

Coal Fatal

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# COAL FATAL

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF MINES

BUREAU OF MINES  
Accident Analysis Branch  
DEC 28 1970  
Referred to

Coal Mine Health and Safety District A

BUREAU OF MINES  
I & E Statistics Branch  
JAN 11 1971  
Referred to

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REPORT OF MULTIPLE FATAL COAL MINE ROOF-FALL ACCIDENT

RUSSELLTON MINE

REPUBLIC STEEL CORPORATION

NORTHERN COAL MINES

RUSSELLTON, ALLEGHENY COUNTY, PENNSYLVANIA

December 1, 1970

by

Everett Turner and Walter J. Balitski  
Federal Coal Mine Inspection Supervisors

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co. site record

while carrying a  
timber the roof  
fell completely  
covering them

- widow - Daniel Campbell, assistant mine foreman
- widow - Joseph Gedraitis, continuous miner operator
- widow - Philip Orsini, roof bolter

Originating Office - Bureau of Mines  
4800 Forbes Avenue, Pittsburgh, Pa. 15213  
T. J. McDonald, Acting District Manager  
Coal Mine Health and Safety District A

181 ug.

4:45 P.M.

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REPUBLIC STEEL CORPORATION  
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INTRODUCTION

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

On Tuesday, December 1, 1970, at approximately 4:45 p.m. Daniel Campbell, assistant mine foreman; Joseph Gedraitis, continuous-mining-machine operator; and Philip Orsini, roof-bolting-machine operator, were killed instantly by a fall of roof in an abandoned mined-out area between J and K entries in K face section.

Campbell, age 55, had 35 years mining experience, 18 months as an assistant mine foreman at this mine, and is survived by his widow. Gedraitis, age 59, had 38 years mining experience, 11 years as a continuous-mining-machine operator. He is survived by his widow. Orsini, age 55, had 30 years mining experience, 8 months as a roof-bolting-machine operator at this mine. He is survived by his widow.

Thomas J. McDonald, Acting District Manager of the Pittsburgh, Pennsylvania office of the Bureau of Mines, was notified of the accident at 6:30 p.m. on the day of the occurrence by A. M. Shaffer, Superintendent of Industrial Relations, Republic Steel Corporation, Northern Coal Mines. An investigation was started the same day.

GENERAL INFORMATION

The Russellton mine is at Russellton, Allegheny County, Pennsylvania. The mine is opened by eight shafts and one slope into the Upper (Double) Freeport coalbed, which averages 84 inches in thickness in the areas being mined. Employment was provided for 226 persons of whom 181 worked underground on 3 shifts a day, 5 and 6 days a week. The average daily production was 2,800 tons of coal.

The mine was developed by the block system, and pillars were recovered. Entries were driven on 50- to 100-foot centers, and the distance between crosscuts did not exceed 100 feet. Pillars were recovered by the pocket-and-wing system of mining. Mining in the K face section consisted of recovery of chain and barrier pillars. First mining had been done in the area about 25 years ago.

The immediate roof in the mine was cannel coal, shale, or sandstone; however, in K face section the immediate roof was sandy shale and sandstone. Minimum standards for roof control had been adopted utilizing roof bolts and conventional timbers. Where roof bolts were used in 16-foot-wide places, the plan required roof bolts to be installed on centers not to exceed 4 feet crosswise and 5 feet lengthwise to within 5 feet of the face before starting a continuous-miner run. Continuous-miner runs were limited to 20 feet in pillar workings. The conventional roof-support plan for 16-foot-wide places required at least one row of posts on 7-foot centers so as to leave a roadway space not exceeding 14 feet in width with at least one post or safety jack ahead of the continuous-miner operator at all times. At least three breaker posts were required in each opening to the gob adjacent to an active working place.

In K face section, roof bolts were utilized except for the final pocket and wing after the main pillars had been split. The bolts were installed according to the plan. On mining the final pocket and wing, crossbars were set (on posts) not more than 7 feet apart with at least one crossbar ahead of the continuous-mining-machine operator. No one was permitted in by the last permanent roof support until temporary roof supports were installed, except to install temporary supports. At least two rows of breaker posts were installed in each opening to the gob adjacent to active working places.

A withdrawal Order, Form 104(a) was issued at 9:25 p.m., December 1, 1970, because a massive roof fall had occurred in a pillar-recovery area in K face section killing three persons. The Order covered the three pillar-recovery sections in the mine; K face, 7 west 20 butt, and 26 butt.

On December 2, 1970, five Federal Coal Mine Inspectors conducted an examination of all active workings of the mine. They found the roof in all working places adequately supported and an ample supply of roof-support materials in each section. As a result of their findings during the examination, the Order was terminated December 2, 1970.

Information for this report was obtained from observations at the scene of the accident, from the testimony of Bruno Zawrotniak, shuttle-car operator, and the only eyewitness to the accident, and from statements made by other employees and officials.

The investigating committee included:

Republic Steel Corporation  
Northern Coal Mines

G. E. DeRusha	General Superintendent
A. M. Shaffer	Superintendent of Industrial Relations
J. B. Anderson	Senior Safety Engineer
J. R. Eaton	Mine Superintendent
A. M. Starnes	Safety Supervisor
L. Vidic	General Assistant Mine Foreman

Pennsylvania Department of Mines and Mineral Industries

W. E. Ray	Chief Mine Inspector, Western Division
G. P. Resick	State Deep Mine Inspector, 5th Bituminous District
Paul Hyatt	State Deep Mine Inspector, 1st Bituminous District

United Mine Workers of America

Peter Bernardo	Safety Coordinator
James Maholic	Mine Safety Committeeman
Michael Micklow	Mine Safety Committeeman
Paul Antoninka	Mine Safety Committeeman

United States Bureau of Mines

T. J. McDonald	Acting District Manager, Coal Mine Health and Safety, District A
Everett Turner	Federal Coal Mine Inspection Supervisor
Walter J. Balitski	Federal Coal Mine Inspection Supervisor
J. Blevins	Federal Coal Mine Inspector
J. Garcia	Federal Coal Mine Inspector
D. McNece	Federal Coal Mine Inspector
W. Stiltner	Federal Coal Mine Inspector
Alex E. O'Rourke	Supervising Mining Engineer

The last regular Federal inspection of the mine was completed October 20, 1970, and the last spot inspection was made November 19, 1970.

DESCRIPTION OF ACCIDENT

In the pillar place between J and K entries where the accident occurred, mining had been completed on the midnight to 8 a.m. shift on December 1 (the day of the accident). The 8 a.m. to 4 p.m. shift crew mined in the pillar immediately outby the accident area (see sketch No. 2) until about

11:20 a.m. when the shift foreman determined the place was too dangerous to continue operations. The equipment was moved out of the area, two rows of breaker posts were set, and a check curtain was installed in the crosscut between K and L face entries near K face and the mined-out area. They then posted a "Danger" sign on the outby side of the posts and curtain.

The equipment was moved from the area, to the right and inby, and a pillar split was made through a 16-foot-wide pillar. At the end of the shift the loading machine and continuous-mining machine were moved about 25 feet outby this pillar split and left there (see sketch No. 1).

The plans for the 4 p.m. to midnight shift crew were to extract the inby pillar between K and L face entries, mining to be done from L face entry side (see sketch No. 1). Reportedly, the day-shift foreman had informed Campbell, assistant mine foreman, that he moved the equipment from the accident area because he felt a roof fall was imminent.

On the day of the accident the K face section crew left the Marshall shaft portal shortly after 4 p.m. and arrived at the section about 4:20 p.m. Campbell along with Zawrotniak, shuttle-car operator, made an examination of some of the area in K face section, including the mined-out area where the accident occurred. While in this mined-out area (supposedly abandoned), Campbell told Zawrotniak that they would recover the timbers in this place. There were two crossbars installed and one lying on the mine floor.

After Campbell and Zawrotniak returned from the mined-out area, Zawrotniak went to the oil rack, obtained some oil and grease, serviced his shuttle car, and delivered a can of grease to Fred Vognozzi the mechanic who was servicing the continuous-mining machine.

Campbell in the meantime examined the remainder of the section then, along with Gedraitis and Orsini, reentered the mined-out area to recover the timbers. Zawrotniak, after delivering the grease to the continuous-mining machine, drove the shuttle car into the crosscut between K and L face entries near the breaker posts and check curtain. He stopped the shuttle car and went inby the check curtain and saw Campbell, Gedraitis, and Orsini coming toward him carrying the crossbar which had been lying on the mine floor. Zawrotniak said, "I see you've gotten the timber," and turned around to go ahead of them back to the shuttle car. As he turned he heard Campbell yell "look out" and he looked back and saw the roof collapse catching the three men and completely covering them.

Zawrotniak ran immediately and notified Vognozzi and George Badincak (loading-machine operator who was working with Vognozzi) of the accident and proceeded onto the telephone at the conveyor belt tailpiece to call for help. He called John Puz, beltman, and told Puz about the accident

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and that he should call for help as soon as possible. Puz contacted Sam Weaver, main-line motorman, by trolley phone and informed him of the accident and told him to send help. Louis Vidic, general assistant mine foreman, on a jitney with a trolley phone heard Puz talking to Weaver. He immediately called Frank Polosky, assistant foreman in 26 face, and told Polosky to take his crew and go to K face promptly.

Vidic then informed the mine superintendent, safety supervisor, and others on the surface while en route to K face.

In the meantime Vognozzi and Badinack had gone to the accident area, but could not see the victims or hear any sign of life. In a short time help arrived and recovery operations began. The bodies of Gedraitis, Campbell, and Orsini were recovered from under the fallen material at 6:20 p.m., 7:05 p.m., and 9:05 p.m. respectively, and were pronounced dead upon arrival on the surface by Dr. L. A. Reynolds.

The roof rock that fell and caught the victims varied from 7 to 16 inches in thickness, 9 to 14 feet in width, and was 21 feet long.

On Wednesday, December 2 a hearing was conducted at the Russellton mine office and company officials and employees were interrogated concerning conditions and practices relevant to the accident. The questioning was conducted by the Pennsylvania Department of Mines and Mineral Industries and the United States Bureau of Mines with the United Mine Workers of America and the Republic Steel Corporation officials participating. The testimonies given during the hearing revealed that it was not company policy or practice to recover roof supports in mined-out areas. However, it was firmly established that the crew supervised by Campbell (one of the victims) had on many occasions recovered roof supports from such areas.

CAUSE OF ACCIDENT

The entry by the victims into an abandoned mined-out area of a pillar section, where a fall of roof was imminent, to recover roof supports was the cause of this accident. The assistant foreman's entry into a known dangerous area that had been "dangered off" and failure to adhere to the company's policy concerning the entry of persons into such mined-out areas to recover roof supports were contributing factors.

RECOMMENDATIONS

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

- 1. Roof supports shall not be recovered from mined-out areas of pillar sections.

2. The company shall reinstruct all officials and employees that no person shall enter mined-out areas for the purpose of recovering roof supports or other materials, and shall ascertain at frequent intervals that this policy is followed.
3. The examinations of all abandoned mined-out areas of pillar sections shall be limited to the approaches to such areas.
4. No official or employee shall enter inby an area where a "Danger" sign has been posted except for the purpose of eliminating a hazardous condition therein.

As a result of this accident the company reinstructed all foreman and employees that no person shall enter mined-out areas for the purpose of recovering roof supports and materials, and restricted the examination of all abandoned mined-out areas on pillar sections to the approaches to such areas.

#### ORDER

#### Imminent danger - Section 104(a).

A massive fall of roof occurred covering three workmen in a pillar-recovery section in K face.

Order of Withdrawal No. 1 was issued December 1, 1970, which required persons to be withdrawn and prohibited from entering K face section, 7 west 20 butt section, and 26 butt section. The order was terminated on December 2, 1970.

#### ACKNOWLEDGMENT

The cooperation of company officials and employees, officials of United Mine Workers of America, and the State mine inspectors during this investigation is gratefully acknowledged.

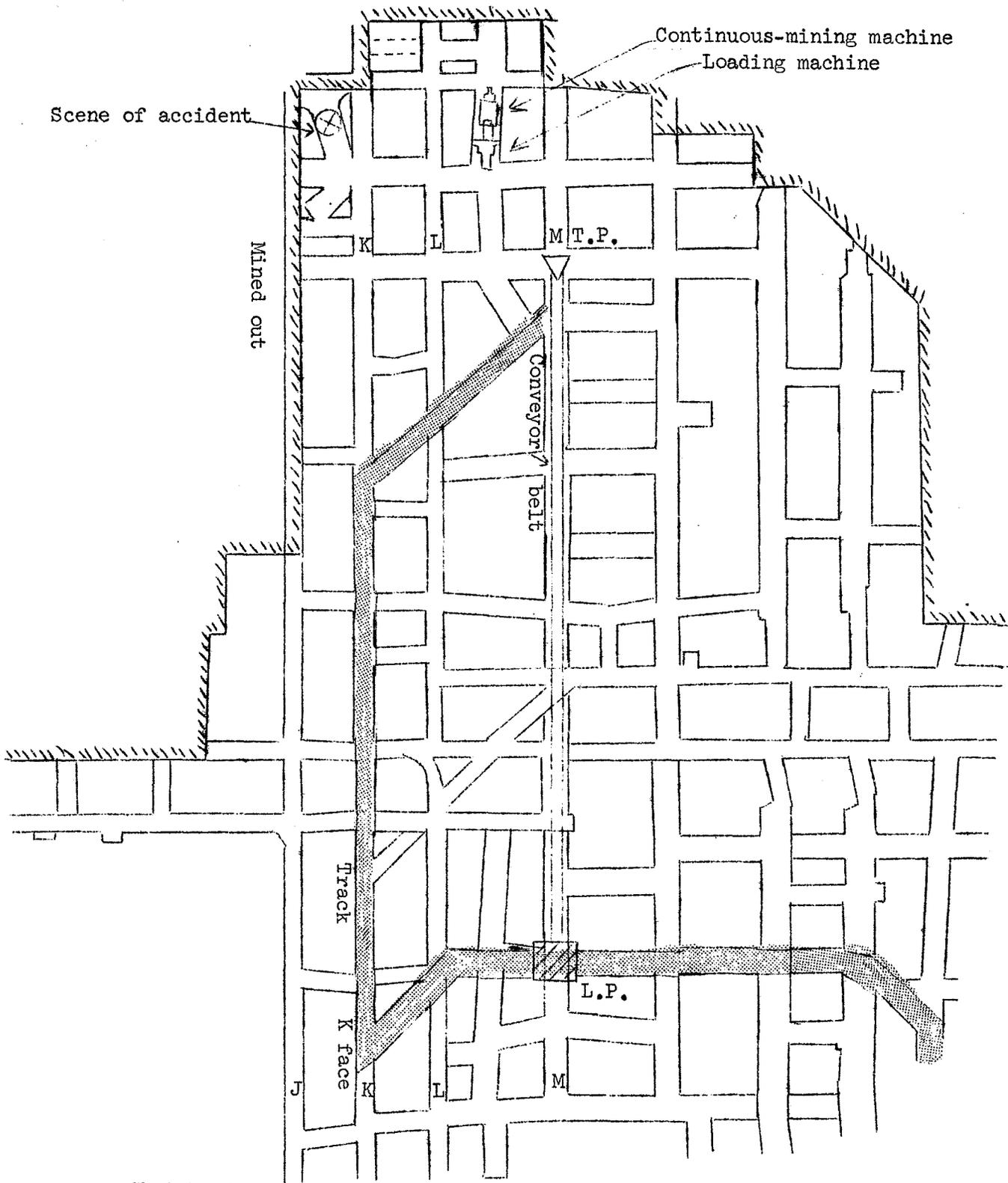
Respectfully submitted,

/s/ Everett Turner

Everett Turner

/s/ Walter J. Balitski

Walter J. Balitski

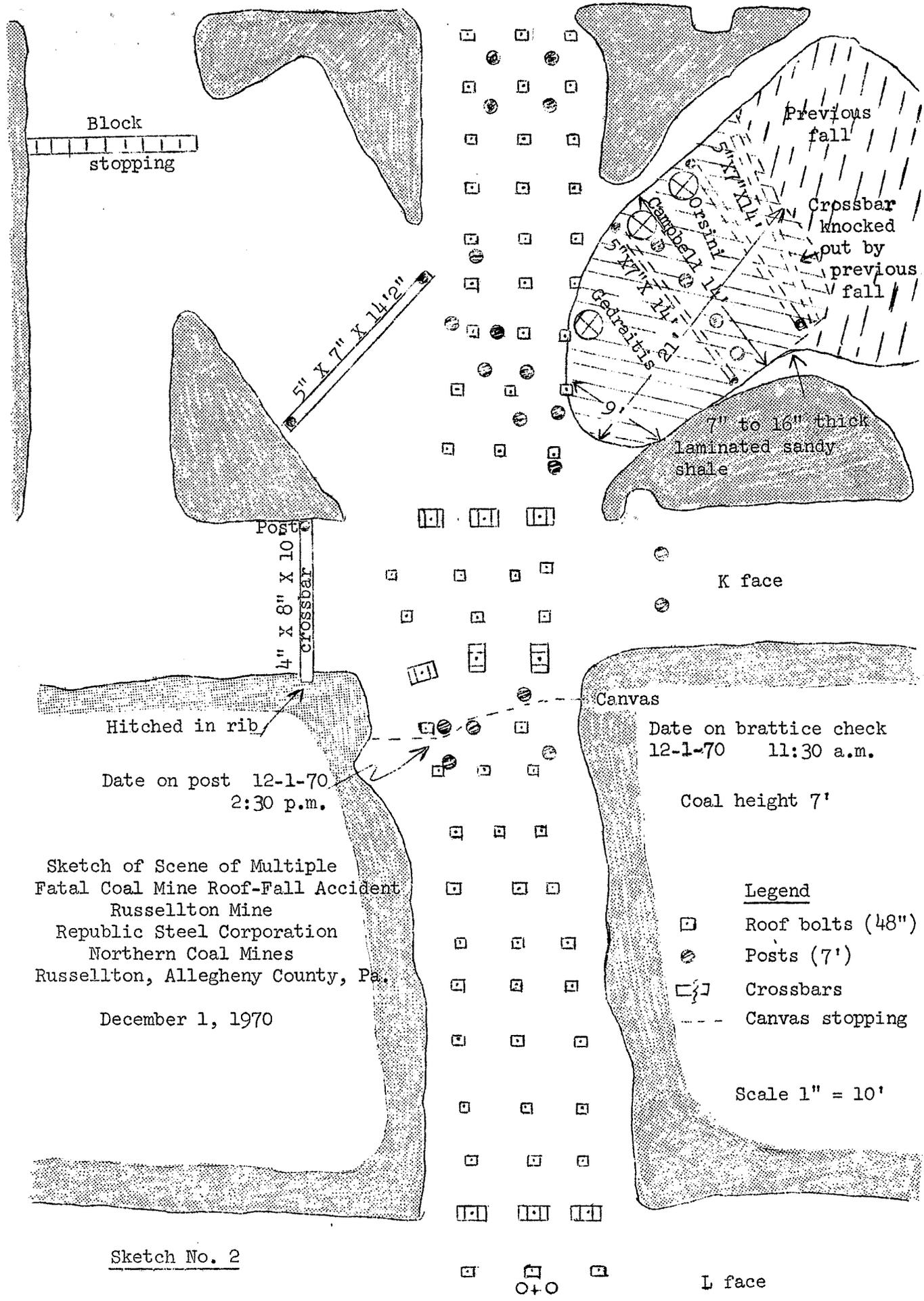


Sketch of Scene of Multiple Fatal Coal Mine Roof-Fall Accident  
 Russellton Mine  
 Republic Steel Corporation, Northern Coal Mines  
 Russellton, Allegheny County, Pennsylvania

December 1, 1970

Sketch No. 1

Scale 1" = 100'



Block  
stopping

5" X 7" X 14 1/2"

Post  
4" X 8" X 10  
CROSSBAR

Hitched in rib  
Date on post 12-1-70  
2:30 p.m.

Sketch of Scene of Multiple  
Fatal Coal Mine Roof-Fall Accident  
Russellton Mine  
Republic Steel Corporation  
Northern Coal Mines  
Russellton, Allegheny County, Pa.

December 1, 1970

Previous  
fall  
Crossbar  
knocked  
out by  
previous  
fall

7" to 16" thick  
laminated sandy  
shale

K face

Canvas  
Date on brattice check  
12-1-70 11:30 a.m.

Coal height 7'

- Legend
- Roof bolts (48")
  - Posts (7')
  - /□ Crossbars
  - Canvas stopping

Scale 1" = 10'

L face

Sketch No. 2