

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
METAL AND NONMETAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Underground Nonmetal Mine
(Gemstone)

Fatal Fall of Rib Accident
March 20, 2012

Vortex Mine
Mike Roberts
Great Falls, Judith Basin County, Montana
ID No. 24-01835

Investigators

Sidney J. Garay
Mine Safety and Health Inspector

Kent L. Norton
Mine Safety and Health Specialist

Originating Office
Mine Safety and Health Administration
Rocky Mountain District
P.O. Box 25367, DFC
Denver, CO 80225-0367
Richard Laufenberg, District Manager



Overview

Michael D. Roberts, Owner, age 54, was killed on March 20, 2012. He was cleaning fine ore with a shovel and loading it in the bucket of a front-end loader when rock, about 20 feet high, fell from the top left rib striking him.

The accident occurred due to management's failure to ensure examinations and tests for loose ground conditions are conducted after blasting. Ground conditions that created a hazard were not taken down or supported.

GENERAL INFORMATION

The Vortex Mine is an underground gemstone operation owned and operated by Mike Roberts located 4.7 miles from Sapphire Village, Judith Basin County, Montana. The principal operating official was Michael Roberts, Owner. The mine operated 8 to 10 hours on the day shift to drill and blast, and 3 to 4 hours on the night shift to stockpile ore. The mine rotation schedule was 3 weeks on and 2 weeks off. Total employment at the mine is four persons.

The material containing gemstone ore is drilled and blasted. The ore is transported by a front-end loader and stockpiled underground and on the surface. The ore is hauled from the stockpiles with a front-end loader to the plant for processing. The finished product is sold for use in making jewelry.

The last regular inspection of this mine was completed on March 30, 2010. Regular inspections were attempted on February 15, 2011, March 29, 2011, and January 11, 2012.

On April 15, 2011, the mine operator reported the mine abandoned. On January 10, 2012, the mine was placed on intermittent status due to activity at the mine.

On January 14, 2012, the mine owner informed the Mine Safety and Health Administration (MSHA) that the only activity at the mine was preparing equipment to be sold and he had no intention of operating the mine. The mine was then placed in abandoned status. The mine operator did not notify MSHA of the mine's reopening.

DESCRIPTION OF THE ACCIDENT

On March 19, 2012, Michael D. Roberts, (victim) went to the mine at approximately 9:30 p.m. to stockpile recently blasted broken rock/ore. Earlier that day, Roberts and Charles Walton, Miner, drilled and blasted at the face of the 250 foot level. Roberts typically worked at the mine from 9:00 p.m. to 12:00 a.m. (midnight). While working at the mine, Roberts stayed with Louis Loader, a friend. Loader went to the mine at approximately 2:00 a.m. on March 20, 2012, to check on Roberts because he failed to return to Loader's home.

Loader traveled underground to the 250 foot level where he saw a front-end loader with the engine running. The front-end loader was located approximately 50 feet from the face of the drift with the headlights shining toward the working face. Loader found Roberts covered by rocks and unresponsive. He exited the mine, drove back to Sapphire Village, Montana, to call 911 for assistance. The Judith Basin County Sheriff's Office responded.

Loader also contacted Walton, Vern Shumway, Miner, and Chance Shumway, Miner, to assist with the recovery. The miners arrived at the mine about 3:40 a.m., traveled underground, recovered the victim, and transported him to the surface. Dick Brown, Judith Basin County Deputy Coroner arrived and pronounced Roberts dead at 6:40 a.m. The cause of death was attributed to severe trauma.

INVESTIGATION OF ACCIDENT

MSHA was notified of the accident at 1:10 p.m. on March 20, 2012, by a telephone call from Dick Brown, Judith Basin County Deputy Coroner, to Dustan Crelly, Staff Assistant. An investigation started the same day. An order was issued under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners.

MSHA's accident investigators traveled to the mine, made a physical inspection at the accident scene, and reviewed conditions and work procedures relevant to the accident. The United States Forest Service, the Judith Basin County Sheriff's office, and the Hubble Law firm assisted with the investigation.

DISCUSSION

Location of the Accident

The accident occurred at the 250 foot level of the working heading located approximately 1 ½ miles from the mine's portal.

Mining Conditions

The 250 level working heading declined 250 feet from the mine entrance. It is uneven and approximately 12 feet wide. The ribs and roof followed the contour of the gemstone seam that was a conglomerate material consisting of hard to soft clay, rock, and gemstones. The 500 feet long heading varies in height from approximately 20 feet on the left rib to approximately 12 to 16 feet on the right rib. Water flows and seeps from the roof and ribs and pooled approximately 8-10 inches deep on the floor across the heading.

At the face, portions of the roof had broken through into the abandoned American Mine located directly above the Vortex Mine. Assorted metal frames

and old wood supports were exposed in the American Mine. At the face, a 10-foot metal ladder provided access into the opening of the American Mine.

Training and Experience

Michael D. Roberts had approximately 25 years of mining experience. He was an MSHA certified Part 48 instructor. A representative of MSHA's Educational Field Services conducted an in-depth review of the mine operator's training records. The training records for Roberts were examined and found to be in compliance with MSHA training requirements.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted and the following root cause was identified:

Root Cause: Management failed to established procedures to correct hazardous conditions or provide ground support where ground conditions indicate it is necessary.

Corrective Actions: The mine owner was killed in the accident and the mine is currently not in production status. No corrective action has been taken. However, before mining operations commence, the mine operator will comply with the requirements of 30 CFR.

CONCLUSION

The accident occurred due to management's failure to ensure that examinations and tests for loose ground conditions were performed after blasting. Ground conditions that created a hazard were not taken down or supported.

ENFORCEMENT ACTIONS


Issued to Mike Roberts

Order No. 8586704 - Issued on March 22, 2012, under the provisions of Section 103(k) of the Mine Act:

A fatal accident occurred at this operation on March 20, 2012. The mine owner was underground, digging out a muck pile, when the top left wall fell. This order is issued to assure the safety of all persons at this operation. It prohibits all activity at the mine underground and surface operations, until MSHA has determined that it is safe to resume normal mining operations in the area. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or resume operations to the affected area.

Citation No. 8586705 - Issued on April 18, 2012, under the provisions of Section 104(d)(1) of the Mine Act for violation of 57.3200:

A fatal accident occurred at this operation on March 20, 2012, when a mine owner was struck by falling rock. The rock fell 20 feet from the top of the left rib at the 250 foot level. The victim did not examine or test ground conditions after blasting. The mine owner did not take down or support ground conditions that created a hazard to persons before commencing work. The mine owner engaged in aggravated conduct constituting more than ordinary negligence, in that he was an experienced miner and failed to take appropriate action to correct hazardous ground conditions. This violation is an unwarrantable failure to comply with a mandatory standard.


Richard Laufenberg
District Manager
Rocky Mountain District

Date: July 23, 2012

LIST OF APPENDICES

Appendix A-Persons Participating in the Investigation

Appendix B-Victim Data Sheet

APPENDIX A

PERSONS PARTICIPATING IN THE INVESTIGATION

Hubble Law Firm

Oliver J. Urick	Attorney
Heather Perry	Attorney

USDA Forest Service, Lewis & Clark National Forest

John Hackwith	Law Enforcement Officer
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Judith Basin County, Montana, Sheriff's Office

Ray Clark	Sherriff
Dick Brown	Deputy Coroner

Mine Safety and Health Administration

Sidney J. Garay	Mine Safety & Health Inspector
Randy J. Carsten	Mine Safety & Health Inspector
Kent L. Norton	Mine Safety & Heath Specialist

APPENDIX B

Accident Investigation Data - Victim Information

U.S. Department of Labor
Mine Safety and Health Administration



Event Number:

6	5	5	8	7	0	4
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Victim Information: 1														
1. Name of Injured/Ill Employee: <i>Michael D. Roberts</i>			2. Sex: <i>M</i>		3. Victim's Age: <i>54</i>		4. Degree of Injury: <i>01 Fatal</i>							
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 03/20/2012 b. Time: 2:00</i>							6. Date and Time Started: <i>a. Date: 03/19/2012 b. Time: 21:00</i>							
7. Regular Job Title: <i>049 Mine Owner</i>				8. Work Activity when Injured: <i>025 Shoveling material</i>				9. Was this work activity part of regular job? <table style="margin-left: auto; margin-right: auto;"><tr><td>Yes</td><td><input checked="" type="checkbox"/></td><td>No</td></tr></table>				Yes	<input checked="" type="checkbox"/>	No
Yes	<input checked="" type="checkbox"/>	No												
10. Experience a. This			b. Regular			c. This			d. Total					
Years	Weeks	Days	Years	Weeks	Days	Years	Weeks	Days	Years	Weeks	Days			
Work Activity:	<i>25</i>	<i>0</i>	<i>0</i>	Job Title:	<i>7</i>	<i>11</i>	<i>3</i>	Mining:	<i>7</i>	<i>11</i>	<i>3</i>			
11. What Directly Inflicted Injury or Illness? <i>122 Fall of the top left rib</i>						12. Nature of Injury or Illness: <i>170 Blunt force trauma</i>								
13. Training Deficiencies														
Hazard:			New/Newly-Employed Experienced Miner:			Annual:			Task:					
14. Company of Employment: (if different from production operator) <i>Operator</i>						Independent Contractor ID: (if applicable)								
15. On-site Emergency Medical Treatment														
Not Applicable:		First-Aid:		CPR:		EMT:		Medical Professional:		None: <input checked="" type="checkbox"/>				
16. Part 50 Document Control Number: (form 7000-1)						17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>								