

COAL FATAL

1961-0136

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DISTRICT I

REPORT OF MULTIPLE FATAL COAL-MINE ~~ACCIDENT~~ ACCIDENT

NO. 4 MINE, WEST SECTION (ABANDONED)
STEARNS COAL AND LUMBER COMPANY
WORLEY, McCREARY COUNTY, KENTUCKY
(Post Office: Stearns, McCreary County, Kentucky)

August 5, 1961

By

C. E. Hyde
Federal Coal-Mine Inspector

Originating Office - Bureau of Mines
Barbourville, Kentucky
G. W. Parry, Subdistrict Supervisor
Barbourville, Kentucky Subdistrict, Health and Safety District I

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REPORT OF MULTIPLE FATAL COAL-MINE FIRE ACCIDENT

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INTRODUCTION

On Saturday afternoon, August 5, 1961, 3 men were overcome by carbon monoxide and a deficiency of oxygen in the 4 left haulage entry of No. 4 mine, West Section. The accident occurred while the men were exploring the abandoned mine to determine the feasibility of additional pillar extraction therefrom. Two of the men died during the afternoon and evening of August 5, before being removed from the mine. The third man died 18 days later in the hospital. The names, ages, marital status, experience, occupations, and number of dependents of these victims are listed in Appendix A.

The Barbourville, Kentucky, Subdistrict Supervisor was notified of the accident at 6:30 p.m., Sunday, August 6. He was advised that two of the men had died and that the third man was still alive and had been hospitalized. Exploration work into the abandoned areas was started with Company, State, and Bureau representatives on Monday, August 7, and continued for a prolonged period.

GENERAL INFORMATION

The No. 4 mine, West Section, was opened by several drifts and shafts into the No. 1-1/2 coal bed, which averaged 46 inches in thickness. The mine was opened in 1910 and was operated until March 31, 1953, when it was abandoned. At the time of the last Federal inspection, completed January 27, 1953, a total of 84 men was employed, of which number 70 worked underground on 2 shifts a day. At that time, the average daily production was 350 tons of coal, all hand-loaded into mine cars. The No. 4 mine, West Section, was interconnected with the abandoned No. 11 mine, which was operated in the Nos. 1 and 1-1/2 coal beds; the vertical separation between these coal beds ranged from 17 to 20 feet. The No. 4 mine, West Section,

was also connected with the No. 18 Comargo mine through caved areas. This mine was opened by drifts into the No. 2 coal bed, which overlies the No. 1-1/2 coal bed, and averaged 44 inches in thickness. The interval between Nos. 1-1/2 and 2 coal beds varies from 40 to 80 feet. Some of the workings from the No. 18 Comargo mine had been driven over mined areas of the abandoned No. 4 mine, West Section. At the time of the last Federal inspection of the No. 18 Comargo mine, which was completed June 30, 1961, a total of 57 men was employed underground on 2 shifts a day. The average daily production of 400 tons of coal was loaded by loading machines into shuttle cars. As there were connections between the abandoned No. 4 mine, West Section, and the active No. 18 Comargo mine, there was danger of fumes entering the active working sections. A Withdrawal Order, Form A, was issued to the operator of the No. 18 Comargo mine August 7, 1961.

The abandoned No. 4 mine, West Section, had been developed by a room-and-pillar method. Entries, in pairs, were driven about 15 feet wide on 35-foot centers. Room entries were turned off the mains at 400-foot intervals. Rooms were driven 25 to 30 feet wide to a depth of 200 feet. When this mine was abandoned 8 years previously, all coal production was from removal of pillars. Crosscuts were 60 feet apart.

The No. 4 mine, West Section, was classed nongassy by the State and was not classed gassy by the Bureau. The overlying No. 18 Comargo mine was classed gassy. The ventilating fans for the No. 4 mine, West Section, were removed at the time of abandonment. There was a fan, however, at 3 north portal of the abandoned No. 11 mine; see Appendix C. It had been left intact in the event that either the No. 4 mine, West Section, or the No. 11 mine would be reactivated. Stoppings in No. 4 mine, West Section, were double-wall oak boards with clay packed between the walls, many of which were still in good condition. There were no oil or gas wells on the property; however, some crude oil had issued from the roof, and pools of oil had accumulated occasionally in low places along the haulageways.

In April 1958, an exploratory trip was made into the abandoned No. 4 mine, West Section, to see if it was practical to remove pillars from that abandoned mine. The party, consisting of Company, State, and Federal officials, went into the mine and advanced to within 150 feet of the slope that connected the 1-1/2 coal bed with the No. 1 coal bed at the abandoned No. 11 mine. Smoke was encountered, which hampered further exploration. Although trips were made into the mine from other openings, the fire was not located. The openings of the No. 4 mine, West Section, and No. 11 mine were sealed in May 1958. In January 1960, the fan at 3 north portal of abandoned No. 11 mine was started to assist in ventilating No. 18 Comargo mine.

About 2 weeks prior to the accident, a seal at the Bit Hole opening was removed, and some additional air entering this opening undoubtedly passed over the fire area; see Appendix C. This recent change in ventilation probably permitted fresh air to pass over the smoldering fire and caused it to rekindle to the extent that carbon monoxide was given off and entered the air current. Following the accident, a slight trace of carbon monoxide was detected at the 3 north fan portal of the abandoned No. 11 mine.

Information for this report was obtained from an investigation where the men were overcome and from statements by company officials and employees who took part in the rescue and recovery of the victims. The names of persons who participated in the hearings and investigation are as follows:

Stearns Coal and Lumber Company

R. L. Stearns, Jr.	President
Frank C. Thomas	Vice President and General Manager
Robert Gable	Secretary
John Wright	General Superintendent (Retired)
C. D. Rose	Superintendent, No. 16 mine, No. 2 seam (recently appointed)
J. C. Slaven	Superintendent, No. 18 mines
Dorman Ross	Section Foreman, No. 16 mine, No. 2 seam

Kentucky Department of Mines and Minerals

A. H. Mandt	Commissioner
Henry Hamblin	Principal Inspector
Noah Jackson	Inspector-in-Charge
Otis Cox	Inspector-in-Charge

United States Bureau of Mines

J. S. Malesky	District Supervisor
G.W. Parry	Subdistrict Supervisor
C. E. Hyde	Federal Coal-Mine Inspector

DESCRIPTION OF ACCIDENT

On Saturday morning, August 5, 1961, Maurice Blevins, General Superintendent, T. E. Lafferty, Superintendent, No. 16 mine, No. 2 seam, and Ottis Tucker, Section Foreman, No. 18 mine, entered the abandoned No. 4 mine, West Section, at the 4 west portal; see Appendix B. It was their

intention to explore the possibilities of additional pillar extraction and to determine the amount of damage done by the fire that was discovered and sealed 3 years previously.

It could not be ascertained which areas were traveled or how extensive the explorations of the party were before entering 4 left entry off 4 west, but according to statements made by Mr. Lafferty (survivor who later died) the party had covered many areas. They entered 4 left entry about 12:30 p.m., and traveled toward the Bit Hole panel (fire area), a distance of 23 crosscuts or 1,380 feet from 4 west main, and for some reason decided to return to 4 west main. They retreated one crosscut length, 60 feet, and at 12:50 p.m., removed a portion of a double-wall wooden stopping in No. 22 crosscut attempting to increase the volume of air in 4 left by short-circuiting the air from the area enclosed by the stoppings. They were immediately engulfed by carbon monoxide and oxygen-deficient air. Their flame safety lamp, the only protective device in their possession, was extinguished. The party then retreated a distance of 840 feet to No. 8 crosscut where they each attempted to open a hole in the wooden stopping in No. 8 crosscut; see Appendix B. By this time the men were too weak to open the stopping effectively, but a small opening was made in the wooden wall nearest the entry, the clay was removed from between the walls, and a crack between the boards of the other wall was exposed. This small hole evidently permitted sufficient air to enter to keep two of the men alive for some time. Mr. Tucker died at 1:15 p.m.; Mr. Blevins became unconscious shortly thereafter; Mr. Lafferty's last conscious act, before being rescued, was looking at his watch at 3:15 p.m.

Dr. Frank C. Thomas, Vice President, Stearns Coal and Lumber Company, had been scheduled to accompany the exploration party but was unable to make the trip. At about 6:15 p.m., he was notified that the exploration party had not returned. Dr. Thomas immediately notified M. D. Hudson, State Mine Inspector at Somerset, Kentucky, of the party's failure to return and requested aid in the search. Dr. Thomas and several company employees entered the No. 4 west fan opening at about 7:30 p.m., and, after exploring several areas of both No. 4 mine, West Section, and No. 11 mine, entered the 4 left entry off 4 west main about 10:00 p.m., because of footprints noted on the floor of this entry. The searchers traveled a distance of 480 feet to No. 8 crosscut and found the three men lying near the wooden stopping. It was apparent to the search party that Tucker was not breathing, and they concentrated their efforts on the rescue of Lafferty and Blevins, who were carried to fresh air within a short time. Since these men (searchers) were working without the benefit of protective equipment, considerable difficulty was experienced in bringing the two living men to fresh air at 4 west main entry. Tucker was removed later when State inspectors arrived with Chemox breathing apparatus. Others arrived and assisted State inspectors and by administering oxygen revived Lafferty and attempted to

restore Blevins to normal breathing, but Blevins could not be revived. Because rock falls and other obstructions had to be removed from 4 west haulageway, the recovery operations were not completed until about 2:30 a.m., on Sunday, August 6, 1961. Lafferty, sole survivor, was taken to a hospital at Oneida, Tennessee, where he remained for several days before being transferred to a Louisville, Kentucky, hospital where he died on August 23, 1961.

Sealing of all known openings of the No. 4 mine, West Section, No. 11 mine, and No. 18 Comargo mine was begun on August 15, 1961, and on September 13, 1961, this sealing operation was completed.

CAUSE OF ACCIDENT

Failure to properly evaluate a potential hazard of entering a poorly ventilated section of an abandoned mine without the use of suitable gas-detecting or respiratory-protective devices was the cause of this accident. Attempting to change the system of ventilation in the area by removing part of a stopping without due consideration of the consequences was a contributing factor.

RECOMMENDATIONS

Compliance with the following recommendations may prevent or minimize the results of a similar occurrence:

1. The potential hazards relative to entering abandoned mines should be thoroughly evaluated, and careful planning should be done to minimize such hazards by use of proper detecting and protective devices. Exploratory work should not extend beyond the limits of a reasonably strong current of fresh intake air.
2. When exploratory work is being done, a standby crew should be stationed on the surface near the portal to assist in rescuing persons engaged in such work should the need arise and to check on their location and condition if they do not return at the appointed time. Exploratory work should be done only in cooperation with State and Federal inspectors.
3. Ventilation changes should be attempted by persons engaged in exploratory work only after careful planning and full evaluation of the effects of such change.
4. To avoid the possibility of fires in abandoned mines, all openings should be sealed promptly upon abandonment.
5. The nearest Bureau of Mines office should be notified promptly when serious accidents occur.

ACKNOWLEDGMENT

The cooperation of company officials, employees, and others who participated in the recovery operations and investigation is gratefully acknowledged.

Respectfully submitted,

/s/ C. E. Hyde

C. E. Hyde

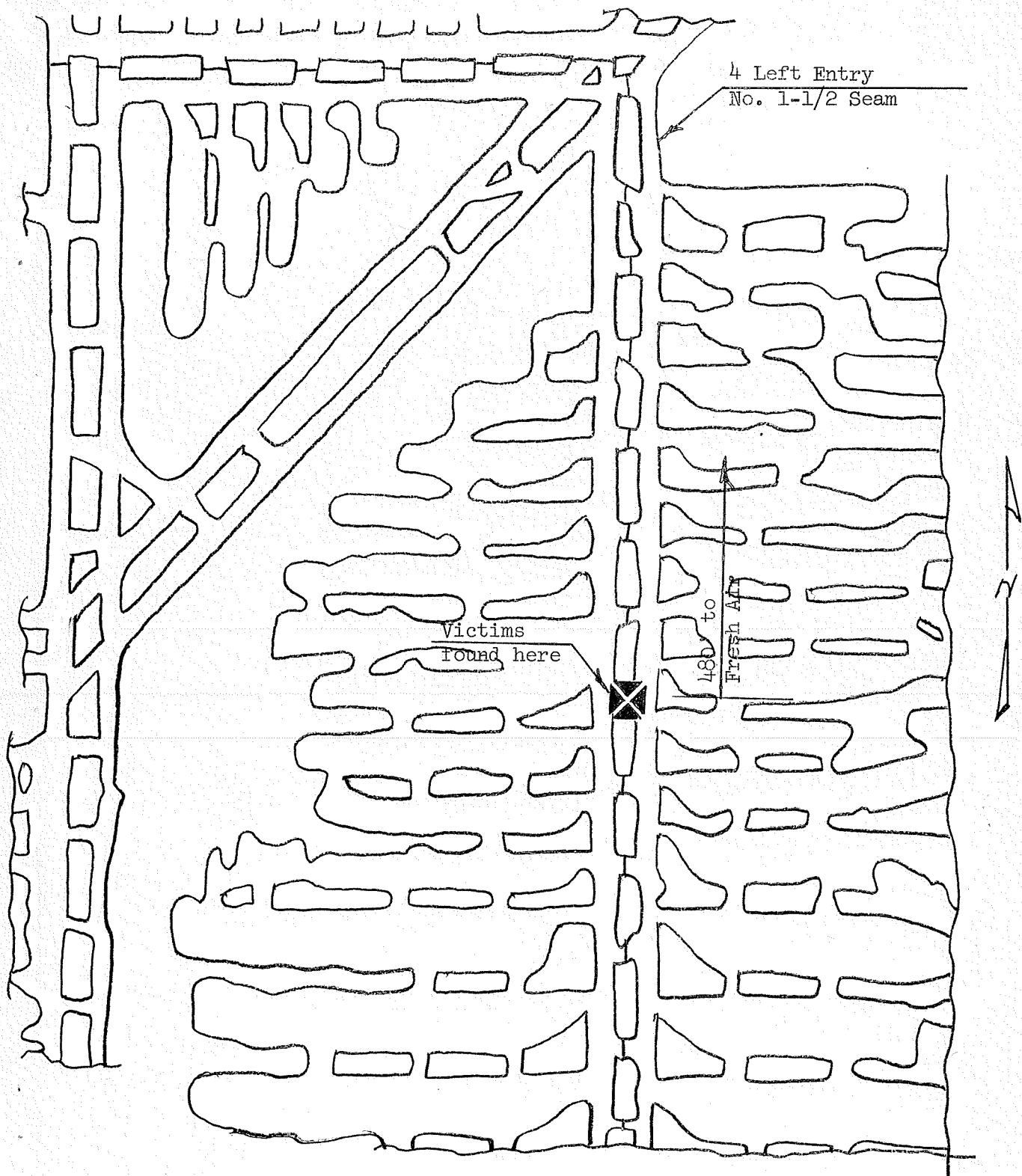
APPENDIX A

VICTIMS OF COAL-MINE FIRE ACCIDENT NO. 4 MINE, WEST SECTION STEARNS COAL AND LUMBER COMPANY WORLEY, McCREARY COUNTY, KENTUCKY

August 5, 1961

DECEASED

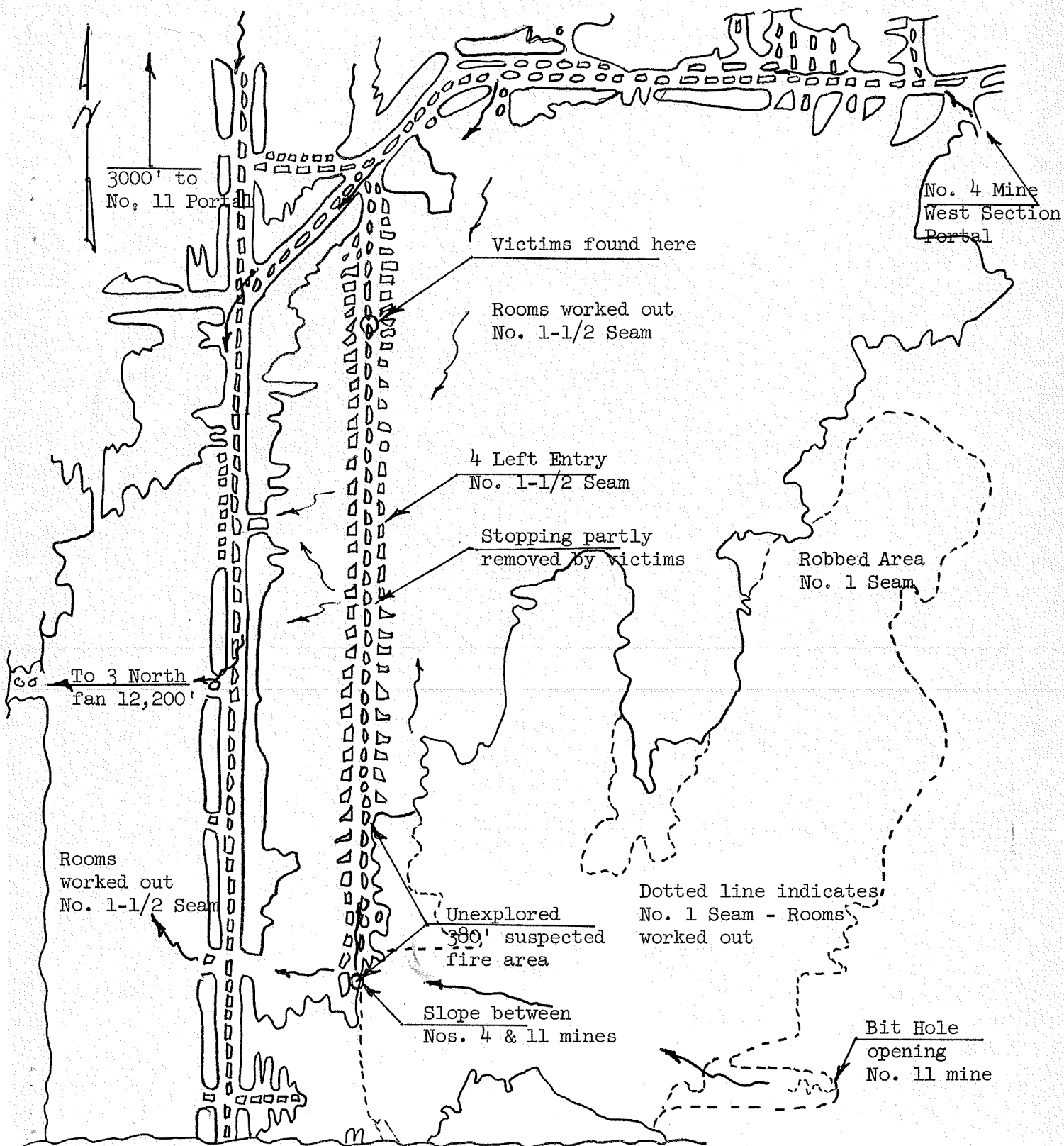
<u>Name</u>	<u>Age</u>	<u>Occupation</u>	<u>Mining Experience Years</u>	<u>Marital Status</u>	<u>Number of Dependents</u>
Maurice Blevins	63	General Superintendent	40	Married	0
T. E. Lafferty	39	Superintendent, No. 16 Mine, No. 2 Seam	20	Married	1
Ottis Tucker	53	Section Foreman, No. 18 3 West Mine	25	Married	1



APPENDIX B
 MULTIPLE FATAL COAL-MINE FIRE ACCIDENT
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Scale 1" = 100'-0"

August 5, 1961



APPENDIX C
 MULTIPLE FATAL COAL-MINE FIRE ACCIDENT
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 STEARNS COAL AND LUMBER COMPANY
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Scale 1" = 400'

August 5, 1961