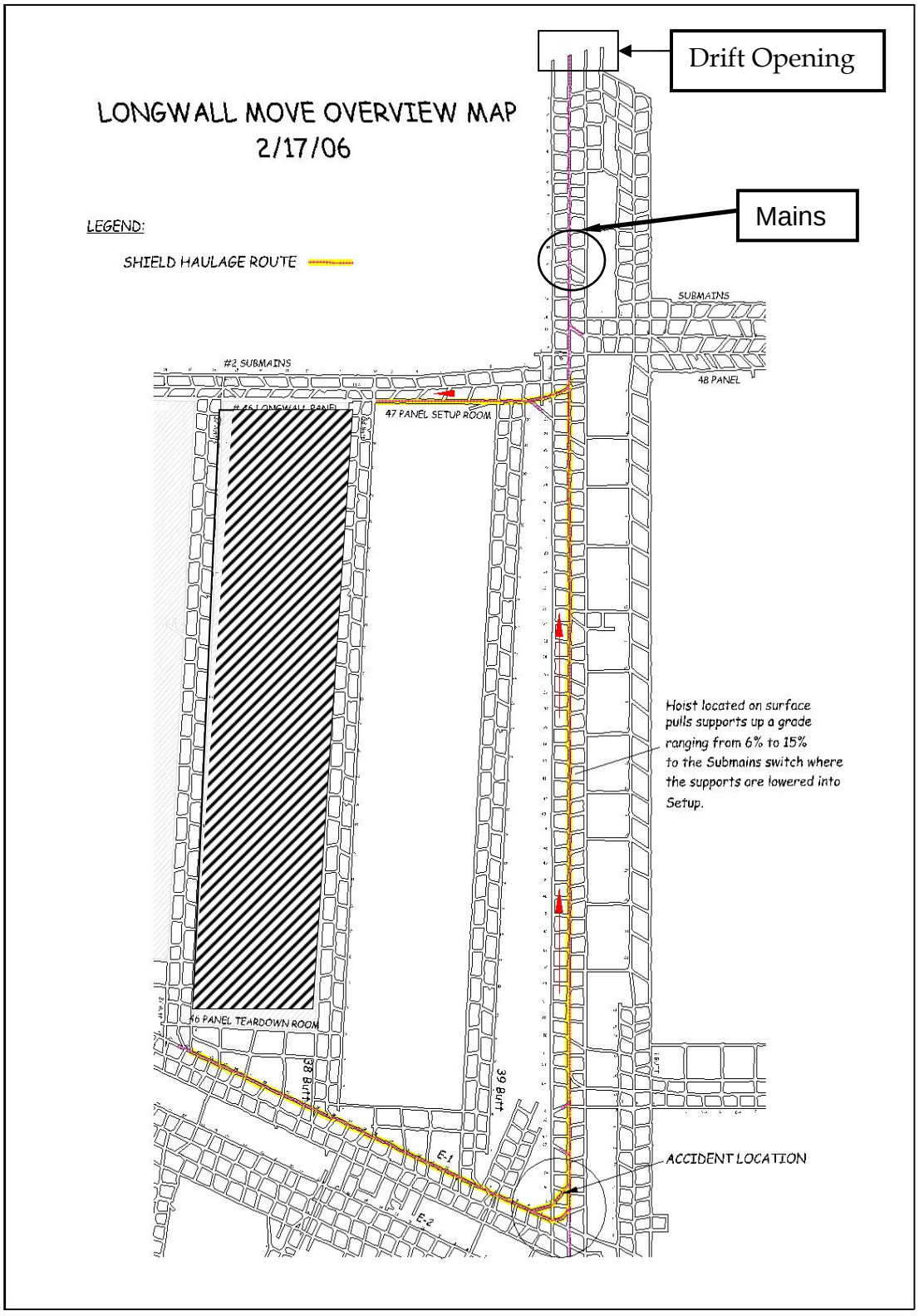
Mettiki Mine

Dwight Kreiser.....Manager of Operations
Al Smith.....Manager of Underground Operations
Jeff Ryan.....Surveyor
John Farmer .....Surveyor

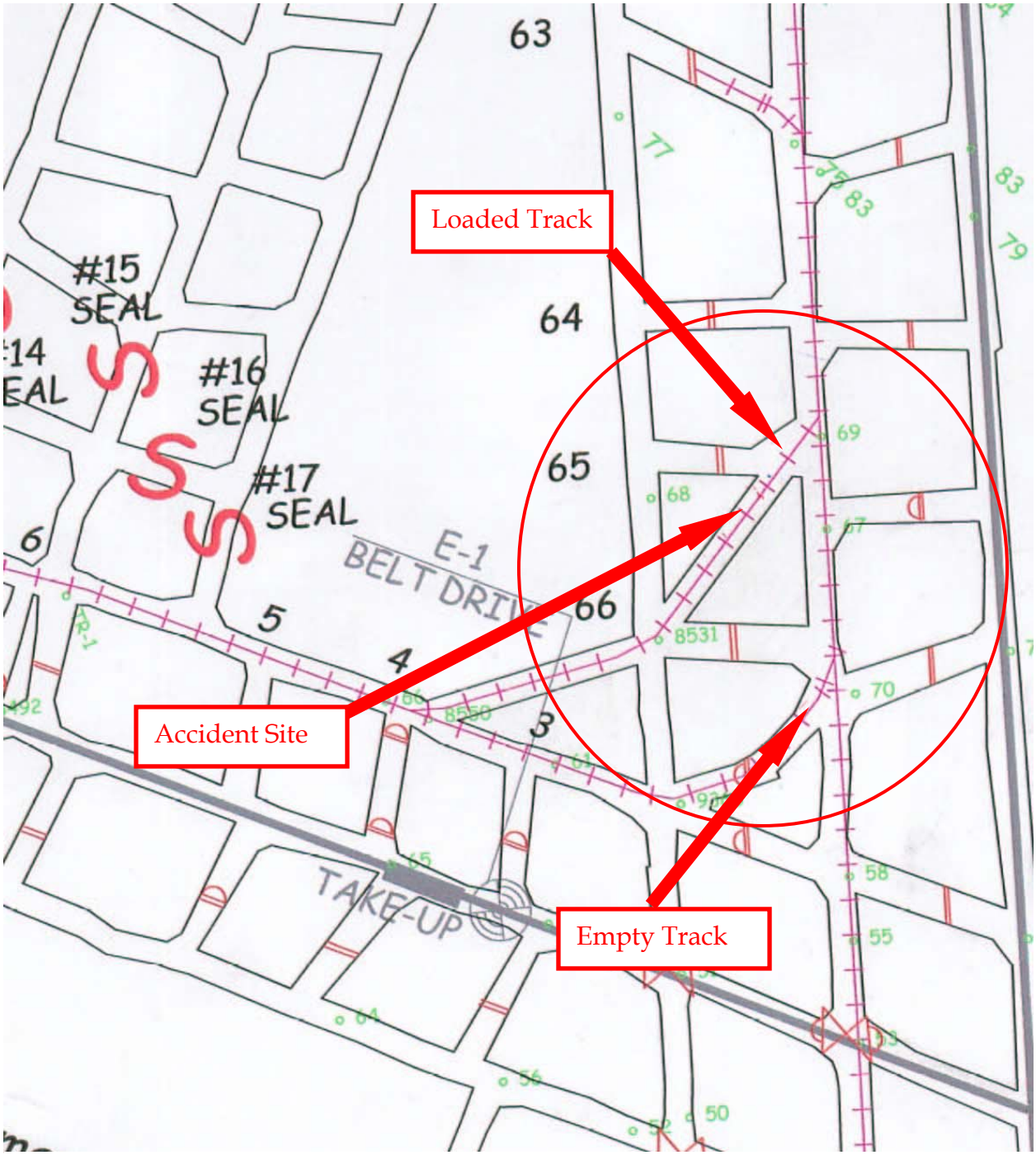
Mine Safety and Health Administration

Ron Wyatt.....Staff Assistant/ Acting Oakland Field Office Supervisor
Michael Stark.....Civil Engineer/ Accident Investigator
Michael Brooks.....Coal Mine Safety and Health Inspector/Ventilation
Eugene Hennen.....Mechanical Engineer, MSHA Tech Support
Jason Rinehart.....Industrial Hygienist
Cynthia Shumiloff.....Mine Safety and Health Training Specialist

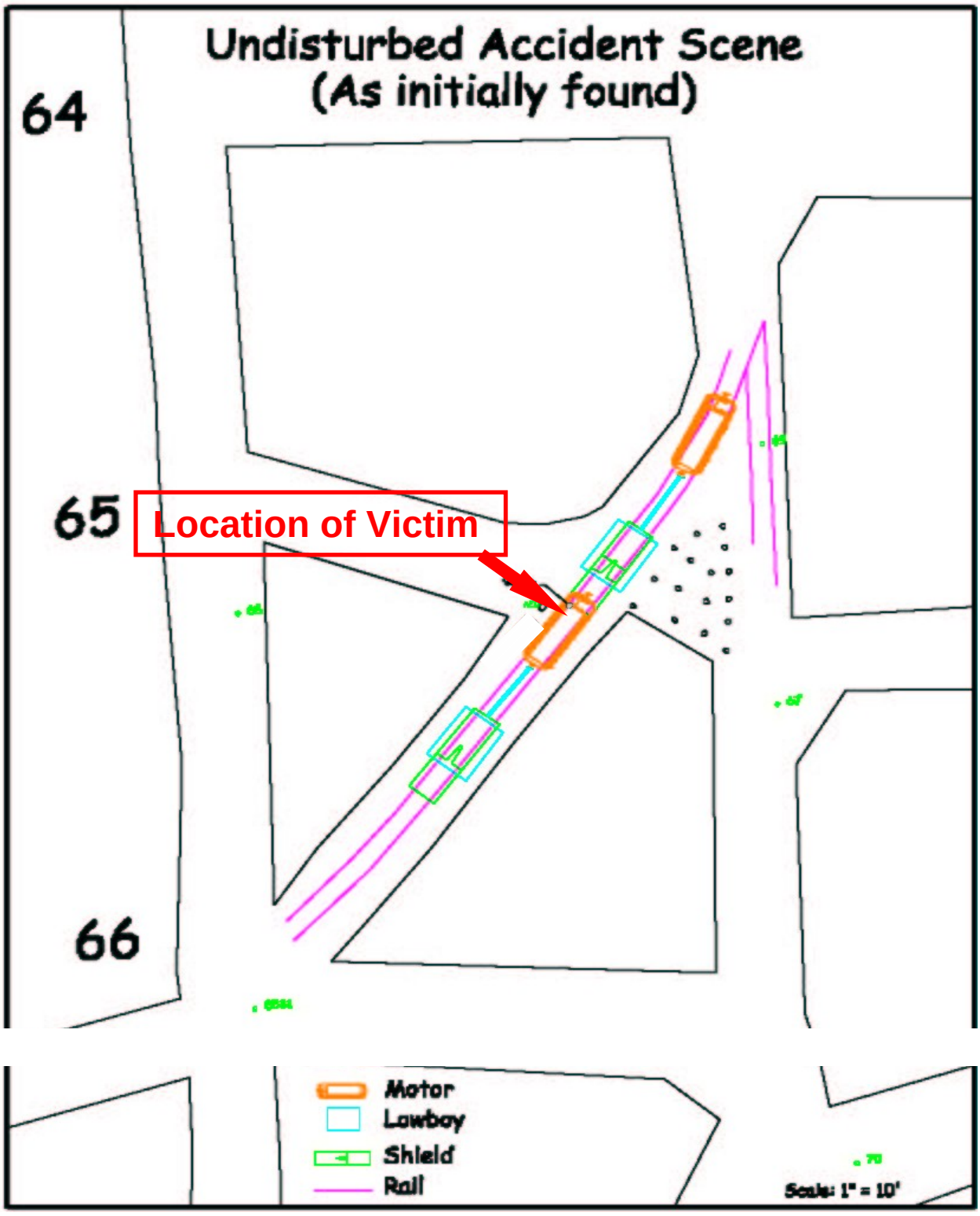
APPENDIX B
Map Showing Longwall Move



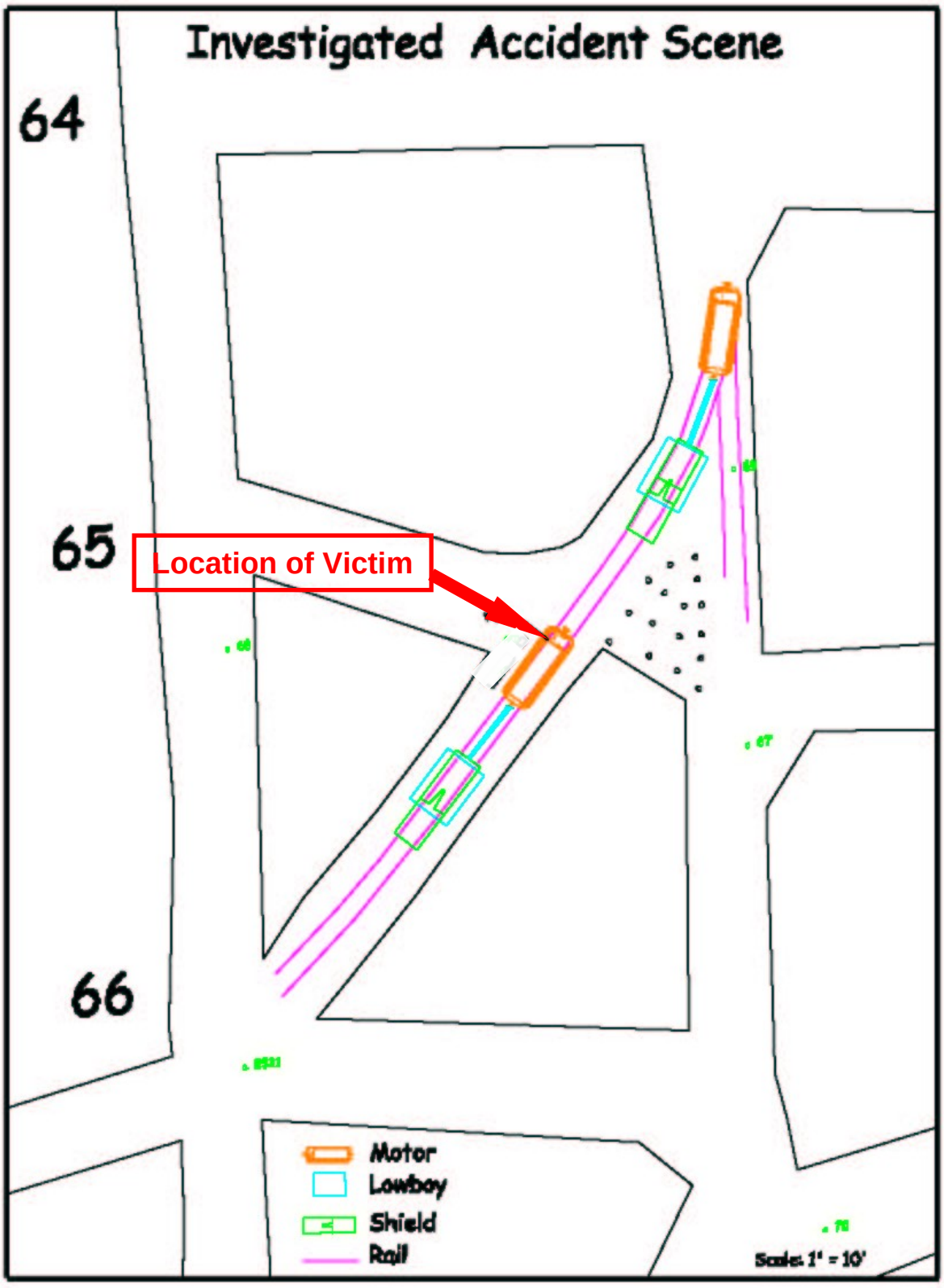
APPENDIX C
Map of Immediate Area



APPENDIX D


Undisturbed Accident Scene
(As initially found)
64
65
Location of Victim
66
Motor
Lowboy
Shield
Rail
Scale: 1" = 10'

APPENDIX E


Investigated Accident Scene
64
65
66
Location of Victim
Motor
Lowboy
Shield
Rail
Scale: 1" = 10'

APPENDIX F

Grade in the Area if the Accident