

Report of Investigation Underground Coal Mine Fatal Fall of a Coal Pillar



U.S. Department of Labor
Mine Safety and Health Administration
1996

**No. 4 Slope Mine
I.D. No. 36-08014
L.V. Coal Company
Keffers,
Schuylkill County,
Pennsylvania**

July 25, 1995

United States
Department of Labor
Mine Safety and Health Administration

REPORT OF INVESTIGATION
JULY 25, 1995
UNDERGROUND COAL MINE
FATAL FALL OF A COAL PILLAR
NO. 4 SLOPE MINE
I.D. 36-08014
L.V. COAL CO.
KEFFERS, SCHUYLKILL COUNTY, PENNSYLVANIA

by

Joseph J. Garcia
District Manager, District 2

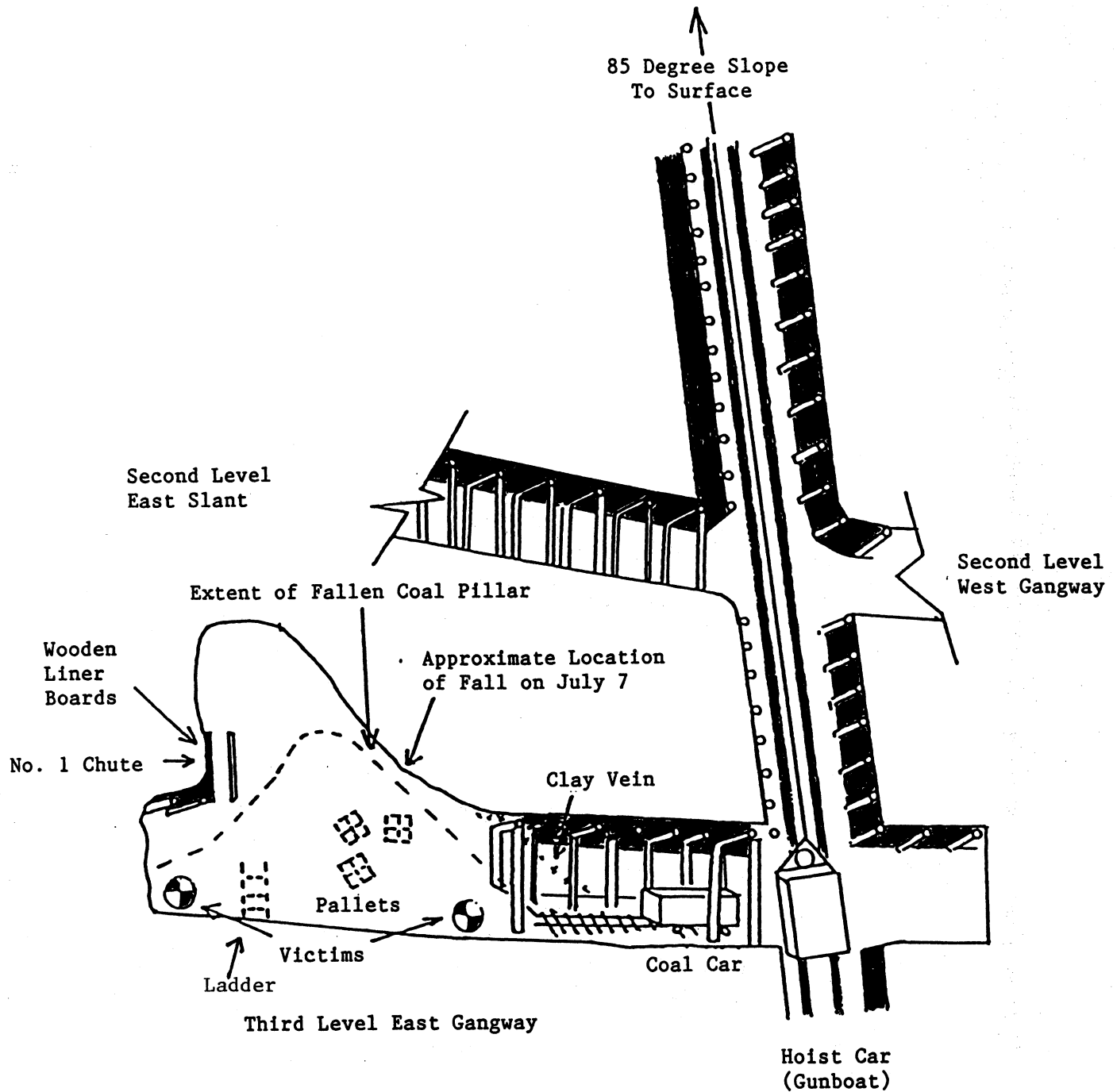
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Originating Office
Mine Safety and Health Administration
Office of the Administrator
Coal Mine Safety and Health
4015 Wilson Boulevard
Arlington, Virginia 22203
Marvin W. Nichols, Jr. - Administrator

Release Date: April 22, 1996

SKETCH 1



Drawing Not To Scale

Sketch of Fatal Fall of Pillar
 L.V. Coal Co.
 No. 4 Slope Mine
 MSHA I.D. No. 36-08014
 Keffers, Schuylkill County, Pennsylvania
 July 25, 1995



Authority—This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164.

Section A—Identification Data

1. Title of investigation: Fatal Fall of Pillar	2. Date MSHA investigation started: July 25, 1995
3. Report release date:	4. Mine: No. 4 Slope
5. Mine ID number: 36 08014	6. Company: L. V. Coal Co.
7. Town, County, State: Keffers, Schuylkill County, PA	8. Author(s): Joseph R. O'Donnell, Jr., Anthony R. Guley, Jr.

Section B—Mine Information

9. Daily production: 15 tons	10. Surface employment: 1
11. Underground employment: 2	12. Name of coalbed: Lykens Valley No. 4 Vein
13. Thickness of coalbed: 3 ft. to 5 ft.	

Section C—Last Quarter Injury Frequency Rate (HSAC) for:

14. Industry: 9.11	15. This operation: 0.00
16. Training program approved: September 23, 1994	17. Mine Profile Rating: N/A

Section D—Originating Office

18. Mine Safety and Health Administration Coal Mine Health and Safety District No. : 2, New Stanton	Address: R.R. 1, Box 736 Hunker, PA 15639
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Section E—Abstract

On Tuesday, July 25, 1995, at about 11:00 a.m., a fatal fall of a coal pillar occurred at the No. 4 Slope Mine of the L. V. Coal Company, resulting in the deaths of two miners. The owner Allen J. Deeter, age 38 and Shawn Kelly, age 25, miner, were working near the No. 1 chute off the East Gangway of the MMU-001-0 when a pillar run occurred resulting in the death of both men.

During development of the third level East gangway, a clay vein was encountered 37 feet from the slope. The friable nature of the coal coupled with a zone of weakness provided by the existence of the clay vein resulted in a small fall of the pillar on or about July 7, 1995. When the No. 1 chute was turned upward off the gangway, the integrity of the coal pillar was further weakened to the point where a sudden failure occurred along the clay vein. The in-rush of coal caused a roof prop, that was set in an area of unstable roof, to dislodge. This caused a domino effect dislodging two other props. These supports failed with little or no warning resulting in both men being buried by the coal. The cause of death of the victims was due to traumatic asphyxia.

The accident occurred because the roof supports installed in the area of the fall were inadequate to effectively control the high side pillar.

Section F—Mine Organization

Company officials:	Name	Address
19. President:	Allen J. Deeter	235 2nd Street Joliett-Tremont, PA 17981
20. Superintendent:	Allen J. Deeter	235 2nd Street Joliett-Tremont, PA 17981
21. Safety Director:	Allen J. Deeter	235 2nd Street Joliett-Tremont, PA 17981
22. Principle officer—H&S:	Allen J. Deeter	235 2nd Street Joliett-Tremont, PA 17981
23. Labor Organization:	None	
24. Chairman—H&S Committee:	None	

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TERMINOLOGY USED IN ANTHRACITE MINES

- | | | |
|----|------------------------------------|---|
| 1. | Gangway | Main entry. |
| 2. | Chute | Driven from gangway to monkey heading. |
| 3. | Monkey Heading
(airway) | Return aircourse and escapeway for the section. |
| 4. | Breast | Advanced above the monkey airway. |
| 5. | Miner Headings | Crosscuts driven from breast to breast above the monkey airway. |
| 6. | Single Prop | One timber post (conventional) |
| 7. | Gunboat | Slope car used to transport materials including coal. |

GENERAL INFORMATION

Background Information

The L.V. Coal Co., No. 4 Slope Mine, is an underground anthracite coal mine located one and one-half miles west of Keffers, Porter Township, Schuylkill County, Pennsylvania.

At the time of the accident, L.V. Coal Co. was a sole proprietorship owned by Allen J. Deeter.

The No. 4 Slope Mine has three slope openings into the Lykens Valley No. 4 Vein. The mine slope opening was approximately 1573 feet above sea level. The working face was located about 420 feet from the surface intake opening with a vertical depth of 330 feet. The mine was placed in active status on January 10, 1995.

The mine employed three persons, one of whom was the owner. The mine worked one shift per day, six days per week. Coal production reported for the first half of calendar year 1995 was 920 tons.

Mining Methods

The Lykens Valley No. 4 Vein varies in thickness between 36 inches and 60 inches. The vein pitches north approximately 85 degrees and at the time of the accident was being mined using the slope, gangway, chute, open-type breasts and pillar system of mining.

Coal was drilled with compressed air drills and blasted off the solid using permissible explosives with short-delay electric detonators. Coal was hand loaded into a mine car, hand pushed to the slope, dumped into the gunboat and hoisted to the surface.

Transportation/Haulage

Coal was hand loaded into a single track-mounted mine car. The loaded three-quarter ton capacity mine car was hand pushed to the dumping point on the slope. The loaded car was end-dumped into the track-mounted gunboat, and brought to the surface by a manually operated, gasoline engine powered hoist. The gunboat was also used to transport persons, materials, and equipment into and out of the mine. The hoist was equipped with overspeed, overwind and automatic stop controls. A 101(c) Petition for Modification of Mandatory Safety Standards for Underground Coal Mines, 30 CFR, Section 75.1400, Docket No. M-91-71-C had been granted November 18, 1991, permitting the use of an alternative method to comply with the requirements for safety catches.

Federal Mine Inspections

A Reopening Inspection (ACA) was conducted intermittently from October 24 through December 8, 1994. There were 27 citations issued. One roof control violation was issued during this inspection. The violation stated there was a broken high side rib prop on the second level slant between No. 2 and No. 3 chutes. The condition was corrected.

A Safety and Health Inspection (AAA) of the mine was conducted intermittently from February 24 through March 8, 1995. During the inspection two citations were issued. Another Safety and Health Inspection (AAA) was conducted intermittently between June 9 and June 21, 1995. Two citations were issued during this inspection.

Roof Support

The roof-control plan for this mine was approved by the Mine Safety and Health Administration (MSHA) on January 18, 1995. The plan permitted a maximum width of 12 feet on the haulage slope and 15 feet on the return slope (return airway). Required roof support consisted of two rows of single props, a minimum of 6 inches in diameter, to be installed on 5-foot centers lengthwise and 7-foot centers crosswise. When an unstable roof was encountered, additional supports were to be installed.

The gangway widths were not to exceed 8 feet. As the gangway was advanced, roof support consisting of one row of single props was to be installed, with cap pieces where required, on 5-foot centers. The high side rib would be lined or lagged. All posts would be set in adequate hitches.

Chutes would be turned on 90-degree angles off of the gangway on 35- to 40-foot centers. The chutes would be driven to a maximum width of 10 feet. The timbering system for the chutes consisted of two rows of single props installed on 5-foot centers in all directions. Foot batteries or liner boards would be provided in open chutes and breasts.

The open-type breasts would be turned off the monkey heading on 90-degree angles on 35- to 40-foot centers. The breasts would be started off the monkey heading to a maximum of 15 feet in width where roof conditions allowed. Roof supports would consist of single props installed on 5-foot centers in all directions. Protective manways would be provided in each breast. All high side ribs and rib corners would be lined and/or lagged. A 20-foot minimum pillar would be maintained between breast crosscuts. In chutes, miner headings, and breasts, the minimum post diameter would be 4 inches. Miner headings, 8 feet in width, would be developed on 30 to 60-foot centers. The timbering system for the miner headings and breast crosscuts required a single row of

props with the high side rib lined and/or lagged. The single row of props would be on 5-foot maximum centers lengthwise. All posts would be set in adequate hitches.

The accident investigators determined that there was a violation of 30 CFR 75.202(a) because roof supports installed in the area of the accident were not adequate to effectively control the high side rib.

Ventilation

A review of the mine ventilation map indicated three slope openings. The slope hoist opening provided intake air for the active workings. The two remaining slope openings were the return air courses on the East and West sides of the mine. A main fan was installed on the surface at each return slope opening. Ventilation of the East side of the mine was provided by a 36-inch diameter centrifugal fan manufactured by American Blower Corporation. The fan was driven by a 10 horsepower, 440 volt, 1160 rpm motor and produced 12,500 cubic feet per minute of air at 2 inches of water gauge. Ventilation of the West side of the mine was provided by a 45-inch diameter axial vane fan with no name plate. The fan was driven by a 15 horsepower, 440 volt, 875 rpm motor and produced 15,000 cubic feet per minute of air at 1.5 inches of water gauge. Both fans were operated in the exhausting mode.

The ventilation plan in effect at the mine was approved by MSHA on January 18, 1995. A minimum of 1,500 cubic feet of air per minute was required to be maintained at each working face. Airflow was directed to within 20 feet of the working face with approved tubing attached to a pneumatic powered air mover or fan located outby the last open crosscut.

Examinations

Allen Deeter, Mine Foreman and Owner, was certified by the Commonwealth of Pennsylvania to make mine examinations. A review of the mine record books revealed that Deeter had been signing the required record books, except for electrical examinations. Electrical examinations had been conducted and recorded in the required book by Kenneth Dengler, a qualified electrician.

A preshift examination was conducted on July 25, 1995, recorded in the Preshift Mine Examiner's Report book and signed by Allen Deeter. No violations or hazardous conditions were noted.

Electricity

Electrical power was generated by a diesel generator. A 440 volt AC circuit supplied power to the two main mine fans. Electrical service was supplied to a surface building and to the air

compressor also located on the surface.

Power was supplied underground to a 15 and a 40 horsepower, 440 volt AC pumps located along the hoist slope. These pumps were the only electrical equipment underground. A No. 4, three conductor cable with two external ground wires was used to supply power to these pumps. Short-circuit protection for the main power cable underground was provided by a circuit breaker located on the surface.

Fire Protection/Emergency Procedures

The firefighting and evacuation plan was approved by MSHA on September 20, 1994. The plan included instruction and training for the miners in the location and use of firefighting equipment, location of the escapeways and the routes of travel to the surface, and evacuation procedures to be followed during an emergency.

Portable fire extinguishers were provided at or near the electrical installations underground.

Records indicated fire drills and escapeway drills were being conducted. The mine operator maintained two designated escapeways from the active working section. The primary escapeway was the intake slope and the secondary escapeway was the return aircourse.

Communications

Two-way voice communication was provided by an Archer voice activated, battery powered intercom system. Speakers were installed on each level along the slope, including the intersection of the slope and the third level East gangway, and the hoist house on the surface. A second separate communication system was installed between the hoist house and the section dump point at the slope bottom. The second system consisted of a manually activated bell signaling system.

A Citizen's Band radio (CB) system was provided in the hoist house. The CB radio was used to provide communications from the mine to the nearest point of medical assistance during an emergency.

Mine Rescue/Self-Rescuers

The mine operator had entered into an arrangement for mine rescue emergency services with Anthracite Underground Rescue, Inc.

A plan for the use of filter-type self rescuers in lieu of self-contained self-rescuers was approved by MSHA on December 21, 1994. The travel time from the most distant work place to the

surface via the alternate escapeway did not exceed 10 minutes.

Filter-type self-rescuers were provided for the miners underground. Miners had been trained in the use of these devices in accordance with the approved training plan.

Training Programs

A training plan, which met the requirements of 30 CFR Part 48, and Part 75, Subpart B, was approved by MSHA on September 23, 1994.

A review of training records indicated training was conducted as required.

Emergency Medical Assistance

A plan to provide emergency medical assistance was posted on the bulletin board at the mine.

DESCRIPTION OF ACCIDENT, RECOVERY, AND INVESTIGATION

The following is a narrative of the events occurring before, during, and after the accident. The narrative was developed from interviews with the hoist operator, who was on the surface when the accident occurred, and from MSHA, State, and emergency response personnel who responded to the accident.

Description of the Accident

On July 25, 1995, Allen Deeter, owner; Shawn Kelly, miner; and Byron Swartzlander, hoist operator; arrived at the mine between 7:00 a.m. and 7:15 a.m. for the start of their regular shift. After the daily routine of pumping water from the slope haulage sump was completed, Deeter performed the preshift examination. Upon completion he returned to the surface and entered his examination in the Preshift Mine Examiner's Report book.

Deeter informed the men that he intended to load and hoist approximately three cars of coal left from the previous day of mining. They would then drill and blast the No. 1 Chute off the third level East Gangway.

At approximately 10:00 a.m., Deeter and Kelly were lowered via gunboat to the third level East Gangway. Work proceeded as planned with Swartzlander hoisting three cars of coal from the mine.

At approximately 11:00 a.m., Deeter returned to the gunboat at the slope bottom and instructed Swartzlander to hoist him up the slope about 100 feet to retrieve a hatchet. After retrieving a

hatchet, Deeter was lowered back to the third level East Gangway. Exiting the gunboat at the landing platform, Deeter then instructed Swartzlander to lower the gunboat into the coal loading position.

Moments later, Swartzlander heard Deeter shouting for help over the voice activated communication system. Swartzlander attempted to contact Deeter several times through both communication systems, but received no response. Swartzlander drove to Deeter's house, about two miles away and informed Mrs. Donna Deeter, Allen Deeter's wife, of an emergency at the mine. Mrs. Deeter telephoned 911, and the emergency response system was activated.

MSHA, State, and Anthracite Underground Rescue, Inc. (AUGR) personnel were dispatched to the mine and a joint rescue and recovery operation was started. The bodies were recovered and transported to Pottsville Hospital and Warne Clinic, Pottsville, Pennsylvania. Autopsies preformed by the Schuylkill County Coroner determined death to both victims was due to traumatic asphyxia.

Mine Emergency Operations

The MSHA Pottsville Field Office was notified at 11:10 a.m. of the accident. A joint recovery operation was undertaken by the MSHA, Pennsylvania Department of Environmental Protection (PADEP), and AUGR.

At approximately 11:45 a.m., an exploration team consisting of Ray Glosek, state mine inspector; Mike Buble, supervisory state inspector; Robert Wolfgang, rescue team member; and Paul Wagner, EMT, proceeded down the East side return escapeway aircourse to the third level East Gangway.

Approximately 50 feet into the third level East Gangway the team found the gangway was blocked with coal. The team determined that a pillar run had occurred. Neither Deeter nor Kelly could be seen and voice contact efforts by the team were futile. No explosive gas was detected and the oxygen level was acceptable. The exploration team returned to the surface via the gunboat.

At approximately 11:57 a.m., Team 1 consisting of Glosek, Buble, Wagner, Troy Wolfgang, miner, Terry Wolfgang, miner; and David Himmelburger, miner; proceeded to the accident scene.

Team One began installing additional roof supports and hand loaded 1-1/2 cars of coal (approximately 1-1/4 tons) in the third level East Gangway. At approximately 1:00 p.m., a portion of Deeter's body (head) was uncovered. Deeter was located approximately 50 feet from the haulage slope.

Team One continued to resupport the fall area and loaded an

additional 6 tons of coal before completely uncovering Deeter's body. He was found lying face down facing outby with a hatchet in his right hand and his right ankle under a dislodged roof prop. A hydraulic lifting jack was used to lift the prop.

Deeter was extracted, transported to the surface and pronounced dead at 4:35 p.m. by Deputy Coroner Robert P. Berger. The members of Team 1 were hoisted to the surface at various intervals between 4:30 p.m. and 4:40 p.m.

At approximately 4:40 p.m., Team 2 was transported underground. Team 2 consisted of Glenn Bensinger, state mine inspector, Ralph Johnson, coal mine safety and health inspector, Jack McGann, coal mine safety and health inspector, and rescue team members David Lucas, Oscar Blough, Scott Wolfgang, Darryl Koperna and Dennis Herring.

Team 2 continued to resupport the area and remove coal as they progressed inby on the gangway. At 6:45 p.m., Kelly was located approximately 4 feet outby the face of the third level East Gangway. By 7:10 p.m. he was completely uncovered. Kelly was found in a kneeling position facing toward the gangway face with his right leg extended. Kelly's body was transported to the surface where he was pronounced dead by Deputy Coroner Berger at 7:28 p.m. By 7:45 p.m., Team 2 had been transported to the surface. Team 2 loaded 4-1/2 tons of coal during their effort to recover Kelly.

Activities of MSHA and State Personnel

At 11:10 a.m., MSHA supervisory coal mine safety and health inspector, James Schoffstall, was notified by telephone of an entrapment of two miners at the No. 4 Slope mine of the L.V. Coal Company. Schoffstall telephoned Paul Hummel, Director of Deep Mine Safety (Anthracite) for the Commonwealth of Pennsylvania to confirm the entrapment. After the information was confirmed by Mr. Hummel, Schoffstall informed Larry Brown, MSHA Acting District Manager, at the Wilkes-Barre District Office. Brown then informed MSHA personnel in the Arlington, Virginia Headquarter Office of the event at 11:25 a.m.

Schoffstall and MSHA coal mine safety and health inspectors Jack McGann, Dennis Myers, Ralph Johnson, and Leonard Rogers arrived at the mine site at noon. At 12:05 p.m. McGann issued a 103(k) Order to insure the safety of all persons in the coal mine. MSHA Coal Mine Safety and Health Inspectors Paul Sargent and Harold Glandon arrived at the mine site at 6:00 p.m. to assist in rescue operations.

Activities were coordinated between MSHA, the Commonwealth, and mine rescue personnel to recover the victims. MSHA and the Commonwealth personnel remained at the mine to monitor and assist

with all recovery activities both underground and on the surface. MSHA personnel were assigned to the mine around the clock until the on-site investigation was completed.

Accident Investigation

The accident investigation began on Wednesday, July 26, 1995. Joseph J. Garcia, District Manager, Coal Mine Safety and Health District 2, was appointed as MSHA's Chief Investigator. MSHA personnel who participated in the investigation are listed in Appendix C.

During the afternoon of July 26, 1995, Garcia met with Commonwealth and MSHA personnel at the mine site. During the meeting, it was determined that as a result of the accident, a certified person was not available at the mine. MSHA then retained Gary Brill, a certified mine foreman and the stepbrother of Allen Deeter, to conduct examinations and provide logistical support. After Brill conducted a preshift examination of the mine, MSHA and State personnel proceeded underground and evaluated the accident scene.

On July 27, 1995, the preshift examination revealed additional material had fallen in the accident area, dislodging some of the temporary support that had been installed during the rescue effort. A joint investigation of the underground accident scene was made by personnel from MSHA, PADEP, and a representative of the deceased mine owner. See Appendix C. Based on the deteriorating conditions underground and the fact that the entire accident scene was visible from a safe distance, the investigative parties decided that the investigation could be accomplished without exposing persons to undue hazards.

Therefore, the underground investigation was conducted in all accessible areas of the third level East Gangway. No other attempts were made to remove coal and further support the area to gain direct access to the immediate accident site. The area was mapped and all pertinent information documented. Photographs of the accident scene were also taken.

The investigation team conducted six voluntary interviews with mine personnel and mine rescue personnel on July 27, 28 and 31, 1995. Five of the interviews were conducted at PADEP's, Bureau of Deep Mine Safety, Anthracite Mine Rescue Station, Tremont, Pennsylvania, and one interview was conducted at the mine site. On July 31, 1995, additional interviews were conducted of MSHA and Commonwealth personnel at the office of PADEP's, Bureau of Deep Mine Safety in Pottsville, Pennsylvania.

FINDINGS OF FACT

Findings

These findings are based on evaluations of the physical conditions in the mine and statements made by the mine employee and mine rescue personnel during interviews conducted by MSHA and the PADEP, Bureau of Deep Mine Safety.

1. The L. V. Coal Co., No. 4 Slope mine was opened on or about May 4, 1988. Dennis Deeter and Allen Deeter assumed ownership of the mine on September 1, 1994. At that time, the second level East slant had been developed to approximately 260 feet. The third level East gangway had been developed to the 30-foot mark off the intake slope and used as an interim sump entry.
2. Between September and October 1994, Allen and Dennis Deeter worked underground rehabilitating the mine. This included pumping water from the mine that had accumulated to within 80 feet of the surface slope opening. In addition, they cleaned up and resupported areas where posts had been dislodged.
3. MSHA conducted a Reopening Inspection (ACA) of the mine between October 24 and December 8, 1994. During this inspection 27 citations were issued, one of which involved a broken high side rib prop on the second level East slant. All were subsequently corrected.
4. According to mine records, on December 12, 1994, Dennis Deeter, co-owner, dissolved his interest in the mine. Allen Deeter completed mining in the second level East slant during May 1995. Rehabilitation of the slope to and including the third level gangway was started. On June 16, 1995, Deeter drilled and blasted the first cut in the third level East gangway. An MSHA inspection was on-going at the time.
5. An inspection of the mine was conducted by PADEP's Bureau of Deep Mine Safety on June 27 and 28, 1995. At that time, the third level East gangway had been advanced to the 35-foot mark off the slope. Deeter, who was working alone underground, would load the coal into a wheel barrow, push the loaded wheel barrow from the face area to the dumping point, dump the coal into the gunboat and have it hoisted to the surface. During the last week of June, Deeter and Gary Brill lowered a coal car from the second level West gangway to the third level East gangway. The coal car replaced the wheel barrow as the means of transporting coal underground.

6. According to Brill and Swartzlander; Shawn Kelly, miner, started working underground with Deeter on Friday, July 7, 1995. On this day, Deeter had drilled and blasted at the end of the shift in the third level East gangway. The cut was left to stand unsupported over the weekend.
7. Brill also stated that during the week of July 10 to 15, 1995, Deeter was working alone resupporting the area that had been blasted on July 7 in the third level East gangway because a fall of a coal pillar had occurred. Brill had loaded wooden pallets into the gunboat. These pallets were used as cribbing material in the area where the fall of a coal pillar had occurred. Brill did not go underground. Advancement of the third level East gangway continued.
8. Deeter had told Swartzlander that based on previous experience, the coal tended to run if it was blasted and left standing for an extended length of time. Therefore, blasting was done early in the shift so that the coal and roof could be secured.
9. The friability of the Lykens Valley No. 4 vein allows the coal to crumble into small gravel sized pieces. When the coal becomes dislodged from the seam by normal mining or in faulted areas it continues to erode or run, making the seam difficult to control in steeply pitched areas.
10. Mine records indicated that the first cut of coal in No. 1 Chute off the third level East gangway was taken on July 14, 1995. The mine did not operate from July 17 to 23, 1995, because the main generator had broken down.
11. On July 24, 1995, the second cut of coal in the No. 1 Chute was taken. Swartzlander stated that Deeter and Kelly drilled, blasted, and hand-loaded coal from the No. 1 chute. Swartzlander hoisted 14 gunboats of coal. The chute was not drilled and blasted again that day.
12. On July 25, 1995, the day of the accident, Deeter conducted the underground preshift examination and returned to the surface where he recorded the examination in the preshift mine examiners record book. No hazardous conditions were noted and Deeter did not indicate there were any problems in the mine. Deeter and Kelly planned to load three cars of coal that remained from the previous day and to drill and blast the No. 1 Chute (third cut). However, during the subject investigation it was determined an inadequate preshift had been made.

13. Deeter and Kelly entered the mine at about 10:00 a.m. and Swartzlander hoisted three gunboats of coal shortly thereafter. At about 11:00 a.m., Deeter returned to the gunboat at the slope bottom and instructed Swartzlander to hoist him up the slope about 100 feet to retrieve a hatchet. After retrieving the hatchet, Deeter was lowered to the landing platform at the third level East gangway. After exiting the gunboat, Deeter instructed Swartzlander to lower the gunboat into the coal loading position. About 20 seconds later, Swartzlander heard Deeter shouting for help over the voice activated communication system.
14. Swartzlander attempted to contact Deeter several times using both mine communication systems, but received no response. A functional citizen's band radio was maintained at the mine for emergency communications; however, Swartzlander did not attempt to use it. He felt it would be quicker to go to Deeter's house, about 2 miles away, and use the telephone. Upon arrival at Deeter's home, he informed Deeter's wife, Donna Deeter, of the accident at the mine and they needed help. Mrs. Deeter telephoned 911 and the emergency response system was activated.
15. Rescue operations began at 11:45 a.m. with MSHA, State and local mine rescue personnel participating. First rescuers on the scene found that a fall of a coal pillar had occurred approximately 45 feet from the slope in the third level East gangway. Efforts to resupport the roof and remove coal that was blocking the gangway were started immediately. See Sketch 1.
16. Deeter was located at 1:00 p.m. He was checked for vital signs and none were found. Deeter's body was recovered at 4:20 p.m., transported to the surface and pronounced dead at 4:35 p.m. by Deputy Coroner Berger.

Kelly was located at 6:45 p.m. He was checked for vital signs and none were found. His body was recovered at 7:10 p.m., transported to the surface and pronounced dead at 7:28 p.m. by Deputy Coroner Berger.

Both bodies were transported to the Pottsville Hospital and Warne Clinic where autopsies were performed. Official cause of death to both victims was listed as traumatic asphyxia.
17. The third level East gangway was developed to the 70-foot mark off the slope. Forty feet of this development had been done since Deeter took over the mine. Nominal dimensions of the gangway were 62 inches wide by 94 inches high. The No. 1 Chute, being driven off the gangway, was located about 60 feet off of the slope. The chute was developed approximately 10 feet, as evidenced by the length of liner boards

still hanging in place after the accident. The thickness of the coal vein in this area was approximately 60 inches.

18. Based on production records, the area of the No. 1 Chute was reconstructed. Assuming normal mining practices and evidence in the form of props, volumetric calculations indicate that the chute was approximately 5.3 feet wide by 10 feet long by 5 feet deep.
19. In the third level East gangway, approximately 37 feet in by the slope rib, a clay vein was observed. The projected angle of the clay vein extended upward into the cavity of the fall.
20. The cavity of the fall started at 45 feet in the gangway as measured from the slope and extended 25 feet to the gangway face. The fall varied from 9 feet to 25 feet in height above the gangway. See Sketch 2.
21. Rescue team members reported finding three roof props dislodged by the fall beginning at the 45 foot mark and extending approximately to the 60-foot mark. At approximately the 50-foot mark the wooden pallets believed to have been used for cribbing during the week of July 14, were found. Except for one top hitch, all hitches for the props were observed to be dug into the top and bottom. Rescuers stated that a small cavity was in the roof where the missing hitch should have been. Rescuers believed that the hitch was dug into a piece of unstable roof that sloughed off during the fall.
22. Based on the witness interviews and physical investigation of the mine, it is believed that the following sequence of events occurred. As the third level East Gangway was being developed, a clay vein was encountered at 37 feet. At approximately 50 feet, a small fall of a coal pillar occurred which Deeter resupported using wooden pallets as cribbing material. At approximately 60 feet, the No. 1 chute was started.
23. Evidence suggests that due to the presence of the clay vein, the high side pillar at the accident site was unstable. The friable nature of the coal coupled with a zone of weakness provided by the existence of the clay vein resulted in a small fall of the coal pillar on or about July 7, 1995. When the No.1 chute was turned upward off the gangway, the integrity of the coal pillar was further weakened to the point where a sudden failure occurred along the clay vein. The inrush of coal caused a roof prop, set in an area of an incompetent roof, to dislodge. This resulted in a domino effect dislodging two other props. These supports failed with little or no warning resulting in both men being buried

by the coal.

Contributing Violation

The following violation contributed to the cause of the accident and a citation was written in association with the accident investigation. This citation was not served due to the fact that the only company official died in the accident:

1. 104(a) Citation: A fall of a coal pillar occurred in the third level East Gangway of the MMU 001-1 working section. The supports that were set in the area where the fall occurred, failed. The roof, face and ribs where persons work or travel, were not adequately supported or otherwise controlled to protect them from hazards related to falls of the roof, face or ribs. This is a violation of Section 75.202(a), 30 CFR.

Non-Contributing Violations

1. Citation No. 3654730 was observed for a violation of 30 CFR 75.360(a). An adequate preshift examination for the day shift on July 25, 1995, was not conducted on the MMU 001 working section. The following obvious conditions were observed during an inspection of this section and were not recorded in the Preshift Mine Examiners Record Book: (1) The face ventilation tubing was observed to be 100 feet from the deepest penetration and not within 20 feet as required by the approved mine ventilation plan. (2) The pneumatic powered air mover was observed to be located in the intersection of the last open crosscut and not outby the last open crosscut as required by the approved mine ventilation plan.

It is unlikely that the condition observed would result any lost work days since the mine has a history of not liberating methane and no ignition sources were observed. This was a 104(a), non-S&S citation.

2. Citation No. 3654731 was observed for a violation of 30 CFR 75.370(a)(1). The mine operator did not comply with the approved mine ventilation plan, dated January 18, 1995, in that the pneumatic powered air mover was not located outby the last open crosscut to prevent recirculation. The air mover was observed located in the intersection of the last open crosscut through which air currents that had ventilated the working face would pass over the air mover and be recirculated back to the face area.

It is unlikely that the condition would result in any lost work

days since the mine has a history of not liberating methane and no ignition sources were observed. This was a 104(a), non-S&S citation.

3. Citation No. 3654732 was observed for a violation of 30 CFR 75.370(a)(1). The mine operator did not comply with the approved mine ventilation plan, dated January 18, 1995, in that the distance from the end of the ventilation tubing to the point of deepest penetration exceeded the plan requirement of not more than 20 feet. The end of the ventilation tubing was observed to be approximately 100 feet from the point of deepest penetration.

It is unlikely that the condition observed would result in any lost workdays since the mine has a history of not liberating methane and no ignition sources were observed. This was a 104(a), non-S&S citation.

Citation Nos. 354730, 3654731, and 3654732 were not served due to the fact that the only company official died in the accident.

CONCLUSIONS

The accident occurred because the roof supports installed in the area of the fall were inadequate to effectively control the high side pillar.

Respectfully submitted,



Joseph J. Garcia
District Manager, District 2

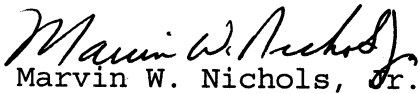


Joseph R. O'Donnell Jr.
Coal Mine Safety and Health
Inspector, District 2



Anthony R. Guley Jr.
Coal Mine Safety and Health
Inspector, District 2

Approved by:



Marvin W. Nichols, Jr.
Administrator for
Coal Mine Safety and Health

APPENDIX A



Section A—Victim Data

1. Name	2. Sex	3. Social Security Number
Allen J. Deeter	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	5173
4. Age	5. Job Classification	
38	Foreman/Miner	
6. Experience at this Classification	7. Total Mining Experience	
7 months	20 years	
8. What activity was being performed at time of accident?	9. Victim's Experience at this Activity	10. Was victim trained in this task?
Miner related work at the face.	20 years	Yes

Section B—Victim Data for Health and Safety Courses/Training Received (related to accident)

	Date Received
11. Annual Refresher	10-15-94
12. Newly Employed, Experienced Miner - Surface and Underground	10-15-94
13. First Aid Part 75	11-18-94
14.	

Section C—Supervisor Data (supervisor of victim)

15. Name	16. Certified
Allen J. Deeter	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
17. Experience as Supervisor	18. Total Mining Experience
7 months	20 years

Section D—Supervisor Data for Health and Safety Courses/Training Received (related to accident)

	Date Received
19. Annual Refresher	10-15-94
20. Newly Employed, Experienced Miner - Surface and Underground	10-15-94
21. First Aid Part 75	11-18-94
22.	

23. When was the supervisor last present at accident scene prior to the accident?	24. What did he do when he was there?
Within 5 minutes	Hand load three coal cars

25. When was he last in contact with the victim?	26. Did he issue instructions relative to the accident?
--	---

Supervisor was the victim	Unknown
27. Was he aware of or did he express an awareness of any unsafe practice or condition?	

No



Section A—Victim Data

1. Name	2. Sex	3. Social Security Number
Shawn Kelly	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	5471
4. Age	5. Job Classification	
28	Miner	
6. Experience at this Classification	7. Total Mining Experience	
5 years	5 years	
8. What activity was being performed at time of accident?	9. Victim's Experience at this Activity	10. Was victim trained in this task?
Miner related duties at the face	5 years	Yes

Section B—Victim Data for Health and Safety Courses/Training Received (related to accident)

	Date Received
11. Newly Employed Experienced Miner	07-05-95
12. Hazard Training	07-05-95
13.	
14.	

Section C—Supervisor Data (supervisor of victim)

15. Name	16. Certified
Allen J. Deeter	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
17. Experience as Supervisor	18. Total Mining Experience
7 months	20 years

Section D—Supervisor Data for Health and Safety Courses/Training Received (related to accident)

	Date Received
19. Annual Refresher	10-15-94
20. Newly Employed, Experienced Miner - Surface and Underground	10-15-94
21. First Aid Part 75	11-18-94
22.	

23. When was the supervisor last present at accident scene prior to the accident?	24. What did he do when he was there?
Within five minutes	Hand loaded 3 coal cars.

25. When was he last in contact with the victim?	26. Did he issue instructions relative to the accident?
Supervisor was also a victim	Unknown
27. Was he aware of or did he express an awareness of any unsafe practice or condition?	

No

APPENDIX B

APPENDIX B

LIST OF MEDICAL PERSONS WHO PROVIDED SERVICES

Tremont Area Ambulance Association

Beverly Moyer	Emergency Medical Technician
Donald Allar	First Responder
Richard Hodgson	Paramedic

APPENDIX C

APPENDIX C

PERSONS WHO PARTICIPATED IN THE INVESTIGATION

MSHA PERSONNEL

Joseph J. Garcia	- District Manager, District 2 (Chief Investigator)
Tony Turyn	- Mine Safety and Health Specialist Arlington, Virginia
Joseph R. O'Donnell, Jr.	- Coal Mine Safety and Health Inspector, District 2
Anthony R. Guley, Jr.	- Coal Mine Safety and Health Inspector, District 2
Joseph W. Trybus	- Coal Mine Safety and Health Specialist, District 2
Clyde G. Turner	- Coal Mine Safety and Health Inspector, District 2
Donn W. Lorenz	- Supervisory Coal Mine Safety and Health Inspector, District 2

Pennsylvania Department of Environmental Protection

Paul L. Hummel	- Chief, Anthracite-Non Coal Mines
Mike Bubel	- Supervisory Mine Inspector
Raymond D. Glosek	- Mine Inspector
Glenn Bensinger	- Mine Inspector
Clement W. Thatcher	- Electrical Mine Inspector

APPENDIX C (Cont.)

L.V. Coal Co.

Byron C. Swartzlander - Hoist Operator

Independent Miner

Gary Brill - Self Employed Miner and
Step-Brother of Allen Deeter.

Pennsylvania Mine Rescue Team Members

Scott Wolfgang - Miner

Darryl Koperna - Miner

Dennis Herring - Miner

APPENDIX D

APPENDIX D

PERSONS WHO PARTICIPATED IN RESCUE AND RECOVERY

MSHA Personnel

James E. Schoffstall	-	Supervisory Coal Mine Safety and Health Inspector, District 1
Jack R. McGann	-	Coal Mine Safety and Health Inspector, District 1
Ralph S. Johnson	-	Coal Mine Safety and Health Inspector, District 1

Pennsylvania Department of Environmental Protection Bureau of Deep Mine Safety (anthracite)

Paul Hummel	-	Chief, Anthracite-Non Coal Mines
Mike Bubel	-	Supervisor, Coal
Ray Glosek	-	Mine Inspector
Glenn Bensinger	-	Mine Inspector
Clement Thatcher	-	Electrical Inspector

Pennsylvania Mine Rescue Team Members

Scott Wolfgang	-	Miner
Troy Wolfgang	-	Miner
Terry Wolfgang	-	Miner

APPENDIX D (Cont.)

Randy Wolfgang	-	Hoist Operator
David Himmelberger	-	Miner
Oscar Blough	-	Miner
Darryl Koperna	-	Miner
Dennis Herring	-	Miner
David Lucas	-	Miner

APPENDIX E

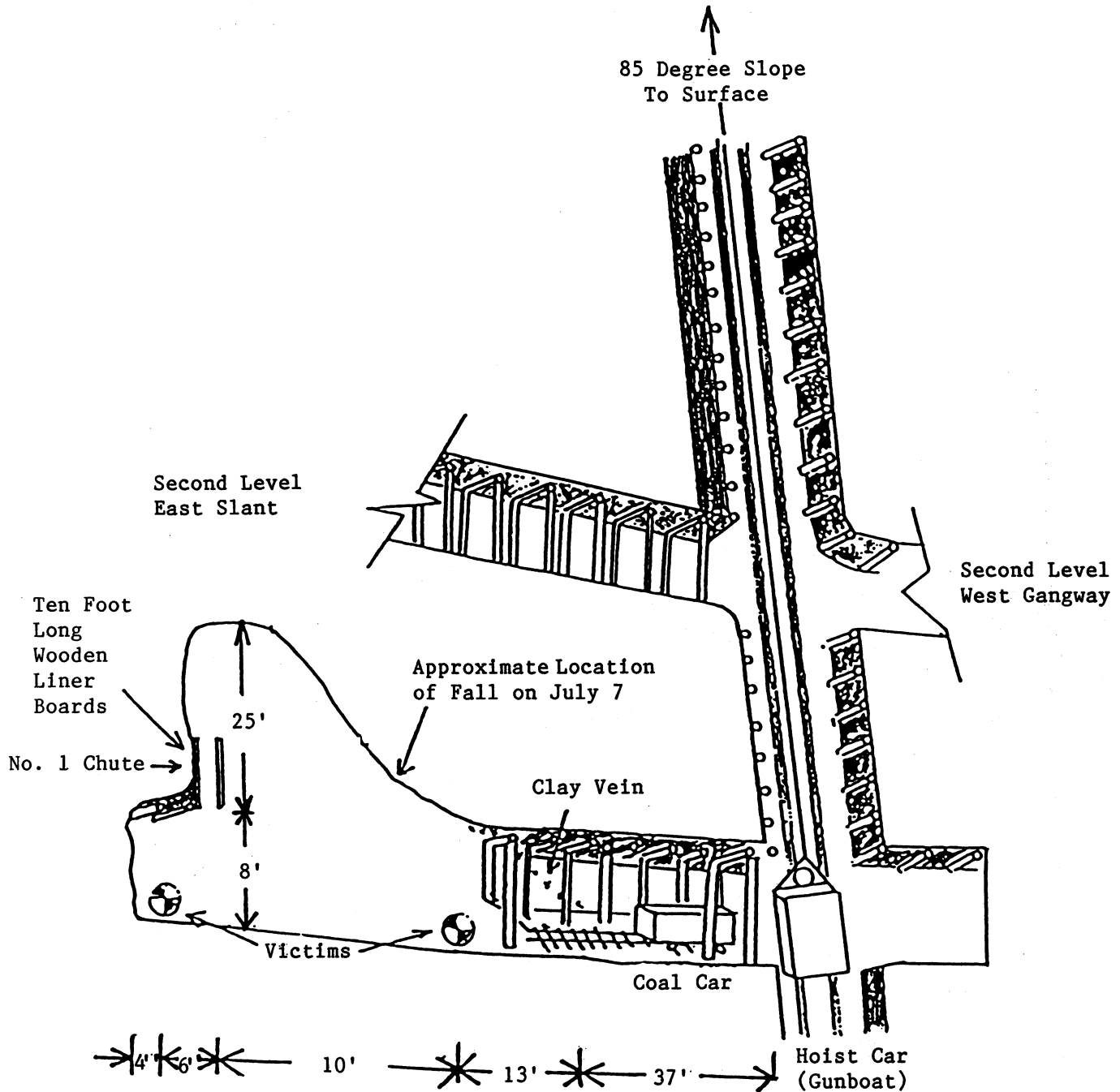
APPENDIX E

LIST OF PERSONS WHO PROVIDED VOLUNTARY STATEMENTS

Bryon C. Swartzlander	-	Hoist Operator L.V. Coal Co.
Scott Wolfgang	-	Mine Rescue Team Member
Dennis Herring	-	Mine Rescue Team Member
Darryl Koperna	-	Mine Rescue Team Member
Gary Brill	-	Independent Miner and Step-brother of Allen Deeter
Dennis Deeter	-	Brother of Alan Deeter
James E. Schoffstall	-	Supervisory Coal Mine Safety and Health Inspector, District 1
Lawrence R. Gazdick, Sr.	-	Coal Mine Safety and Health Inspector, District 1
Dennis L. Myers	-	Coal Mine Safety and Health Inspector, District 1
Jack R. McGann	-	Coal Mine Safety and Health Inspector, District 1
Leonard P. Sargent	-	Coal Mine Safety and Health Inspector, District 1
Harold Glandon	-	Coal Mine Safety and Health Inspector, District 1
Ronald G. Pinchorski	-	Coal Mine Safety and Health Inspector, District 1
Kenneth G. Hare	-	Special Investigator, District 1
Leonard P. Rogers, Jr.	-	Coal Mine Safety and Health Inspector, District 1

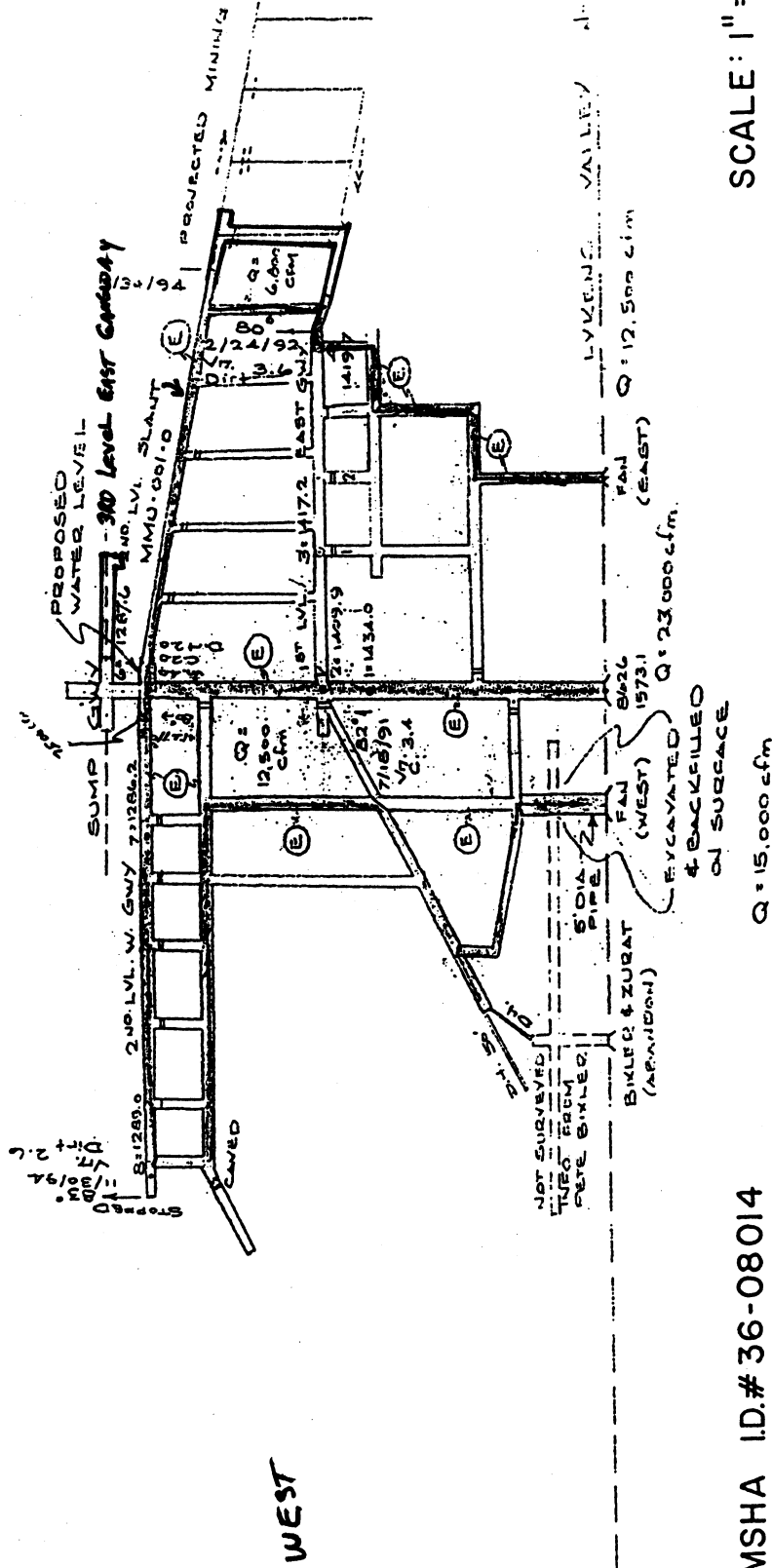
APPENDIX F

SKETCH 2



Drawing Not To Scale

Sketch of Fatal Fall of Pillar
L.V. Coal Co.
No. 4 Slope Mine
MSHA I.D. No. 36-08014
Keffers, Schuylkill County, Pennsylvania
July 25, 1995



MSHA ID.# 36-08014

SCALE: 1" = 100'

ON VEIN SECTION or VIEW OF THE
LV COAL COMPANY'S No.4 Slope

David L. Williams

PORTER TOWNSHIP

SCHUYLKILL COUNTY

PENNSYLVANIA

REVISED 11/30/94