FAI-6823656-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

# REPORT OF INVESTIGATION

Surface
(Gold Ore)

Fatal Machinery Accident
November 8, 2020

Smoky Valley Common Operations
Round Mountain Gold Corporation
Round Mountain, Nye County, Nevada
ID No. 26-00594

Accident Investigators

Patrick L. Barney
Supervisory Mine Safety and Health Inspector

William L. Whitby
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Vacaville District
991 Nut Tree Road
Vacaville, California 95687
James M. Peck, District Manager

TABLE OF CONTENTS


## OVERVIEW

On November 8, 2020, at approximately 5:11 a.m., Robert Larson, a 58-year-old Bulldozer Operator with approximately 41 years of mining experience, died when the bulldozer he was operating backed off a highwall and tumbled approximately 300 feet to a bench below.

The accident occurred because mine management: 1) did not follow their company policy that prohibited work in certain areas while it was dark; 2) did not perform working place examinations prior to work being performed; 3) did not provide sufficient illumination for safe working conditions; and 4) did not place barricades or warning signs to warn of extreme fall hazards.

## GENERAL INFORMATION

Kinross Gold Corporation is the parent company of Round Mountain Gold Corporation which owns and operates Smoky Valley Common Operations (Smoky Valley). Smoky Valley is a surface gold mine located in Round Mountain, Nye County, Nevada. Smoky Valley employs 855 miners and operates two twelve-hour shifts, seven days per week. The mine drills and blasts gold ore in an open pit and transports the ore by haul truck to an onsite processing facility where the ore is concentrated and sent to an offsite refinery.

Principal Officers for Kinross Gold Corporation, at the time of the accident were:

| | |
|---|---|
| Gregory Van Etter | Sr. Vice President, Legal, Global Operations |
| Dennis C. McHarness | Vice President, Global Lands, Legal |
| Martin D. Litt | Vice President and General Counsel |
| Neil R. Jensen | Vice President and General Manager |

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on June 22, 2020. The 2019 non-fatal days lost (NFDL) incident rate for Smoky Valley Common Operations was 1.38, compared to the national average of 0.79 for mines of this type.

## DESCRIPTION OF THE ACCIDENT

On November 7, 2020, Larson started his shift at 5:30 p.m. Larson attended the shift assignment meeting at 5:45 p.m. and received his work assignments from Jody Millard, Supervisor. Riley Briseno, Lead Person, drove Larson to the mill surge pile at 6:05 p.m., where Larson used a bulldozer to push ore to the mill feeders until 11:42 p.m. At that time, Briseno picked Larson up and drove him to another bulldozer where Laura McCoy, Lead Person, instructed Larson to prepare a bench for drilling. After completing this, McCoy then instructed Larson to push blasted ore from the 5454 bench to a front-end loader loading trucks on the 5415 bench. Larson trammed bulldozer #540 to the 5454 bench, and pushed the blasted ore down to the 5415 bench from 4:22 a.m. until 5:11 a.m. when the bulldozer backed over the edge of the pit highwall (see Appendix A). The time of the accident came from the MineStar GPS tracking system installed on the bulldozer.

At 6:30 a.m., Joe Mondragon, Fuel Truck Driver, observed the bulldozer on a bench, approximately 300 feet below the edge of the pit highwall. Mondragon called a "code blue" over the radio to Ryan Ludden, Dispatcher, who contacted the mine's rescue team and called 911 at 6:48 a.m. The rescue team arrived at the pit and rappelled down to the bulldozer at approximately 7:00 a.m. Rescue team members checked Larson and determined he had suffered fatal injuries. Allen Lyn, Lieutenant Sheriff, from the Nye County Sheriff's Office and Allison Morgan, Detective and Deputy Coroner, arrived at the mine at approximately 7:38 a.m. Morgan pronounced Larson dead at 12:00 p.m.

## INVESTIGATION OF THE ACCIDENT

On November 8, 2020, at 7:54 a.m., Caleb Trease, Safety and Health General Foreman, called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Miles Frandsen, Supervisory Mine Safety and Health Inspector. Frandsen contacted Patrick Barney, Supervisory Mine Safety and Health Inspector, and Barney dispatched William Whitby, Mine Safety and Health Inspector, to the mine. Barney verbally issued an order at 8:20 a.m. to the mine operator under the provisions of Section 103(j) of the Federal Mine Safety and Health Act to ensure the safety of miners and rescue personnel prior to the investigation team's arrival at the site.

Barney and Whitby, arrived at the mine site at 1:45 p.m. to conduct the investigation. Gary Hebel, Assistant District Manager, and Mike Tromble, Educational Field and Small Mine Services Supervisor, arrived at the mine site on November 9, 2020, at approximately 2:00 p.m. MSHA's accident investigation team modified the 103(j) order to a 103(k) order, conducted a physical examination of the accident scene, interviewed miners, and reviewed conditions and work procedures relevant to the accident. See Appendix B for a list of persons who participated in the investigation.

## DISCUSSION

### Location of the Accident

The accident occurred on the 5454 bench of the WA2 phase pit high wall, located in the upper northwest portion of the open pit. Investigators determined there were no barricades or signs to provide a warning of the extreme fall hazard present at the edge of the WA2 phase pit high wall (see Appendix A). This area was blasted on November 4, 2020, and the blast destroyed the berm in that area.

### Equipment Involved

The Caterpillar D10T2 bulldozer (company number #540) involved in the accident is a track-mounted earth moving piece of equipment (see Appendix C). The company retrieved data from the electronic control modules (ECM) on the bulldozer and found no faults in the ECM data prior to the time of the accident. Investigators did not find preoperational examination records for the bulldozer. The records were kept on the bulldozer and investigators believe the records were lost when the bulldozer fell.

### Weather

At the time of the accident, the weather was below 32 degrees Fahrenheit, windy and snowing. Investigators determined that weather was not a contributing factor in the accident.

### Training and Experience

Robert Larson had approximately forty-one years of mining experience, twenty-one of them at Smoky Valley. Larson had over 14 years of experience operating Caterpillar D10T2 bulldozers. He received annual refresher training in 2020, in accordance with MSHA's Part 48 training regulations. Investigators determined that his annual refresher and task training were current.

### Examinations

Based on interview statements and a review of records, investigators learned that management did not perform workplace examinations of the 5454 bench of the WA2 Phase pit highwall before Larson began work on November 8, 2020.

### Illumination

Mine management did not follow their written safety work policy prohibiting material to be cleared on the edge of highwalls when it is dark. The investigation team determined there was no illumination at the 5454 bench, and that the operator did not use light plants that were available. The only places Smoky Valley regularly used light plants was at waste dumps. Since August 2019, MSHA inspectors cited the mine operator four times for not using light plants when it was dark. The locations cited were not at highwalls.

### Barricades and Warning Signs

Management did not install barricades and warning signs to demarcate areas of extreme fall hazards at the edge of the pit highwall. Management did not have policies or procedures in place to train their competent persons to install barricades and warning signs demarcating those areas of extreme risk.

## ROOT CAUSE ANALYSIS

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

1. Root Cause: Mine management did not follow their written safety work policy prohibiting material to be cleared on the edge of highwalls when it is dark.

   Corrective Action: Smoky Valley Common Operations has retrained all miners on this policy.

2. Root Cause: Mine management did not perform workplace examinations in the area of the accident after blasting was performed on November 4, 2020.

   Corrective Action: Smoky Valley Common Operations has developed written policies and procedures to ensure that workplace examinations of assigned work areas will be conducted and documented in accordance with 30 CFR § 56.18002. The company has trained their competent persons in the policies and procedures.

3. Root Cause: Mine management did not provide sufficient illumination to provide safe working conditions in and on the assigned work areas of the 5415 and 5454 benches of the WA2 Phase of the pit highwall.

   Corrective Action: Round Mountain Gold Corporation has implemented written policies and procedures to place sufficient illumination to provide safe working conditions at all work areas. They have trained their managers and competent persons in the policies and procedures.

4. Root Cause: Mine Management did not provide barricades or warning signs to demarcate the extreme fall potential at the edge at the pit highwall.

   Corrective Action: Round Mountain Gold Corporation has placed reflective signs and barricades thirty feet from the edge of the pit highwall to demarcate the extreme fall potential. The Company has instituted a written policy to post warning signs and barricades along the edge of the pit highwall. The company has trained their managers, competent persons, examiners and miners in the policy.

## CONCLUSION

On November 8, 2020, at approximately 5:11 a.m., Robert Larson, a 58-year-old Bulldozer Operator with approximately 41 years of mining experience, died when the bulldozer he was operating backed off the edge of a bench highwall and tumbled approximately 300 feet to a bench below.

The accident occurred because mine management: 1) did not follow their company policy that prohibited work in certain areas while it was dark; 2) did not perform working place examinations prior to work being performed; 3) did not provide sufficient illumination to provide safe working conditions; and 4) did not place barricades or warning signs to warn of extreme fall hazards.

Approved By:

_____ _____

James M. Peck Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) Order No. 9508642 was issued to Round Mountain Gold Corporation on November 8, 2020:

   An accident occurred at this operation on 11/08/2020, at approximately 0631 Hours. As rescue and recovery work is necessary, this order is being issued, under Section 103(j) of the Federal Mine Safety and Health Act of 1977, to assure the safety of all persons at this operation. This order is also being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at the entire pit until MSHA has determined that it is safe to resume normal mining operations in this area. This order applies to all persons engaged in the rescue and recovery operation and any other persons on-site. This order was initially issued orally to the mine operator at 0820 Hours, and has now been reduced to writing.

2. A 104(d)(1) Citation was issued to Round Mountain Gold Corporation for violation of 30 CFR § 56.18002:

   The mine operator did not conduct a workplace examination of the 5454 level push area before allowing work to start in that area. Management assigned the bulldozer operator of the Caterpillar D10T2 bulldozer, company #540, to work that area approximately two hours before sunrise on November 8, 2020. Without a workplace examination for that area, hazardous conditions existed, such as a lack of work area illumination, and a lack of barricades or warning signs along the edge. These conditions went uncorrected, which resulted in the bulldozer traveling over the unprotected edge of the highwall. The bulldozer fell approximately 300 feet to the bench below, resulting in a fatal injury. The mine operator engaged in aggravated conduct, constituting more than ordinary negligence, in that a company-designated competent person, did not perform a workplace examination prior to miners entering into the assigned area. This is an unwarrantable failure to comply with a mandatory standard.

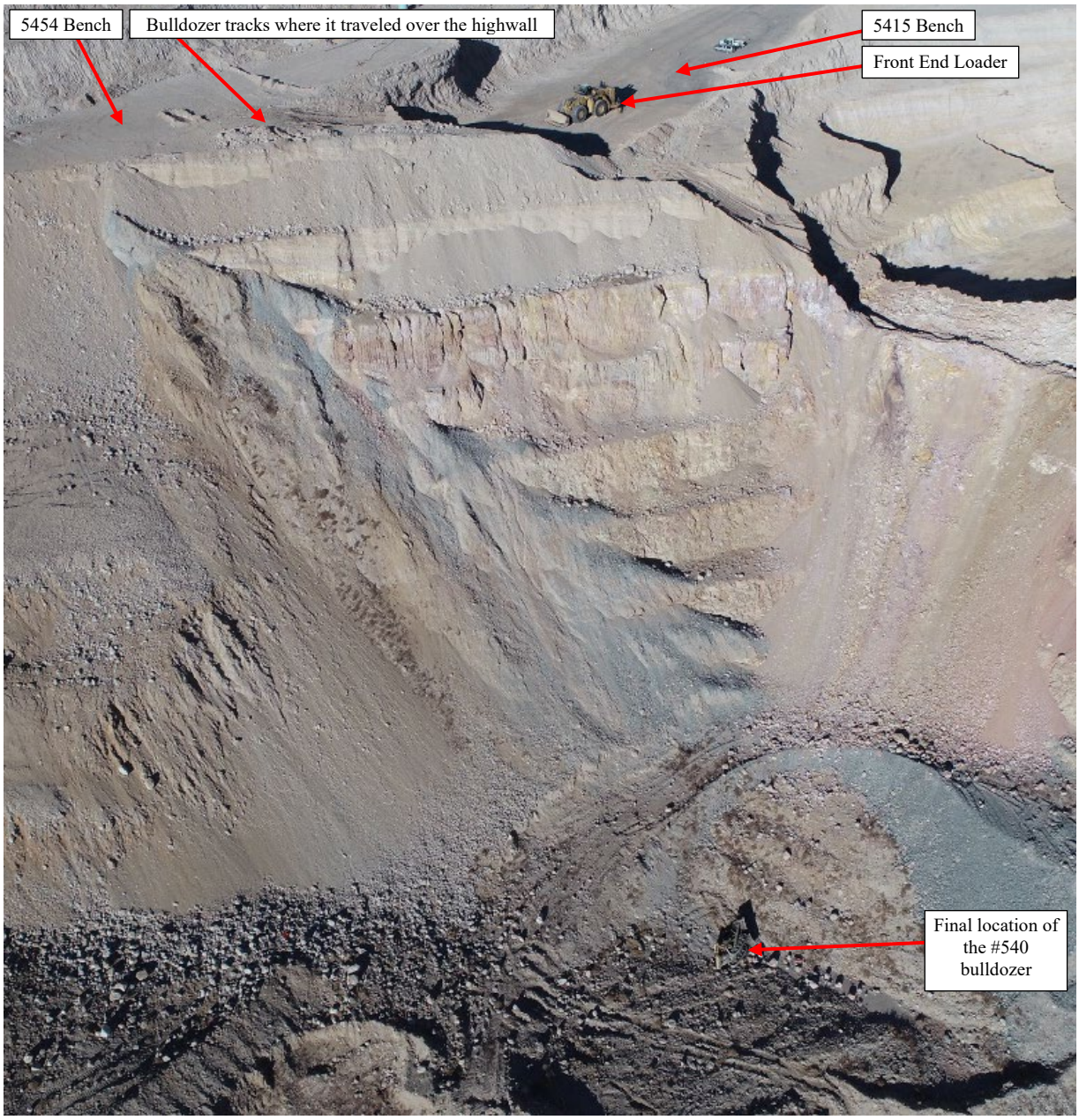
3. A 104(d)(1) Order was issued to Round Mountain Gold Corporation for a violation of 30 CFR § 56.20011:

   The mine operator did not provide barricades or warning signs of the hazardous conditions that were not immediately obvious at the top of the highwall for the 5454 level. The shot material from the 5454 level was being pushed by a Caterpillar D10T2 Bulldozer company #540 to the level below to be loaded into haulage trucks. Barricades or warning signs demarcating the top of the highwall were not in place. The bulldozer operator traveled over the edge of the bench, and the bulldozer fell approximately 300 feet to the bench below, resulting in a fatal injury. The mine operator engaged in aggravated conduct, constituting more than ordinary negligence, in that the edge of the 5454 bench was not barricaded nor were warning signs posted to demarcate the top of the highwall and the extreme fall potential where the victim was working. This is an unwarrantable failure to comply with a mandatory standard.

4. A 104(d)(1) Order was issued to Round Mountain Gold Corporation for a violation of 30 CFR § 56.17001:

   The mine operator did not provide work area illumination to the 5454 push area. Management assigned the operator of the Caterpillar D10T2 bulldozer, company #540 to work the area approximately 2 hours before sunrise, while it was very dark. The absence of illumination, particularly with the push area being located on top of a highwall, created a hazardous condition. A fatal injury occurred when the bulldozer traveled over the unprotected edge of the highwall and fell approximately 300 feet to the benches below. The mine operator engaged in aggravated conduct, constituting more than ordinary negligence, when it did not provide sufficient illumination for safe working conditions and did not follow company policy to push these areas only during daylight hours. This is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A - Photograph of the Accident Scene



APPENDIX B - Persons Participating in the Investigation

Smoky Valley Common Operations

| | |
|---|---|
| Caleb Trease | Safety and Health General Foreman |
| Robert Flynn | Safety and Health Field Support Supervisor |
| John Burton | Mine Rescue Coordinator |
| Jody Millard | Supervisor |
| Joe Edwards | Service Supervisor |
| Gary Svoboda | Health, Safety, and Training Superintendent |
| Tony Philips | Clinic Supervisor |
| Bobby Murray | Miner's Representative |
| Riley Briseno | Lead Person |
| Laura McCoy | Lead Person |
| Joe Mondragon | Fuel Truck Driver |

Nye County Sheriff's Department

| | |
|---|---|
| Allison Morgan | Detective and Deputy Coroner |
| Alan Lyn | Lieutenant Sheriff |

State of Nevada

| | |
|---|---|
| Dan Inman | State of Nevada Mine Inspector |
| Rickie Stevens | State of Nevada Mine Inspector |

Cashman Equipment

| | |
|---|---|
| John Eversgard | Caterpillar Mechanic |
| Blaise Berg | Caterpillar Mechanic |
| Thomas Stevens | Lead Technician |

Mine Safety and Health Administration

| | |
|---|---|
| William Whitby | Mine Safety and Health Inspector |
| Patrick Barney | Supervisory Mine Safety and Health Inspector |
| Gary Hebel | Assistant District Manager |
| Mike Tromble | Educational Field and Small Mine Services Supervisor |

APPENDIX C – Photograph of the Equipment Involved