UNITED STATES
DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY ADMINISTRATION

District 9

REPORT OF MULTIPLE-FATAL COAL-MINE ROOF-FALL ACCIDENT
DEER CREEK MINE (I.D. NO. 42-00121)
PEABODY COAL COMPANY
HUNTINGTON, EMERY COUNTY, UTAH

May 12, 1975

by

Tony Gabossi
Coal Mine Inspection Supervisor

Originating Office - MESA
Price, Utah 84501
J. Freeman, Subdistrict Manager
Coal Mine Health and Safety, Price, Utah Subdistrict

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INTRODUCTION

This report is based on an investigation made pursuant to the provisions of the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 742).

A roof fall occurred about 10:55 a.m. on May 12, 1975, that resulted in the death of Roger Luke, Social Security No. [redacted] and Charles R. Larsen, Social Security No. [redacted]. Luke, age 19, and Larsen, age 28, had a total of 6 months and 13½ months mining experience, respectively. Luke was classified as shuttle-car operator and Larsen was classified as roof bolter. This was the 1st day Larsen had performed duties of continuous-mining-machine helper and had received no previous training at this occupation. Larsen is survived by his widow and one dependent. Luke was unmarried and had no dependents. The continuous-mining machine was equipped with a substantially constructed cab which protected the operator from sustaining injuries.

During recovery operations a second fall of roof occurred about 11:10 a.m. the same day, which resulted in the death of Alfred Willis, bruises and abraisions to David Cave, mine manager, and fractured pelvis to Vernon Wilson. Willis, age 28, Social Security No. [redacted] had 11 months mining experience, 2 months classified as laborer with this company. He is survived by his widow and three dependent children. Cave, age 33, had 16 years mining experience, 1 year as classified. Wilson, age 29, trainee, had 2 months mining experience.

The Price, Subdistrict office of Mining Enforcement and Safety Administration was notified of the accident at about 11:30 a.m., on May 12, 1975, and an investigation was started immediately.

Information for this report was obtained from company officials, employees, eyewitnesses, and from an investigation at the scene of the accident.

GENERAL INFORMATION

The Deer Creek mine is opened by four drifts into the Blind Canyon coalbed, which averages 14 feet in thickness. Of the 303 men employed, 256 work underground on three coal-producing shifts a day and produce an average of 4,000 tons of coal daily. All coal is loaded with continuous-mining machines into shuttle cars which dump onto belt conveyors for transporting to the surface.

The operator's training and retraining program was approved May 2, 1974, by Mining Enforcement and Safety Administration, and the following courses are offered by the company:

First-Aid Methods
Principles of Mine Rescue
Oxygen-Deficiency and Methane-Detecting Devices
Safe Use and Care of Permissible Flame Safety Lamp
Use of Self-Rescuer
Coal Mine Health and Safety Act of 1969
Coal Mine Ventilation
Roof and Rib Control
Safe Use and Handling of Explosives
Permissible Mining Machinery
Electrical Safety
Man-Hoisting Equipment

Charles R. Larsen had received training in the following courses:

MSA Methane Spotter
G-70 Methanometer
Use of Self-Rescuer
Use of Breathing Apparatus Draeger
First-Aid Methods
Roof and Rib Control
Coal Mine Ventilation
Haulage

Roger Luke received orientation when he was reemployed on March 1, 1975, and had received no other training.

Alfred Willis had received training in the following courses:

MSA Methane Spotter
G-70 Methanometer
Use of Self-Rescuer
Safe Use and Care of Permissible Flame Safety Lamp

The immediate supervisor, James Noyes, section foreman, had 5 years mining experience, the last year as supervisor, and had received training in First-Aid Methods, Self-Rescuer, Use of Draeger Breathing Apparatus, Safe Use and Care of Permissible Flame Safety Lamp, MSA Methane Spotter,

and G-70 Methanometer. Noyes was certified by the Industrial Commission of Utah as a mine foreman. Kelly Kofford, mine superintendent, is designated as principal officer in charge of health and safety at the mine.

Safety meetings were conducted weekly on each section by the section foreman.

Training classes were scheduled on May 5-9, 1975, by MESA instructor and were as follows: Roof and Rib Control, Coal Mine Ventilation, Oxygen-Deficiency and Methane-Detecting Devices, Safe Use and Care of Permissible Flame Safety Lamp, and Principles of Mine Rescue. Nine persons reported for the training classes; therefore, the classes were cancelled.

The investigation was conducted by Mining Enforcement and Safety Administration personnel. The following persons furnished information or were present during the investigation:

Peabody Coal Company

Joe Craggs	Vice President
William Smith	Assistant Safety Director
Tom Herman	General Superintendent
Neldon Sitterud	Assistant General Superintendent
Byrd Gordon	Mine Safety Director
Kelly Kofford	Mine Superintendent
David Cave	Mine Manager
Leland Olsen	Assistant Mine Manager
Jim Noyes	Section Foreman
Michael Greenan	Chief Electrician

United Mine Workers of America

Doug Tollis	International Safety Coordinator, District 22
Perry McArthur	Safety Committee Chairman, Local No. 1769
Barney Jensen	Safety Committeeman, Local No. 1769
Edward Lyerla	Safety Committeeman, Local No. 1769
Marvin Richardson	Safety Committeeman, Local No. 1769
Chester Housekeeper	Continuous-Mining-Machine Operator
Jerry L. Olsen	Faceman
Kirk Hansen	Shuttle-Car Operator
Vernon L. Wilson	Trainee

Industrial Commission of Utah

Frank Ularich	State Mine Inspector
Steve Hatsis	State Mine Inspector

United States Geological Survey

James J. Travis	Deputy Mining Supervisor

Mining Enforcement and Safety Administration

Tony Gabossi	Coal Mine Inspection Supervisor
Harry Carter	Coal Mine Safety Specialist, Washington Office
Ted Milovich	Federal Coal Mine Inspector
Jack E. Judi	Federal Coal Mine Inspector (Electrical)
William P. Knepp	Mining Engineer, Denver Office
Jerry Davidson	Denver Technical Support Center
M. L. Ellickson	Denver Technical Support Center

The last Combined Health and Safety inspection at the mine was completed on March 26, 1975; the last spot inspection was made May 8, 1975.

The mine was developed by room-and-pillar method. Entries, rooms and crosscuts were driven 20 feet wide on 100-foot-maximum centers. Pillars were being extracted in one section of the mine.

The immediate roof in the 1 south section where the accident occurred consisted of top coal 1 to 2 feet in thickness overlain by approximately 2 feet of slickensided firm slate containing vertical slips and horizontal fractures that were not detectable prior to the accident. Water dripping from the roof existed throughout the entire 1 south section, and it was obvious after the accident that this contributed in separating the immediate roof from the main sandstone roof. Wet roof condition was prevalent at various locations in the mine.

The minimum roof-control plan, approved October 16, 1974, requires permanent supports (timber) be installed on 8-foot centers 4 feet from the rib, which provides a 16-foot roadway. When adverse roof conditions are encountered, spot roof bolting shall be used as a supplement to the conventional supports and shall be installed on 4-foot centers lengthwise and crosswise, a minimum of 4 feet in length. Temporary supports are to be installed where it is necessary to perform any work inby permanent supports. During recovery operations the roof-control plan was not followed, in that the plan for recovery operations was not posted and followed. A Notice of Violation was issued.

On March 18, 1975, the inspector visited the mine, reviewed the roof-control plan and conditions underground and determined the roof-control plan was inadequate and requested in writing, to the District Manager, that the plan be revised requiring a full roof-bolting program be initiated as soon as possible. A revised plan was submitted by the company on April 24, 1975, and was being reviewed by the roof-control specialist in the Price, Subdistrict office when the accident occurred.

DESCRIPTION OF THE ACCIDENT

The crew, under the supervision of James Noyes, section foreman, arrived at the working section at approximately 8:30 a.m. Noyes examined the face areas, which included sounding the roof in the accident area and located one crosscut outby the face of 1 south belt entry. He returned to the kitchen and informed the crew the area was safe and electrical equipment could be energized. The continuous-mining-machine helper was absent this day so Charles Larsen (roof bolter) was assigned those duties.

Housekeeper (continuous-miner operator), and Larsen (victim) proceeded into the face area where the continuous-mining machine was parked, while shuttle-car operators Hansen and Luke (victim), aligned their shuttle cars for haulage purposes. Approximately 8:55 a.m., mining commenced and continued without incidence until approximately 9:30 a.m., at which time the water to the continuous-mining machine went off. Noyes instructed the shuttle-car operators and the mining-machine operator to clean the shuttle cars, reset two timbers which were dislodged where the shuttle cars pass, and to remove the loose coal around the feeder breaker. Noyes proceeded to the telephone and contacted the dispatcher to find out why the water was off. In the meantime, he informed Marvin Richardson, mechanic, to proceed to 2 west section and start the pump. Noyes returned to the mining machine and told Housekeeper to clean things up and rock dust the area while he checked out the water problem. At the 2 west section he found the pump operating; he bled the air out of the line and returned to the mining machine where Housekeeper was repairing a blownout water hose. Noyes continued on into the working face, made a gas test and sounded the roof. This was about 10:30 a.m. Noyes then proceeded to the adjacent entry where a crew assigned for cleanup operations was working. At this time the continuous-mining machine started operating and continued for a short time, then operations ceased. Noyes returned to the crosscut where the mining machine was located and observed Housekeeper, Larsen and Luke moving the continuous-miner cable. He asked Luke what he was doing off the shuttle-car, and Luke replied that the conveyor belt had stopped. Noyes proceeded to the telephone.

Housekeeper had rounded the left side of the crosscut and moved to the right side, where he established the right rib line. In doing so, he

left bottom coal. He was in and out of the protective cab several times and each time he tested the roof. While the conveyor belt was off, Luke came up to the continuous-mining machine and was talking to Larsen. Housekeeper reentered the cab and started to remove the bottom coal. About 10:40 a.m. he heard a cap piece on a timber pop behind the machine, and as he looked over his shoulder the fall occurred.

About this time the mechanic, Richardson, was entering the accident area, when he overheard Hansen, who was waiting at the bypass, shout at Luke to get on his shuttle car. Richardson continued into the section to relay the message to Luke, and as he approached the shuttle car, which was parked near the continuous-mining machine, he immediately observed the machine covered by the roof fall. Richardson did not hear or see the roof fall. He immediately ran back to the power center and deenergized the power to the two shuttle cars and continuous-mining machine. He continued out to the phone where Noyes was informed of the accident. Noyes and Richardson ran directly to the continuous-mining machine and Noyes called out to Housekeeper, asking if he was hurt and if Luke and Larsen were near the machine. Housekeeper replied he was all right but Larsen and Luke (victims) were under the fall. Noyes instructed Charles Olsen to summon the monorail crew located outby the working section, and for Jerry Olsen and his crew to commence setting safety timber while he (Noyes) telephoned the dispatcher for assistance and tools. Then he returned to the fall area to supervise recovery operations.

Approximately 11 a.m., Kofford, Cave, Greenan, and Gordon arrived at the scene, bringing tools necessary for recovery operations. Kofford instructed Greenan to set timber in the 1 right crosscut and for Cave to proceed around the fall area to assist Noyes and his crew. Kofford proceeded to the telephone, called the surface and requested the company medic, Michael Sczesnick, be dispatched to the accident scene immediately. He was informed the medic was on his way inside. He requested additional first-aid boxes and another man trip to transport the main west crew to the accident scene to assist with recovery work.

The company maintains an ambulance at the mine in conjunction with a trained male nurse. Additional ambulances were furnished by Utah Power and Light Company, Emery County Sheriff's Department, and Carbon Hospital, Price, Utah. Dr. O. B. Spencer was called to the mine and remained there during recovery operations.

During recovery operations the safety posts which were installed (approximately eight or nine) were not adequate to support the loose overhanging roof and rib. A second fall occurred, striking Dave Cave, Vernon Wilson and Alfred Willis, victim. Noyes, with the help of others, immediately removed Wilson and Cave from the fall area. The men were examined for injuries and determined through discussion and observations that Wilson sustained pelvis injuries. It was determined that Cave was not

seriously injured. Both men were immediately transported to the surface, where an ambulance awaited to transport them to the hospital in Price, Utah. Cave was released from the hospital the following day when the doctor's examination revealed no serious injuries. Willis (victim) was recovered at 12:10 p.m. and transported to the surface, where he was pronounced dead by Dr. O. B. Spencer.

Housekeeper was removed from the substantially constructed cab of the continuous-mining machine at 12:25 p.m., without sustaining injuries. It is important to note the size of the openings of the cab (6 to 8 inches) prevented rock from entering and causing serious injuries to the operator.

Recovery of the remaining two victims proceeded without incident. Luke was recovered at 1:55 p.m., and Larsen at 11:25 p.m. Both victims were pronounced dead upon arrival at the surface by Dr. O. B. Spencer. The roof fall was approximately 41 feet long, 32 feet wide and varied in thickness from 16 to 48 inches.

CAUSE OF ACCIDENT

Failure of management and workmen to recognize and evaluate the hazardous roof condition that existed in the area and to install adequate roof supports before the crosscut was started at the three-way intersection was the cause of the initial accident.

Cause of the second accident was management's failure to properly supervise rescue operations.

FINDINGS OF FACT

1. The roof was not adequately supported at the three-way intersection in the main entry (belt entry) in 1 south section, where No. 87 crosscut was being started to the left; a violation of Section 75.200.

2. The approved roof-control plan was not being complied with, in that the opening to the crosscuts between entries had been driven excessively wide in the 1 south section (crosscut opening widths ranged from 22 to 29 feet), which was a result of poor mining practices; a violation of Section 75.200.

3. The roof-control plan was not being complied with, in that the plan for recovery work was not posted in the area following the initial roof-fall; a violation of Section 75.200.

4. The recovery crew installed inadequate temporary supports on loose material after the initial fall.

5. A second fall occurred during recovery operations, which resulted in the death of one employee and injuries to two employees.

6. Horizontal fractures and vertical slips in the roof were evident in the cavity left by the fall.

7. Coal which had been left on the roof for support purposes could have affected the examination and detection of the roof condition.

8. Water was observed dripping from the roof in the fall area.

9. Employees stated the roof had been tested (visual and sound methods) several times by Noyes, section foreman, and Housekeeper, continuous-mining machine operator.

10. The cab on the continuous-mining machine prevented injury to the continuous-miner operator.

REQUIREMENTS

1. The roof-control plan shall be revised to require full roof bolting throughout the mine and temporary supports shall be installed immediately after each mining cycle is complete. When loose roof, water, or fractures are encountered, additional supports shall be installed.

2. Where falls have occurred management shall devise and have in writing, at the scene of the fall, a plan incorporating the procedures for recovery.

3. During recovery operations work shall be performed under the direct and constant supervision of a company official, and loose overhanging roof shall be taken down or adequately supported before workmen are permitted to work in the area.

4. All underground employees shall be retrained and thoroughly instructed in the requirements of the new roof-control plan for safe and proper bolting procedures.

NOTICES AND ORDERS

Order 103(f)

A roof fall has occurred underground at crosscut No. 87 of the belt-conveyor entry in the 1 south section.

Action Taken

Order No. 1JEJ Form 103(f), was issued May 12, 1975, permitting only the persons necessary to recover the victims and the investigating committee to enter the area. The order was modified May 13, 1975, to include the entire underground mine, to determine the roof conditions in other active workings of the mine. The order was modified three more times on May 13, 1975, and once on May 14, 1975, to permit sections of the mine to operate after an investigation of each section was complete. The order will remain in effect in the 1 south section until rehabilitation is complete.

Violation - Section 75.200

Notice of Violation No. 1JEJ was issued on May 12, 1975, on Form 104(b), requiring that this violation be abated by May 14, 1975. Work commenced immediately and the notice was extended three times while rehabilitation is in progress, to June 12, 1975.

Violation - Section 75.200

Notice of Violation No. 2JEJ was issued on May 12, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., May 14, 1975. The notice was extended to 10 a.m., May 21, 1975.

Violation - Section 75.200

Notice of Violation 1TRM was issued on May 13, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., on May 15, 1975.

Violation - Section 75.200

Notice of Violation 2TRM was issued on May 13, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., on May 15, 1975.

Violation - Section 75.200

Notice of Violation 3TRM was issued on May 13, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., on May 15, 1975.

Violation - Section 75.200

Notice of Violation 1TRM was issued on May 14, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., on May 15, 1975.

Violation - Section 75.200

Notice of Violation 2TRM was issued on May 14, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., on May 15, 1975.

Violation - Section 75.200

Notice of Violation 3TRM was issued on May 14, 1975, on Form 104(b), requiring that this violation be abated by 8 a.m., on May 15, 1975.

Respectfully submitted,

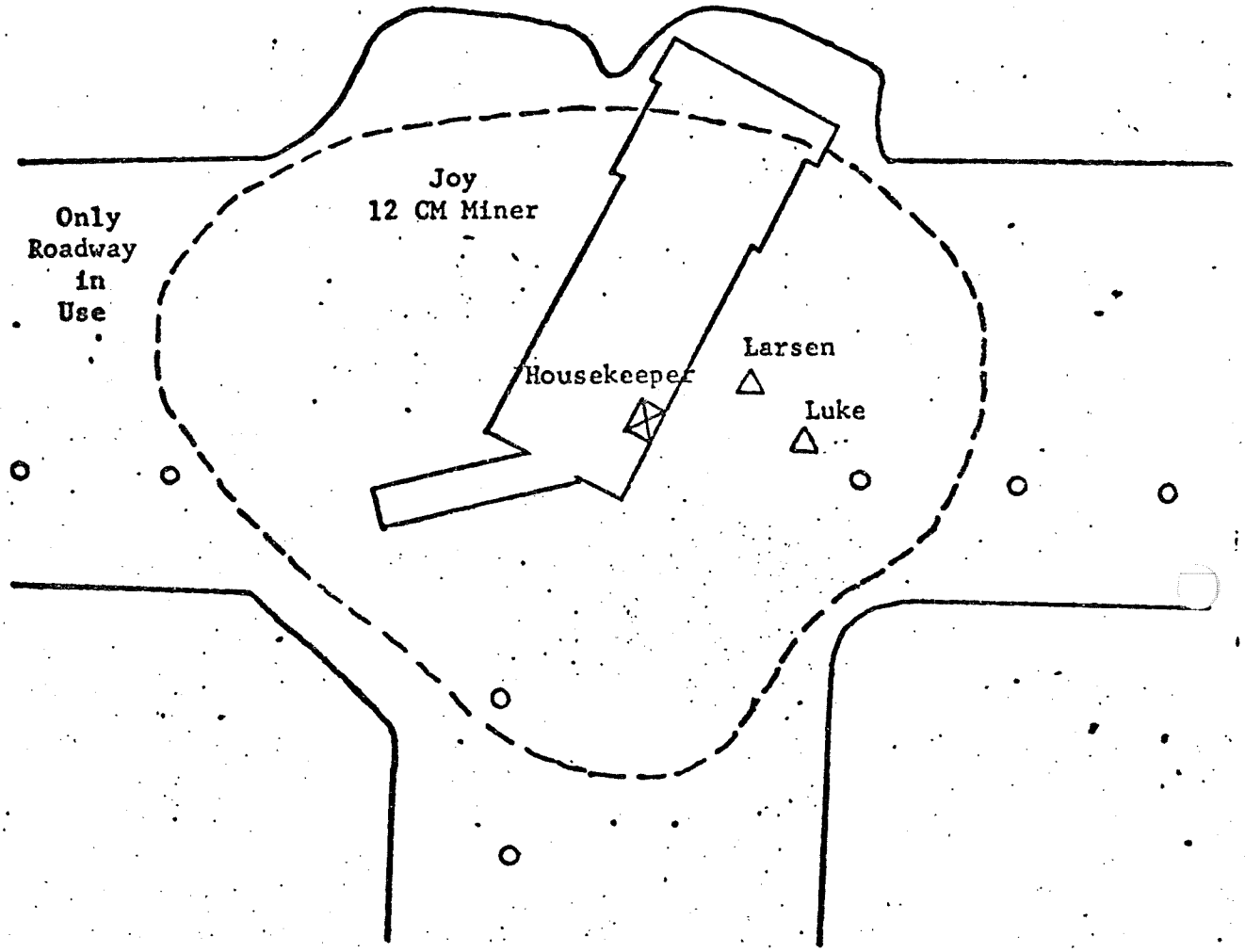
Tony Gabossi

Tony Gabossi
Coal Mine Inspection Supervisor

BELT ENTRY, #87 CROSSCUT

1ST SOUTH SECTION

INITIAL FALL



MULTI-FATAL ROOF FALL ACCIDENT
DEER CREEK MINE
PEABODY COAL COMPANY
HUNTINGTON, EMERY COUNTY, UTAH

Legend:

- O - Post
- △ - Victim
- ⊠ - Operator in Cab
- ——— Fall Line

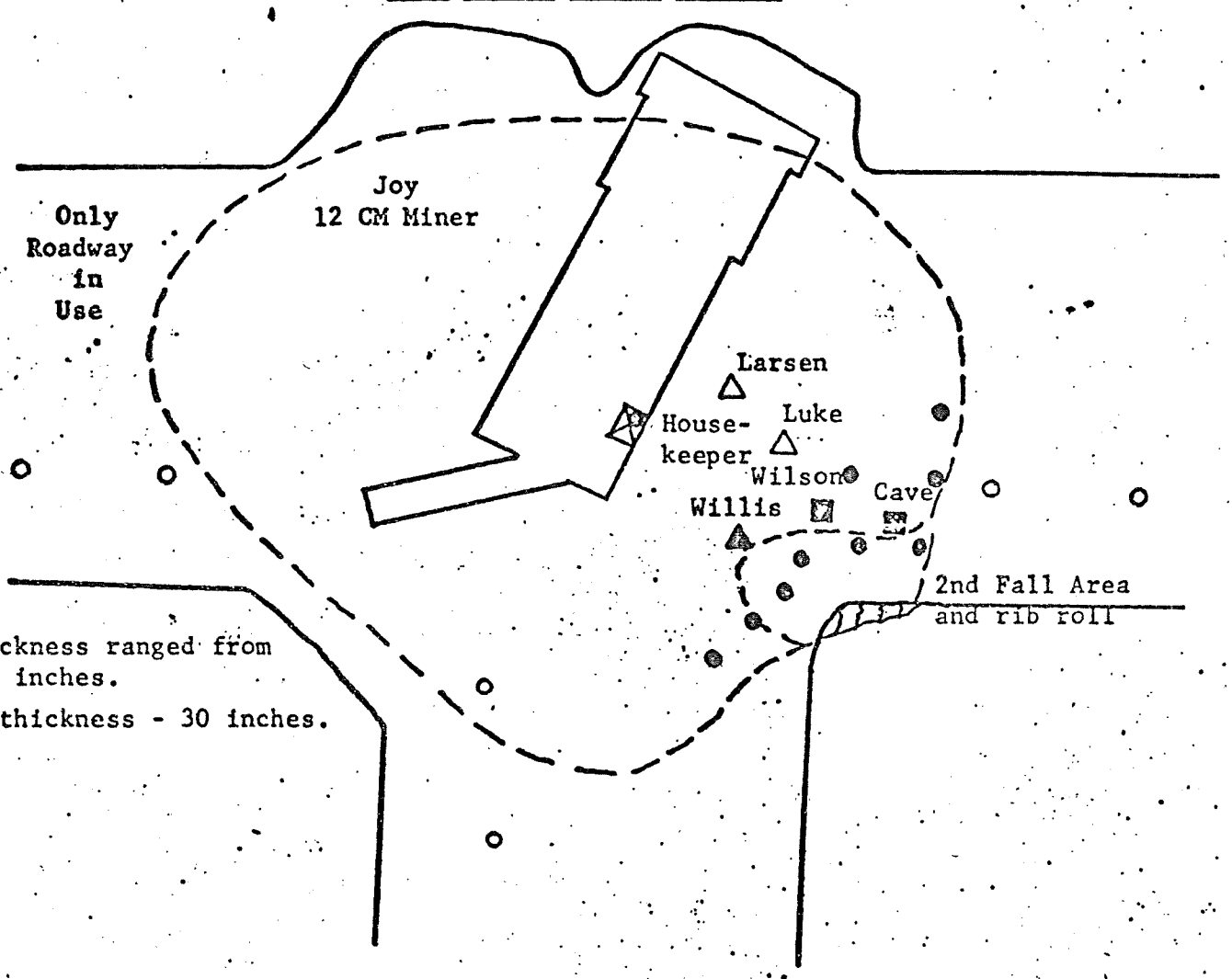
Scale:
1" = 10'

DRAWING 1

BELT ENTRY, #87 CROSSCUT

1ST SOUTH SECTION

FALL DURING RESCUE ATTEMPT



Fall thickness ranged from 16 to 48 inches.

Average thickness - 30 inches.

MULTI-FATAL ROOF FALL ACCIDENT
DEER CREEK MINE
PEABODY COAL COMPANY
HUNTINGTON, EMERY COUNTY, UTAH

Legend:

- ⊠ - Operator in Cab
- ○ - Post set prior to initial fall
- ● - Post set prior to second fall
- △ - Victim - initial f
- ▲ - Victim - 2nd fall
- ▣ - Injured - 2nd fall

Scale:
1" = 10'

DRAWING 2