MAI-2015-17

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
Metal and Nonmetal Mine Safety and Health

REPORT OF INVESTIGATION

Surface Metal Mine
Gold

Fatal Powered Haulage Accident
December 28, 2015

Barrick Cortez Inc
Barrick Cortez Inc
Crescent Valley, Lander County, Nevada
Mine ID No. 26-00827

Investigators

Troy Van Wey
Supervisory Mine Inspector

Patrick Barney
Mine Safety and Health Inspector

Kent Norton
Mine Safety and Health Specialist (Training)

Originating Office
Mine Safety and Health Administration
Western District
991 Nut Tree Road
Vacaville, CA 95687
Wyatt S Andrews, District Manager

OVERVIEW

On December 28, 2015, Douglas Paul Hicks, Haul Truck Operator, age 42, was killed while attempting to access a common parking area referred to as the Area 34 road rock pad (rock pad). The rock pad and access road were completely covered with snow and ice and extremely slippery. Hicks lost control of his haul truck while trying to climb an incline portion of an access road to the rock pad and slid back down until the road leveled off. A second haul truck entered the area, lost control, and slid back down the incline. The tail section of the second truck collided with Hick's haul truck. A third haul truck entered the area, also lost control, and slid back down the incline colliding with the second haul truck, pushing the tail section further into Hick's haul truck.

The accident occurred because the haul truck operators failed to maintain control of their individual pieces of mobile equipment. There were no signs posted at the entrances of the rock pad to warn mobile equipment operators of potentially hazardous conditions that would affect their ability to negotiate the area safely. Finally, management failed to adequately examine the rock pad for conditions that adversely affected the miners who were accessing this parking area.

GENERAL INFORMATION

Barrick Cortez Inc., a surface gold operation, is operated by Barrick Cortez Inc., under the parent company Barrick Gold Corp. It is located near Crescent Valley, Lander County, Nevada. The principal operating official is Mark Rantapaa, Mine Manager. The mine operates two, twelve-hour shifts, seven days per week. Total employment is 1,247 persons.

Gold ore is drilled, blasted, and transported by haul trucks to an onsite mill. The finished products are sold to commercial industries. The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this operation on September 15, 2015.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, Douglas Paul Hicks, truck driver, arrived at the Barrick Cortez Inc. mine at 6:45 a.m., his usual arrival time. Hicks was assigned to haul material from the pit shovel operator to the Area 34 leach pad. At approximately 2:15 p.m., dispatch informed the haul truck operators to take their extended/combined breaks (one hour) during the upcoming blast. The blast typically occurs at approximately 2:45 p.m. There are designated queuing areas along the route between the shovel and the Area 34 leach pad for the haul truck operators to take their breaks during the blast times. The queuing areas prevent the haul trucks from congregating in the same area in order to avoid unnecessary wait times during the production cycle. At approximately 2:14 p.m., Hicks attempted to enter the rock pad to find a place to park while the mine was blasting. The access ramp to the rock pad had an approximate grade of 5 percent and was completely covered with snow and ice. Hicks lost control of his haul truck, No. 314, and slid backwards. Due to the icy conditions of the road, Hicks was unable to move his truck. At approximately 2:15 p.m., Leander Sloan, operator of haul truck No. 318, started up the ramp to the rock pad. Sloan lost traction as he proceeded up the grade and slid backwards, tail first, into and through the driver's side door of Hick's haul truck. At approximately 2:20 p.m., Jose Arbillaga, operator of haul truck No. 335, pulled into the same area. Arbillaga also lost traction as he proceeded up the grade and slid backwards into truck No. 318, pushing it further into Hicks's truck.

Victor Ortiz, haul truck operator and Emergency Medical Technician (EMT), was traveling up the main haul road towards the Area 34 leach pad. He saw that there was an accident between two haul trucks (No. 314 and No. 318) at the rock pad. Ortiz parked his truck along the haul road and went to investigate. As Ortiz approached the accident scene, he saw Arbillaga lose control of his haul truck and slide into Sloan. Ortiz radioed the dispatcher and requested that all mine rescue personnel respond to the accident site. Ortiz asked arriving EMTs to remove Sloan and Arbillaga from the scene. When Ortiz checked Hicks, he found him nonresponsive. The Lander County Coroner arrived on site and

officially pronounced the victim dead. The official time of death is listed as 6:55 p.m.

INVESTIGATION OF THE ACCIDENT

On December 28, 2015, at 2:37 p.m., Lester Charles Beatty, Safety and Health Manager, Barrick Cortez Inc., called the Department of Labor National Contact Center (DOLNCC) to provide notice of the accident. DOLNCC notified John Pereza, Assistant District Manager of the Western District at 2:48 p.m., and a fatal accident investigation was initiated the same day. In order to ensure the safety of all persons, MSHA issued an order under section 103(k) of the Mine Act when the first Authorized Representative arrived at the mine.

MSHA's accident investigation team traveled to the mine, made a physical inspection of the accident scene, interviewed employees, and reviewed documents and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management, employees, and the State of Nevada Mine Safety and Training Section.

DISCUSSION

Location of the Accident

The accident occurred north of the main haul roadway at the rock pad. The rock pad is a common parking area for the haul truck operators to take their scheduled breaks during the shift. Haul trucks access the rock pad by traveling up an access road that has an approximate grade of 5 percent. On the day of the accident, the roadway surface was completely snow and ice covered. Upon inspection of the roadway, the investigation team noted multiple tire slide marks in the snow and ice. The slide marks were consistent with marks that would be expected as the drivers tried to stop when the trucks slid down the incline. All three haul trucks were fully loaded and there was no indication that the trucks were traveling at excessive speed.

Equipment involved in the accident

There were three haul trucks involved in the accident. All three were Caterpillar 795F H 350 Ton haul trucks.

- The first truck involved was company No. 314 (victim), Serial No. ERM00226.
- The second truck involved was company No. 318 (Sloan), serial No. ERM00242.
- The third truck involved was company No. 335 (Arbillaga), Serial No. ERM00284.

The investigators examined all three haul trucks. The right rear tail piece of truck No. 318 was found wedged directly through the driver's side door of truck No. 314. The impact of truck No. 318 forced the operator's seat of truck No. 314 to the rear and right – towards, and nearly behind, the trainer's seat. Truck No. 318's cab had considerable impact damage all along the left side from being hit by truck No. 335. Truck No. 335 had some impact damage along the right side and its right front tire blew out upon impact.

The operator provided pre-start item check lists (CAT downloads) for all three haul trucks and no defective items or significant events were noted. All three trucks were equipped with a Dynamic Braking (electric) lever located on the steering column, as well as an automatic retard control switch on the center console. Normal braking was accomplished by applying the service brake pedal on the floor, which operated the hydraulic braking system. All trucks were equipped with a secondary (backup) hydraulic braking system. The pedal for the secondary brake was located to the left of the service brake. The park brake was spring applied on the front wheels and hydraulically applied on the rear wheels and was automatically actuated when the shift lever was placed in the park position.

Tires

All three trucks' tires were examined by the investigators and were found to be in good condition.

Weather

The weather on the day of the accident was below freezing and it was actively snowing. The weather was a contributing factor to the accident in that the rock pad was completely covered with snow hiding a thick layer of ice underneath.

Training and Experience

Douglas Paul Hicks had 2 years and 18 weeks of experience as a haul truck operator at this mine. A representative from MSHA's Educational Field and Small Mine Services (EFSMS) conducted an in-depth review of the mine operator's training records. EFSMS reviewed the training records for Hicks and found that the operator had an MSHA Form 5000-23 for Hicks for task training on the CAT 795F Haul Truck for August and November of 2013, but it was not certified as being completed. MSHA issued a non-contributory citation related to training.

ROOT CAUSE ANALYSIS

Investigators conducted a root cause analysis and identified the following root cause:

Root Cause: Management failed to complete a workplace exam to identify and correct hazardous conditions in the working area.

Corrective Action: Management will develop a thorough training procedure on complete workplace examinations under variable workplace conditions.

Root Cause: Management failed to ensure that the equipment operator maintained control of the haul truck at all times.

Corrective Action: Management shall develop a task training process that trains equipment operators on driving under adverse conditions.

Root Cause: Management policies and controls were inadequate and failed to ensure that haul truck operators were provided with a safe driving surface to all working places at the mine.

Corrective Action: Management should conduct a risk assessment of all working areas that can be affected by adverse weather conditions.

CONCLUSION

The accident occurred due to the haul truck operators not maintaining control of their individual pieces of mobile equipment. There were no signs posted at the entrances of the rock pad to warn mobile equipment operators of potential conditions that would affect their ability to negotiate the area safely. Finally, management failed to adequately examine the rock pad for conditions that adversely affected the safety of miners that were accessing this common parking area on the day of the accident.

ENFORCEMENT ACTIONS

Issued to Barrick Cortez Inc

Order No.8876817 - Issued under section 103(k) of the Mine Act:

A fatal accident occurred on this mine site at approximately 1435. This Section 103(k) Order is intended to protect the safety of all persons on-site, including those involved in rescue and recovery operations or investigation of the accident. The mine operator shall obtain prior approval from an Authorized Representative of the Secretary for all actions to recover and/or restore operations in the affected area. Additionally, the mine operator is reminded of its existing obligations to prevent the destruction of evidence that would aid in investigating the cause or causes of the accident.

This order was terminated after conditions that contributed to the accident no longer existed.

Citation No. 8779297-Issued under Section 104(a) of the Mine Act for a violation of 30 CFR 56.9101:

A fatal accident occurred at this mine on December 28, 2015 when three haul trucks collided while attempting to access the Area 34 road rock pad to park. The victim and two other operators lost control of the Caterpillar 795 haul trucks they were operating. The victim's truck slid backward and came to rest at the berm where it was struck by two other haul trucks.

Citation No. 8779298-Issued under Section 104(a) of the Mine Act for a violation of 30 CFR 56.9100(b):

A fatal accident occurred at this mine on December 28, 2015 when three haul trucks attempted to access the Area 34 road rock pad to park. The roadway leading to the Area 34 road rock pad was completely covered by ice and snow and very slick. Signs or signals were not posted at all approaches to alert operators of mobile equipment to safety hazards that existed on the designated parking area.

Citation No. 8779299-Issued under Section 104(d)(1) of the Mine Act for a violation of 30 CFR 56.18002(a):

A fatal accident occurred at this mine on December 28, 2015 when three haul trucks attempted to access the Area 34 road rock pad to park. The Area 34 road rock pad was completely ice and snow covered at the time of the accident. An inadequate examination of this working place was conducted. The examiner did not identify or correct the slippery condition that existed. Management's failure to ensure that an adequate examination of this "common parking area" was completed and corrective actions were taken constituted more than ordinary negligence and was an unwarrantable failure to comply with a mandatory standard.

Approved: Wyatt Andrews Date: 5/23/16

Wyatt Andrews
District Manager

APPENDICES

APPENDIX A: Persons Participating in the Investigation

APPENDIX B: Victim Information

APPENDIX A

Persons Participating in the Investigation

Barrick Cortez Inc

Lester Charles Beatty	Safety and Health Manager
Steve Arnhold	Safety and Health Coordinator
Tammie Neff	General Superintendent Safety and Health
Dinah Choi	Attorney at Law Ogletree Deakins

Mine Safety and Health Administration

Troy Van Wey	Supervisory Mine Inspector
Patrick Barney	Mine Safety and Health Inspector
Kent Norton	Mine Safety and Health Specialist (Training)

State of Nevada Mine Safety and Training Section

Michael Anderson	Mine Inspector
Jim Peterson	Mine Inspector

Lander County Sheriff's Office

Stephan Priest	Deputy Sheriff/Coroner

APPENDIX B

Accident Investigation Data - Victim Information

Event Number: | 6 | 5 | 9 | 7 | 7 | 9 | 5 |

U.S. Department of Labor

Mine Safety and Health Administration

Victim Information: 1

1. Name of Injured/Ill Employee: *Douglas P. Hicks*
2. Sex: *M*
3. Victim's Age: *42*
4. Degree of Injury: *01 Fatal*
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: *12/28/2015* b.Time: *18:55*
6. Date and Time Started: a. Date: *12/28/2015* b.Time: *6:45*
7. Regular Job Title: *176 Haul Truck Driver*
8. Work Activity when Injured: *055 Operating Haul Truck*
9. Was this work activity part of regular job? Yes | X | No | |

10. Experience

	Years	Weeks	Days
a. This Work Activity:	3	9	0
b. Regular Job Title:	3	9	0
c. This Mine:	2	18	0
d. Total Mining:	3	9	0

11. What Directly Inflicted Injury or Illness? *104 Haul Truck*
12. Nature of Injury or Illness: *370 Blunt Force Trauma*
13. Training Deficiencies: Hazard: | | New/Newly-Employed Experienced Miner: | | Annual: | | Task: | |
14. Company of Employment: (If different from production operator) *Operator* Independent Contractor ID: (if applicable)
15. On-site Emergency Medical Treatment: Not Applicable: | | First-Aid: | | CPR: | | EMT: | X | Medical Professional: | | None: | |
16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim: *9999 None (No Union Affiliation)*