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COAL FATAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DISTRICT C

REPORT OF MULTIPLE FATAL ROOF-FALL ACCIDENT
STEPHENS ELKHORN MINE
STEPHENS ELKHORN FUEL CORPORATION
MANTON, FLOYD COUNTY, KENTUCKY

1500000

February 8, 1966

By

Raymond Linville
Federal Coal Mine Inspection Supervisor

Originating Office - Bureau of Mines
Barbourville, Kentucky 40906
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INTRODUCTION

This report is based on an investigation made in accordance with provisions of the Federal Coal Mine Safety Act (66 Stat. 692; 30 U.S.C. Secs. 451-483).

A roof fall occurred in No. 1 barrier room off 1 south mains in the Stephens Elkhorn mine at 1:30 p.m., Tuesday, February 8, 1966, and resulted in the instant death of the four men who were in the place when the accident occurred; the victims were removed from under the rock about 1 hour later. The names of the victims, their ages, martial status, experience, occupation, and number of dependents are listed in Appendix A of this report.

The Bureau of Mines office at Hazard, Kentucky, was notified of the occurrence by an official of the company at 5 p.m., February 8, 1966, and an investigation of the accident was made the following day.

GENERAL INFORMATION

The Stephens Elkhorn mine is off State Highway Route No. 1210 at Manton, Kentucky, and it is opened by drifts in the Elkhorn No. 3 coalbed, which averages 36 inches in thickness in the areas being mined. Of the 82 men employed, 12 worked on the surface and 70 worked underground on 2 coal-producing shifts and 1 maintenance shift a day, 5 days a week. The average daily production was 750 tons of coal, of which 60 percent was loaded by a mobile loading machine into shuttle cars and the rest was loaded by a mobile loading machine with a bridge conveyor attachment onto chain conveyors.

The mine was developed by a room and pillar method. Main, cross, and room entries were driven in sets of four to seven; room entries were turned at various intervals. Entries and rooms were driven about 25 to 30 feet wide, and crosscuts were generally made at 60-foot intervals. Partial recovery of barrier pillars was practiced and was accomplished by driving rooms through the pillars.

The immediate roof in the section where the accident occurred was fragile shale (draw rock), 3 to 4 inches in thickness, and was taken down as the faces were advanced; the main roof ranged from fragile to firm shale. The adopted plan of timbering required permanent timbers to be set on 4-foot centers along each side of the roadways to within 8 feet of the faces and safety posts to be set between the workmen and faces. The extent of timbering in the area of the accident immediately prior to the accident could not be determined accurately; however, the timbering plan was not followed in that some of the permanent timbers in the place were 7 feet apart, were 15 feet from the face, and were set on footsills made of round timbers. Also, improperly supported, loose roof was present at numerous locations along 2 east haulageway from the portal to the intersection of 2 west haulageway and for a distance of 100 feet inby 2 west haulageway to the loading point in 1 south main section.

A Withdrawal Order, Form A, was issued February 9, 1966, during a spot-check inspection following the investigation of the accident, for a man-trip danger along 2 east haulageway from the portal to the intersection of 2 west haulageway and for a distance of 100 feet inby 2 west haulageway to the loading point in 1 south main section.

Working places in 1 south mains section were driven in pairs, and coal was loaded by a Joy loading machine, Model No. 12 B. U., with a Long PT-12 bridge conveyor attachment onto Long chain conveyors. Coal was drilled, before undercutting, with a Long coal drill, Model TDF-10, and the drill and loading machine were trammed between the faces of the two working places. A Goodman mining machine, Model No. 512, was used in each working place to undercut the coal, and after cutting operations were completed, the machine was pulled on the bottom back from the face along the left rib and remained in the place until needed.

Information for this report was obtained from a visit to the scene of the accident and from company officials and employees; there were no eyewitnesses.

The investigating committee consisted of:

Stephens Elkhorn Fuel Corporation

B. L. Brashear	President
Cecil Sherman	Superintendent
Rufus Stephens	Mine Foreman
William Morgan	Section Foreman
James Ratliff	Safety Committeeman
Melvin Frasure, Jr.	Safety Committeeman
Orville Ousley	Safety Committeeman, Chairman

about 1:30 p.m., Fraley had drilled four holes in the face of the room and was tramping the machine into position to drill the final hole in the left rib when the rock fell; Wells, Fraley, Stone, and Litton were caught and killed instantly by the falling rock. William Morgan and Russ Morgan, who were in No. 2 barrier room, heard the rock fall, and they immediately ran to No. 1 barrier room to see what had happened. After determining that all four men were caught under the rock fall, they went to the nearby loading point and summoned aid, by phone, from company officials who arrived on the section shortly thereafter. The bodies of the victims were removed from under the rock about 1 hour later and transported to the surface.

The rock that fell was 30 feet long, 30 feet wide, and from 0 to 8 inches thick; the rock broke into several pieces either as it fell or after striking the bottom. Reportedly, three timbers, two from the face area in by the fall and one along the left rib of the place, were removed and used as cribbing when the victims were being removed from under the rock.

William Morgan stated that he examined and tested the roof with a mechanic's hammer about 20 minutes before the accident occurred, and that he did not detect any loose roof or unusual roof conditions. He also stated that he considered the roof to be timbered adequately when he left the place.

CAUSE OF ACCIDENT

Working in an area of inadequately and improperly supported roof was the direct cause of this accident. Failure to follow the company's timbering plan, lack of proper supervision, failure to properly test and evaluate the roof condition, and failure to supply timbers of proper length were contributing factors.

RECOMMENDATIONS

Compliance with the following recommendations may prevent accidents of a similar nature in the future.

1. No person should work or be permitted to work in an area of inadequately or improperly supported roof.
2. The company's timbering plan, with respect to setting permanent timbers along each side of the roadways to within 8 feet of the faces, should be complied with, and when roof of this nature (draw rock) is encountered, the plan should be revised to include the use of roof bolts and/or crossbars.
3. The roof should be more thoroughly tested to properly evaluate the roof condition, and suitable testing rods should be used.

4. Closer and stricter supervision should be maintained in regard to roof conditions and timbering practices throughout the mine, and timbers of proper length should be provided for use in the face areas.

5. The roof and ribs of all active roadways and travelways in a mine should be adequately supported to protect persons from falls of roof and ribs.

Although the following recommendation has no direct bearing on this accident, it should be followed in the interest of safety:

1. Roof supports in place during recovery operations should not be removed until equivalent protection is provided.

ACKNOWLEDGMENT

The cooperation of company officials and employees, State mine representatives, and the representative of the Old Republic Insurance Company during this investigation is gratefully acknowledged.

Respectfully submitted,

/s/ Raymond Linville

Raymond Linville

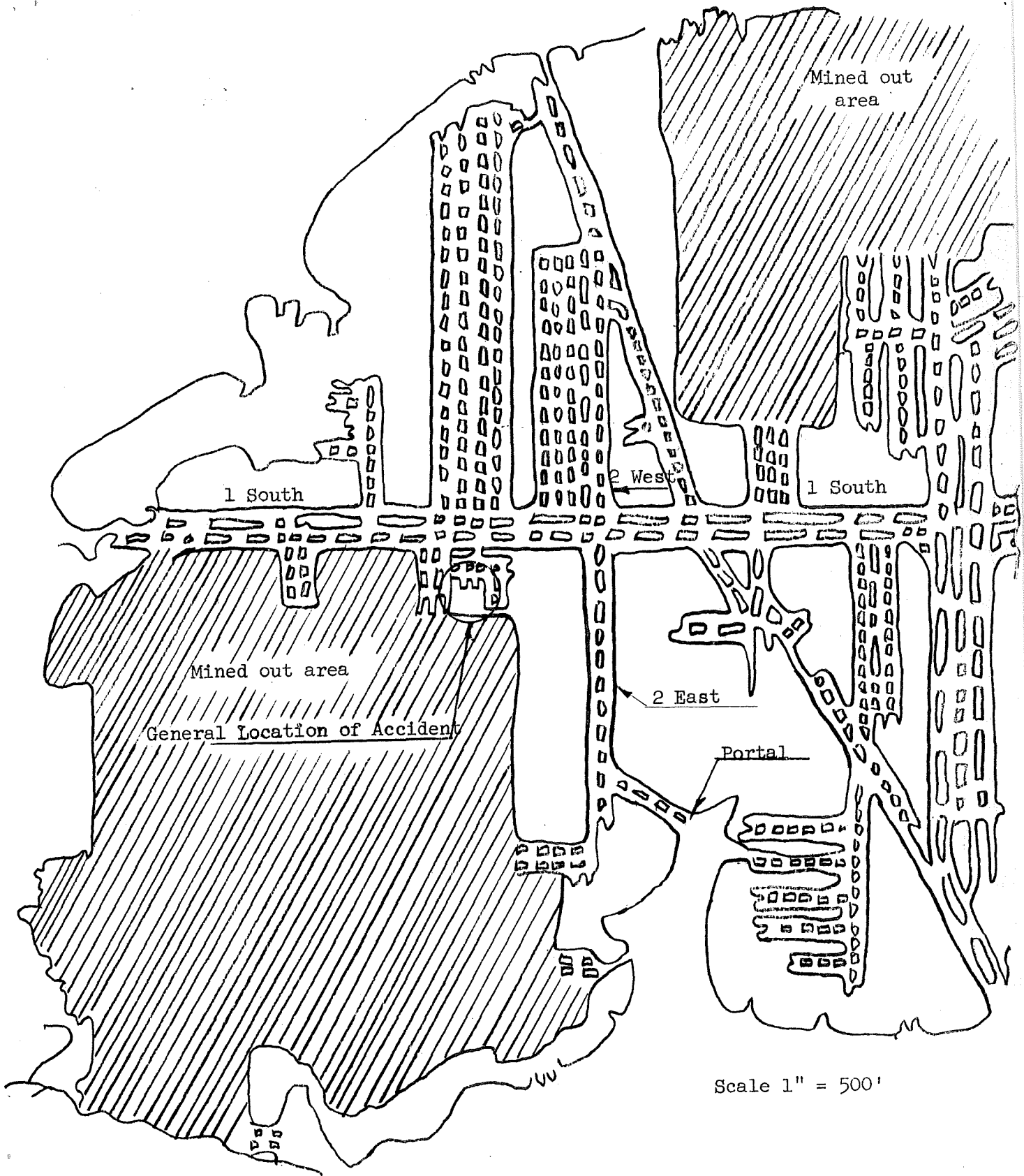
APPENDIX A

VICTIMS OF MULTIPLE FATAL ROOF-FALL ACCIDENT
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DECEASED

<u>Name</u>	<u>Age</u>	<u>Occupation</u>	<u>Mining Experience Years</u>	<u>Marital Status</u>	<u>Number of Dependents</u>
Evan Stone	64	Utility Man	16	Married	3
Calep Wells	57	Mining Machine Operator	17	Married	2
Ervin Litton	52	Faceman	17	Married	1
J. W. Fraley, Jr.	38	Drill Operator	16	Married	2



Scale 1" = 500'

SKETCH NO. 1
 MULTIPLE FATAL ROOF-FALL ACCIDENT
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Reportedly timbers were set at these three locations prior to the accident and were removed for use as cribbing during the removal of the victims

TDF-10 mobile drill

512 Goodman mining machine

Roadway to No. 2 Room

Calep Wells victim

Ervin Litton victim

Extra conveyor pan

NO. 1 Room

J. W. Fraley victim

Rock that fell 30'x30'x0" to 8" thick

Evan Stone Victim

Bridge conveyor

Chain conveyor

Scale 1"=10'-0"

○ Timbers

◻ Timbers set on round timbers

SKETCH NO. 2
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