

INTRODUCTION

This report is based on an investigation made pursuant to Section 103(a) of the Federal Mine Safety and Health Act of 1977, Public Law 91-173 (83 STAT. 742) as amended by Public Law 95-164 (91 STAT. 1290).

Morgan I. Owen, Miners Helper, age 19, Social Security Number 9037, single with no dependents was fatally injured in an explosives accident on September 9, 1981, at 5:00 p.m.

Glen A. Bedard, Miner, age 24, Social Security Number 9855, married with two dependent children and Ardy E. Johnson, Miner, age 51, Social Security No. 469-32-9514, married, were fatally overcome by a carbon monoxide-contaminated atmosphere caused by the explosives detonation.

Rocke Wilson, Mine Foreman, age 33, Social Security Number 3361, married with three dependent children was overcome by the carbon monoxide-contaminated atmosphere but was rescued, given oxygen and attended by the Lucille, Idaho, Quick Response Unit. Emergency Medical Technicians, transported to the McCall, Idaho Hospital and placed under the care of Dr. Droge.

Wilson had received his initial M.S.H.A. training in April of 1980 and his annual refresher training March 25, 1981.

Bedard had one and one half years mining experience all at the Warrior Mine. Bedard had received his initial task training on April 1, 1980 and his annual refresher course on March 25, 1981.

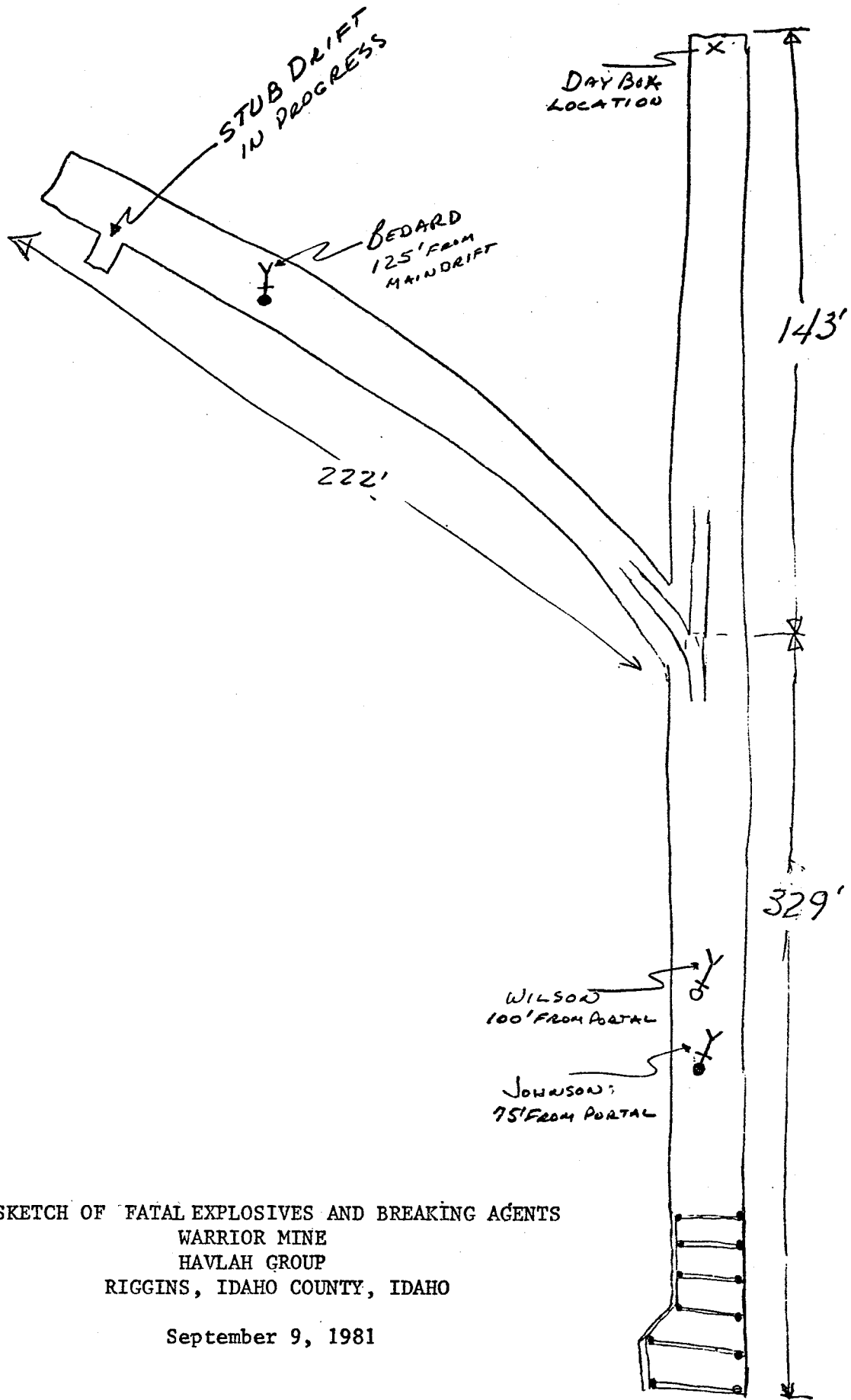
Owen had worked two days as a miners helper. He had received his training at the mine for two weeks but not as an employee, and by mutual agreement with the operator.

Johnson, a neighboring miner reportedly had nine years of mining experience all at his own mine. He had not received task training.

The Mine Safety and Health Administration was notified of the accident by a telephone call from Bud Walkup, Idaho County Sheriff to Mr. Homer E. Trussell, Supervisory Mining Engineer, Boise, Idaho Field Office, at 7:20 p.m., September 9, 1981. The investigation was started that evening.

GENERAL INFORMATION

The Warrior Mine, an underground exploration gold mine, was located on Bear Creek in Sections 8 & 9, T24N, R SE, in the Marshall Mountain mining area, Burgdorf, Idaho County, Idaho. The office and main shop were located 31 miles from the mine at a ranch on the Salmon River.



SKETCH OF FATAL EXPLOSIVES AND BREAKING AGENTS
 WARRIOR MINE
 HAVLAH GROUP
 RIGGINS, IDAHO COUNTY, IDAHO

September 9, 1981

NOT TO SCALE

The inactive mine owned by Ardy Johnson was about one mile northeast of the Warrior. The mine was not supplied with electrical power and there was no electrical storm in the area on this day.

DESCRIPTION OF ACCIDENT

Because both men working in the mine were killed in the accident, and no witnesses were present, events leading up to the explosion and after can only be speculated.

Glen A. Bedard, Miner, and Morgan Owen, Miners Helper, both victims, began work at about 8:00 a.m. for their regular shift. Except for Bedard's wife and children, they were the only ones present at the mine that day.

The mine foreman, Rocke Wilson, also served as mine mechanic and on the day of the accident was engaged in machinery repair at the main shop 31 miles from the mine, at the office shop complex.

It is assumed that after mucking out, Bedard and Owen drilled another round and loaded it with an ammonium nitrate/fuel oil mixture and dynamite. Electric blasting caps were used for detonating the explosives. Owen apparently took some unused explosives back to the day box while Bedard started wiring in the round.

When the explosion occurred, Mrs. Bedard realized that it was unusually violent as it shook the buildings and was very loud. She ran to the portal, a short distance away, but did not see the men. She did, however, notice considerable damage and felt the after blast (concussion) and saw smoke billowing from the portal. She then called via radio to Rocke Wilson's wife, who in turn called the office. Dan Cook, who was at the office told Wilson to proceed to the mine immediately. He left the office at 6:00 p.m. and arrived at the mine at 7:00 p.m.

A nearby mine owner, Ardy Johnson, victim, met Wilson at the mine and after radioing for assistance they proceeded into the mine. Wilson went to the day box location and found evidence of an explosion. Johnson went to the left 45° drift where mining was in progress. They found Bedard but found no vital signs. They looked for Owen but could not find him. They then began to depart from the mine but were overcome by carbon monoxide before reaching the portal.

A U. S. Forest Service helicopter crew from Krassel Creek had responded to an emergency request reportedly made by the Idaho County Sheriff. Three emergency medical technicians arrived at the mine via the aircraft about 7:40 p.m. They examined the mine and decided they could give no assistance due to the gas and smoke and consequently left the area.

Gerald Kooyers, General Partner and Dan Cook, Mine Manager, arrived at the mine at 9:00 p.m., entered the mine and found Johnson 75 feet and Wilson 100 feet in from the portal. Wilson was moved out of the mine and revived by these men. CPR was administered to Johnson by Kooyer but he did not respond. When the Quick Response Unit, from Lucille, Idaho, arrived Wilson was placed in their care. Wilson was then transported to McCall, Idaho.

Cook had re-entered the mine with a self-rescuer and located Bedard but could not find Owen.

Upon the arrival of John Austin, Metal and Nonmetal Mine Inspector, M.S.H.A., at 11:05 p.m., the mine air was sampled. One squeeze on a Draeger tester with a two squeeze CO tube totaled out the 700 PPM tube, which indicated more than 1400 PPM of CO. A 103(k) order was placed in effect immediately.

Self contained oxygen breathing apparatus was summoned from the Mine Safety and Health Field Office, Boise, Idaho, at this time.

An effort was then started to ventilate the mine with compressed air using the available mine compressor.

At approximately 7:30 a.m., October 10, 1981, the ore was resampled and indicated to contain up to 150 PPM of CO.

The men were able to enter the mine without the self-contained breathing apparatus and retrieved Glen Bedard's body from the mine. Owen's body had been blasted and somewhat disintegrated and he was reported dead at approximately 9:00 a.m. by the Sheriff's Department.

CAUSE OF ACCIDENT

The cause of the accident can only be speculated. When returning unused explosives to the day box, a static electric buildup could have detonated a primer which may have detonated the remaining explosives. Static electricity could have been generated and introduced into the individual's body by loading ammonia nitrate/fuel oil with a pneumatic loader or from the clothing or rain suit worn by the miner.

ORDERS ISSUED

103(k) Order Number 0347436 was issued at 2305 hours on September 9, 1981.

The Warrior Mine has experienced an explosion. This Order is issued to preserve evidence and prevent persons gathering for assistance from entering the mine. Due to high concentrations of Carbon Monoxide in the mine air no one is to enter the mine without self-contained oxygen breathing apparatus or until the mine air is tested to be within safe limits.

Area or equipment: Entire Warrior Mine.

103(k) Order Number 0347436 was terminated at 1030 hours on September 22, 1981.

All evidence was preserved by management during the investigation. Carbon Monoxide gas was reduced in the mine air by compressed air ventilation to a safe level. The loaded round was safely blasted with no apparent missed holes.

CITATIONS ISSUED

104(a) Citation Number 0347444 was issued at 1000 hours on September 17, 1981.
Part and Section: 57.6-90

The miner's helper (trainee), with only two (2) days mining experience, was not in the presence of an experienced person when he was apparently returning unused powder and/or primers to the day box storage area. His actions somehow initiated an explosion which caused three (3) fatalities. His and two (2) others.

104(a) Citation Number 0347444 was terminated at 1110 hours on September 22, 1981.

Management understands the need for trainees to be in the immediate presence of an experienced miner when handling explosives or detonators. Such will be emphasized in all future training classes.

104(a) Citation Number 0347445 was issued at 1020 hours on September 17, 1981.
Part and Section: 57.15a-31

The mine foreman entered the mine, which was filled with toxic gases after an explosion, without providing himself with a 1-hour self-rescue device. He had to be rescued by others, transported to a hospital and doctors care after being overcome.

104(a) Citation Number 0347445 was terminated at 1100 hours on September 22, 1981.

Management stated that the wearing of a one hour self-rescue device approved by M.S.H.A. shall be highly emphasized in future training classes, and that a self-rescuer shall be securely attached to the worker's lamp belt at all times except as provided in (b) and (c) of part and section 57.15-31 to aid in preventing the worker from entering the mine without it.

RECOMMENDATIONS

The operator should give special emphasis to new employees on the handling of explosives. When retraining the miners it might be well to take time to re-emphasize explosives hazards, especially with miners working with new employees.

The operator should have more accessible main storage magazines. Only enough explosives should be kept in the day box for rounds being blasted that shift. Excess explosives should be returned to the magazines. Explosives inventory records should be kept.

ACKNOWLEDGMENT

The courtesies, cooperation and assistance extended during this investigation is sincerely appreciated.

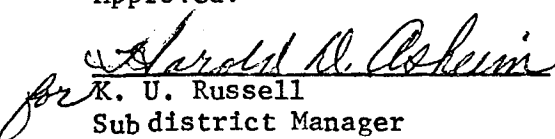
/s/ John B. Austin

John B. Austin
Metal and Nonmetal Mine Inspector

/s/ George A. Gipson

George A. Gipson
Alternate Metal and Nonmetal
Mine Specialist

Approved:


K. U. Russell
Sub district Manager

Section I (Coal Only)

Glen Bedard

MSHA and/or State Certification and/or Qualification

Mine ID 10-01404

| | | |
|--|------------------------------|--|
| Date Training Plan Approved _____ | Date Training Received _____ | Date Training Received _____ |
| * <input type="checkbox"/> Certified Person (Underground) | _____ | <input type="checkbox"/> Dust (Sampling) _____ |
| * <input type="checkbox"/> Certified Person (Surface) | _____ | <input type="checkbox"/> Dust (Calibration) _____ |
| * <input type="checkbox"/> Methane & Oxygen Deficiency Testing | _____ | <input type="checkbox"/> Noise _____ |
| * <input type="checkbox"/> Electrical | _____ | * <input type="checkbox"/> Impoundments _____ |
| * <input type="checkbox"/> Energized Surface High Voltage | _____ | * <input type="checkbox"/> Hoisting Engineer _____ |
| * Annual Retraining Required | | |

Section II (Metal-Non-metal and Coal)

MSHA Training Programs Completed

Date of Hire March, 1980 Date Training Plan Approved April 30, 1980

| | | | |
|---|------------------------|---|------------------------|
| Required Training (Victim) | Date Training Received | <input type="checkbox"/> Required Training (Victim) | Date Training Received |
| <input checked="" type="checkbox"/> New Miner (U.B.) | <u>March 24, 1980</u> | <input type="checkbox"/> Hazard Training (U.G.) | _____ |
| <input type="checkbox"/> New Miner (Sur.) | _____ | <input type="checkbox"/> Hazard Training (Sur.) | _____ |
| <input type="checkbox"/> Newly Employed Experienced (U.G.) | _____ | | |
| <input type="checkbox"/> Newly Employed Experienced (Sur.) | _____ | | |
| <input checked="" type="checkbox"/> Annual Refresher (U.G.) | <u>March 25, 1981</u> | Task Training Specify Type: | _____ |
| <input type="checkbox"/> Annual Refresher (Sur.) | _____ | _____ | _____ |
| | | _____ | _____ |
| | | _____ | _____ |

Section III

Company Training Program Completed:

| Training | OJT/Formal | Instructor | Date Completed |
|----------|------------|------------|----------------|
| _____ | _____ | Dan Cook | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

DID VICTIM HAVE TRAINING SPECIFICALLY RELATED TO THE TASK BEING PERFORMED
AT THE TIME OF THE ACCIDENT?

YES NO WHEN? _____

BY WHOM? Dan Cook

HOW WAS TRAINING GIVEN? On the job

and classroom training completed March 25, 1981.

Section V

RECOMMEND TRAINING PLAN EVALUATION BY EDUCATION & TRAINING OFFICE

YES NO

Section I (Coal Only)

Rocke Wilson

MSHA and/or State Certification and/or Qualification

Mine ID 10-01404

Date Training Plan Approved _____

Date Training Received _____

Date Training Received _____

* Certified Person (Underground) _____

Dust (Sampling) _____

* Certified Person (Surface) _____

Dust (Calibration) _____

* Methane & Oxygen Deficiency Testing _____

* Impoundments _____

* Electrical _____

* Hoisting Engineer _____

* Energized Surface High Voltage _____

* Annual Retraining Required

Section II (Metal-Non-metal and Coal)
MSHA Training Programs Completed

Date of Hire August 1980

Date Training Plan Approved April 30, 1980

Required Training (Victim)

Date Training Received

Required Training (Victim)

Date Training Received

New Miner (U.B.)

March 25, 1981

Hazard Training (U.G.) _____

New Miner (Sur.) _____

Hazard Training (Sur.) _____

Newly Employed Experienced (U.G.) _____

Newly Employed Experienced (Sur.) _____

Annual Refresher (U.G.) _____

Annual Refresher (Sur.) _____

Task Training Specify Type:

Section III

Company Training Program Completed:

Training

OJT/Formal

Instructor

Date Completed

Dan Cook

DID VICTIM HAVE TRAINING SPECIFICALLY RELATED TO THE TASK BEING PERFORMED
AT THE TIME OF THE ACCIDENT?

YES NO WHEN? _____

BY WHOM? Dan Cook HOW WAS TRAINING GIVEN? On the job and
classroom training. March 25, 1981 completed

Section V

RECOMMEND TRAINING PLAN EVALUATION BY EDUCATION & TRAINING OFFICE

YES NO

Section I (Coal Only)

Morgan Owen

MSHA and/or State Certification and/or Qualification

Mine ID 10-01404

Date Training Plan Approved _____

Date Training Received _____

Date Training Received _____

* Certified Person (Underground) _____

Dust (Sampling) _____

* Certified Person (Surface) _____

Dust (Calibration) _____

* Methane & Oxygen Deficiency Testing _____

* Noise _____

* Electrical _____

* Impoundments _____

* Energized Surface High Voltage _____

* Hoisting Engineer _____

* Annual Retraining Required

Section II (Metal-Non-metal and Coal)
MSHA Training Programs Completed

Date of Hire 09/08/81

Date Training Plan Approved 04/30/80

Required Training (Victim)

Date Training Received

Required Training (Victim)

Date Training Received

New Miner (U.B.)

09/03/81

Hazard Training (U.G.) _____

New Miner (Sur.) _____

Hazard Training (Sur.) _____

Newly Employed Experienced (U.G.) _____

Newly Employed Experienced (Sur.) _____

Annual Refresher (U.G.) _____

Annual Refresher (Sur.) _____

Task Training Specify Type:

Section III

Company Training Program Completed:

Training

OJT/Formal

Instructor

Date Completed

Dan Cook

DID VICTIM HAVE TRAINING SPECIFICALLY RELATED TO THE TASK BEING PERFORMED
AT THE TIME OF THE ACCIDENT?

YES NO WHEN? _____

BY WHOM? Dan Cook HOW WAS TRAINING GIVEN? On the job
and classroom training. Completed 09/08/81

Section V

RECOMMEND TRAINING PLAN EVALUATION BY EDUCATION & TRAINING OFFICE

YES NO
