

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Underground
(Platinum Group Ore)

Fatal Machinery Accident
November 13, 2023

Moran Mining USA Inc (4MC)
Nye, Montana

at

Stillwater Mining Company
Stillwater Mine
Columbus, Stillwater County, Montana
ID No. 24-01490

Accident Investigators

Clayton Johnson
Mine Safety and Health Inspector

Thaddeus Sichmeller
Mine Safety and Health Supervisor

Gary Rethage
Supervisory General Engineer, Technical Support

Originating Office
Mine Safety and Health Administration
Denver District
1 Denver Federal Center
Denver, CO 80225
Peter Del Duca, Acting District Manager

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OVERVIEW

On November 13, 2023, at approximately 1:00 a.m., Noah Dinger, a 24 year-old miner with over four years of experience, died when he became entangled in a rotating drill steel while changing the steel.

The accident occurred because the contractor did not ensure that the power was off, and the equipment was blocked against hazardous motion.

GENERAL INFORMATION

Sibanye Stillwater Limited is the parent company of Stillwater Mining Company, which operates the Stillwater Mine, an underground platinum mine located in Nye, Stillwater County, Montana. The mine employs approximately 1,100 miners and operates two, 12-hour production shifts, seven days per week. The mine operator uses load haul dump loaders, underground trucks, and underground rail haulage to transport the ore to the surface. The ore is crushed, processed, and sent to a smelter and base metal refinery facility located in Columbus, Montana. Moran Mining USA Inc is a mining contractor headquartered in Canada with operations in the United States. Moran employs 62 miners at the Stillwater Mine, where it contracts regularly to perform development work and Alimak raise mining.

The principal management officials at the Stillwater Mine at the time of the accident were:

Matthew O'Reilly
Nikkayla Simon

Vice President and General Manager
Senior Safety Manager

The principal management official for Moran Mining USA Inc at the time of the accident was:

Otto Stenberg

Supervisor

The Mine Safety and Health Administration (MSHA) was conducting a regular safety and health inspection at this mine when the accident occurred. The 2022 non-fatal days lost incident rate for the Stillwater Mine was 1.35, compared to the national average of 1.23 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On November 12, 2023, at 7:00 p.m., N. Dinger started his shift at a lineout and safety meeting with the rest of the crew. Stenberg assigned his crew their various tasks. Stenberg assigned N. Dinger, Miner 2, to operate the roof bolting machine, and Seth Dinger, Miner 3/Leadman, to muck and load trucks. The crew traveled underground to the 72W 11400 decline and began their assigned tasks. At approximately 12:00 a.m., N. Dinger, S. Dinger, and Nickolas Burbank, Miner 3, advanced the flexible ventilation tubing in the 72W 11400 heading and then resumed their normal work. While S. Dinger was mucking, he noticed N. Dinger was not in the cab of the roof bolting machine. Assuming a blown hose, S. Dinger walked down the decline to help N. Dinger and found him entangled in the drill steel of the bolting machine. S. Dinger attempted to free N. Dinger from the steel but was unsuccessful. S. Dinger ran up the decline to retrieve a hacksaw and returned to N. Dinger. He cut N. Dinger's clothing to free him from the drill steel and began cardiopulmonary resuscitation (CPR). S. Dinger realized that he needed help and drove his personnel carrier to the nearest phone. At 1:20 a.m., S. Dinger called Stillwater Dispatch and requested a medic. S. Dinger returned to his personnel carrier, but it would not start. S. Dinger then ran back to N. Dinger and resumed CPR until help arrived.

At approximately 2:00 a.m., Stenberg and Nathaniel Lewis, Miner 2, employed by Moran, arrived at the scene and assisted with CPR. At 2:15 a.m., Devon McReynolds, Paramedic Supervisor for Stillwater, arrived and took over care at the scene. Clay Waltner, Stillwater County Deputy Sheriff and Coroner, pronounced N. Dinger dead at 5:11 a.m.

INVESTIGATION OF THE ACCIDENT

On November 13, 2023, at 2:37 a.m., Terry Anderson, West Supervisor for Stillwater, called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Lee Hughes, Acting Assistant District Manager. Hughes contacted Matthew Jaynes, Supervisory Mine Safety and Health Inspector, who dispatched Jordan Gustafson, Mine Safety and Health Inspector, to secure the scene. Hughes dispatched Thaddeus Sichmeller, Supervisory Mine Safety and Health Inspector, and Clayton Johnson, Mine Safety and Health Inspector, to the mine to investigate the accident. Hughes assigned Johnson as the lead accident investigator.

At 10:45 a.m., Gustafson arrived at the mine, began work to secure the area, and issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and preservation of evidence. MSHA's accident investigation team, which included miners' representatives, conducted an examination of the accident scene, interviewed miners, mine management, and other relevant personnel, and reviewed conditions and work practices relevant to the accident. See Appendix A for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred at the 72W 11400 decline, Muck Bay 2 (see Appendices B and C).

Equipment Involved

The roof bolting machine involved in the accident was a 2022 Komatsu ZB21. The roof bolting machine is fitted with a bolt-driver, bolt carousel, and a rotating drill head. The bolting machine is operated from controls located in the cab, allowing the operator to drill holes and install bolts from the safety of the cab, away from the rotating drill steel and percussion bolt driver. Investigators conducted an examination of the bolting machine and found no defects that contributed to the accident.

Investigators determined that the roof bolter need only approach the bolt carousel and drill head when refilling bolts or when changing drill steels. Investigators found a broken bit in a previous hole and confirmed that a new drill steel had been installed. Investigators located the Komatsu ZB21 operator's manual, which contains warning statements indicating that no persons should be near the drill or bolt driver while the equipment is in operation. The manual also warns against persons working around the machine while wearing loose clothing. According to interviews, when S. Dinger approached the roof bolting machine to check on N. Dinger, he discovered that it was still operating and he immediately de-energized it. Investigators concluded that the manufacturer's warning statements were not followed during the accident.

Training and Experience

N. Dinger had over four years of mining experience and less than one year of experience operating a roof bolting machine. N. Dinger received task training for operating the 2022 Komatsu ZB21 on July 26, 2023. Phillip Dahl, Mine Safety and Health Training Specialist, reviewed the mine operator's training plan, including N. Dinger's training records, and determined that all training was completed in accordance with MSHA Part 48 training regulations.

Examinations

Investigators reviewed examination records and determined they were conducted in accordance with MSHA regulations.

Previous Injury

Investigators determined that on June 18, 2023, a non-fatal entanglement injury to a Stillwater employee, involving a similar piece of equipment, occurred at the Stillwater Mine. Following that incident, the mine operator and the contractor implemented a new policy prohibiting miners from threading drill steel by hand while the drill is rotating, to prevent a reoccurrence. The policy required that signage be in place to prevent persons from working past the outriggers while the roof bolting machine was in operation. The mine operator and the contractor trained all miners and contractors on-site on the new policy before this fatal accident occurred. Investigators determined that the policy was not followed during the accident.

ROOT CAUSE ANALYSIS

The accident investigators conducted an analysis to identify the underlying causes of the accident. The accident investigators identified the following root causes, and the mine operator implemented the corresponding corrective actions to prevent a reoccurrence.

1. Root Cause: The contractor did not ensure that the power was off, and that the equipment was blocked against hazardous motion.

Corrective Action: The contractor developed and implemented a new written procedure requiring two miners to operate the roof bolting machine, and signage located at the front jacks restricting access while the drill is energized. The mine operator is working with the equipment manufacturer to install electronic barriers that will de-energize the roof bolting machine automatically.

CONCLUSION

On November 13, 2023, at approximately 1:00 a.m., Noah Dinger, a 24-year-old miner with over four years of experience, died when he became entangled in a rotating drill steel while changing the steel.

The accident occurred because the contractor did not ensure that the power was off, and the equipment was blocked against hazardous motion.

Approved by:

Peter Del Duca
Acting District Manager

Date

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Stillwater Mining Company.

A fatal accident occurred on November 13, at approximately 1:20 a.m. This order is being issued under the authority of the Federal Mine Safety and Health Act of 1977, under Section 103(k) to insure the safety of all persons at the mine and requires the operator to obtain the approval of an authorized representative of MSHA of any plan to recover the mine or affected area. This order prohibits any activity in the affected area or equipment. The operator is reminded of the obligation to preserve all evidence that would aid in investigating the cause or causes of the accident in accordance with 30 CFR 50.12.

2. A 104(a) citation was issued to Moran Mining USA Inc for a violation of 30 CFR 57.14105.

A fatal accident occurred on November 13, 2023, when a miner died when he became entangled in a rotating drill steel while changing the steel. The contractor did not ensure that the power was off, and the equipment was blocked against hazardous motion.

APPENDIX A – Persons Participating in the Investigation

Stillwater Mining Company

Matthew O'Reilly	Vice President and General Manager
Matthew Dennis	Westside Development and Production Superintendent
Nikkayla Simon	Senior Safety Manager
John Hopper	Safety Manager
Laura Reynolds	Human Resource Manager
Devon McReynolds	Paramedic Supervisor
Daniel Alberda	Safety Coordinator
David Anderson	Safety Coordinator and Trainer
Dan Christensen	Safety Coordinator
Guy Davis	Safety Coordinator
Shaun Parkinson	Safety Coordinator
Brandt Halver	Geologist

United Steelworkers Local 11-0001

Ed Lorash	Union President
Jerry Philhower	Joint Health and Safety Representative
Kyle Sandlin	Joint Health and Safety Representative

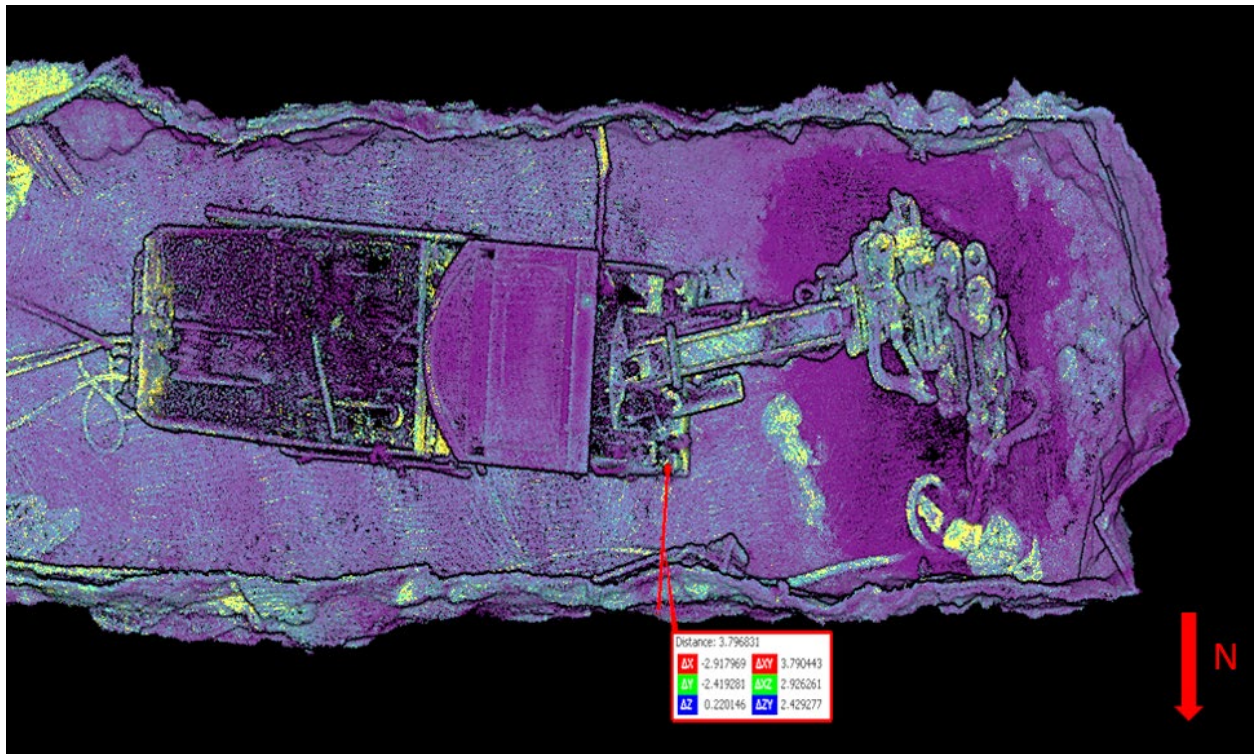
Moran Mining USA Inc

Jason Moran	Manager
Michael Raffath	Mechanical Superintendent
Benjamin Bignell	Operations Superintendent
Arthur Bouillon	Operations Superintendent
Kevin Callaghan	Operations Superintendent Support
Michael Turnbull	Safety Supervisor
Otto Stenberg	Supervisor
Nickolas Burbank	Miner 3
Seth Dinger	Miner 3/Leadman
Jacob Leach	Miner 3
Nathaniel Lewis	Miner 2
Dyllon McDermid	Miner 2

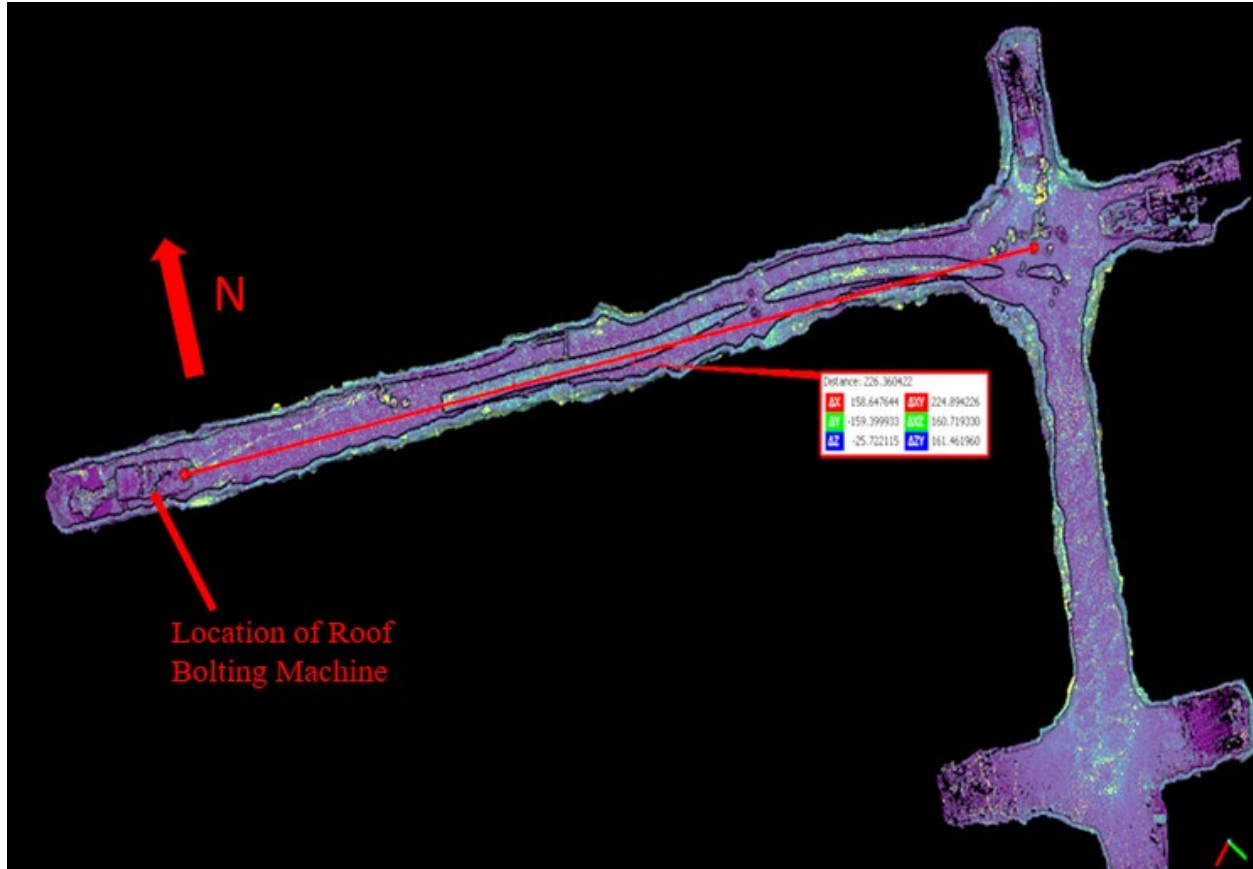
Mine Safety and Health Administration

Brad Breland	Assistant District Manager
Thaddeus Sichmeller	Supervisory Mine Safety and Health Inspector
Gary Rethage	Supervisory General Engineer, Technical Support
Phillip Dahl	Mine Safety and Health Training Specialist
Jordan Gustafson	Mine Safety and Health Inspector
Clayton Johnson	Mine Safety and Health Inspector

APPENDIX B – LiDAR Scan of 72W 11400 Decline



APPENDIX C – Position of the Roof Bolting Machine in the 72W 11400 Heading



APPENDIX D – Roof Bolting Machine Head Position

