

Accident Investigation Report  
Underground Metal Mine

Fatal Powered Haulage

Getchell Mine  
Getchell Gold Corporation  
Golconda, Humboldt County, Nevada  
Mine ID No. 26-02233

January 15, 1997



Authority—This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164.

Section A—Identification Data

1. Title of investigation: FATAL POWERED HAULAGE  
 2. Date MSHA investigation started: 1/15/97  
 3. Report release date: 4/19/97  
 4. Mine: GETCHELL  
 5. Mine ID number: 26-02233  
 6. Company: GETCHELL GOLD CORP.  
 7. Town, County, State: GOLCONDA, HUMBOLDT, NEVADA  
 8. Author(s): S. CAIN/T. BARRINGTON

Section B—Mine Information

9. Daily production: NA  
 10. Surface employment: 25  
 11. Underground employment: 216  
 12. Name of coalbed: NA  
 13. Thickness of coalbed: NA

Section C—Last Quarter Injury Frequency Rate (HSAC) for:

14. Industry: 4.17  
 15. This operation: 19.31  
 16. Training program approved: 2/15/96  
 17. Mine Profile Rating: NA

Section D—Originating Office

18. Mine Safety and Health Administration  
WESTERN DISTRICT, M/NM  
 Address: 3333 VACA VALLEY PKWY, STE 600  
VACAVILLE, CA 95688

Section E—Abstract

A 3½ yard scoop tram (LHD) was parked against the rib of the 4850-162 inclined access drift. While being serviced, it moved along the rib crushing the lube technician and temporarily trapping the loader operator.

Section F—Mine Organization

Company officials:	Name	Address
19. President:	R. David Russell	P.O. Box 220 Golconda, NV 89414
20. Superintendent:	Tim Harter	Same
21. Safety Director:	Patrick Allen	Same
22. Principle officer—H&S:	Patrick Allen	Same
23. Labor Organization:	NA	
24. Chairman—H&S Committee:	NA	



## GENERAL INFORMATION

Isabelle Marcelle Justus, age 36, an underground lube technician/laborer, was fatally injured at approximately 4:20 p.m. on January 15, 1997, when the loader she was servicing crushed her against the rib. Justus had one year and three months of mining experience, all at this mine. She had held the title of lube technician the past nine months. Justus originally was hired as a surface warehouse worker and was given 24 hours of surface new miner training. She was later transferred underground but was not given the required underground new miner training. There also were no records to indicate that she had received task training upon being assigned lube technician duties.

Timothy Kilbreath, Safety Engineer for Getchell Gold Corporation, notified MSHA of the accident at 6:09 p.m. on January 15, 1997. An investigation was started the same day.

The Getchell Mine was a multi-level, gold producing, underground mine located 30 miles north of Goldconda, Humboldt County, Nevada. The mine was owned and operated by Getchell Gold Corporation. Principal officials were R. David Russell, vice-president and CEO, Tim Harter, general mine manager, Craig Gimmel, mine superintendent, and Patrick S. Allen, loss control manager. The mine worked two shifts per day, seven days per week. A total of 241 employees worked on the surface and underground.

The mining method was underhand cut-and-fill with conventional drilling and blasting. Mucking was done with rubber tired LHD mobile equipment. The ore was hauled to the surface to processing points where it was sized and placed on cyanide leach pads. Gold was recovered through a carbon collection/electrowinning process.

The last regular inspection of this operation, prior to the accident, was completed on March 21, 1996. A regular inspection was completed February 25, 1997.

## PHYSICAL FACTORS INVOLVED

The accident occurred at the 4850-162 drift, an access cross-cut drift located between the 4850 haulage drift and the 4864 production drift. The 4850-162 drift was about 50 feet in length, 13 feet wide, and 14 feet high. It was developed on a 10 percent grade.

The Tamrock/EJC, model 130, Load-Haul-Dump scoop tram (LHD) was a 3-1/2 yard, rubber tired, articulated, front-end loader. The LHD was 27 feet, 9 inches in length and, at the operator's station, 7 feet, six inches in height. It weighed 17.5 tons. Approximately one yard of muck was in the bucket at the time of the accident. The loader articulated in the center with the operator's compartment on the left side behind the articulation pivot point. The LHD was powered by a Detroit, four cylinder, turbo charged, diesel engine. Power was transferred through a Powershift three-speed transmission and a Clark C273 torque converter. Because of the grades the LHD operated on, the third gear had been blocked out as both a safety and maintenance measure. The overall gear ratio was 22.39 to 1.

The brakes on the LHD operated on two separate systems. The service brake was an enclosed, liquid cooled, multi-disc system. Hydraulically actuated service brakes were provided on each wheel unit and had an accumulator reserve. A dual, closed center, control valve was actuated by a foot pedal at 1500 psi. The accumulators were piston type, nitrogen charged at 800 psi pre-load. Cooling of the service brakes was attained through the use of a one quart receiver located above the differential. This system experienced a constant loss of coolant and required regular refilling.

The park brake system was a single caliper/rotor assembly. The assembly was located on the front drive line at the union with the front differential third member. The caliper was mounted under the rotor on a 9/16 inch thick metal frame that extended across the lower portion of the main frame. Application of the caliper was spring applied when the hydraulic pressure in the system was released, causing three pistons with pads on each side of caliper to extend and make contact with the rotor. Release pressure was set at 1400 psi with an accumulator reserve system similar to the service brakes.

The company had adopted the manufacturer's recommendations for pre-operational testing of the brakes. There were separate procedures to follow in testing the service brakes and the park brake. During the investigation it was found that loader operators did not know the correct testing procedures.

A Tamrock service technician visited the mine in June of 1996 to review brake problems the mine was experiencing. Brakes were wearing out sooner than anticipated. The technician's follow-up report listed major problems with the equipment operators' knowledge of the park brake test procedures. The technician also stated that improper maintenance was the reason for the short brake life. Equipment operators reported park brake defects on service logs, but records indicated that the mine operator failed to initiate corrective action.

Both the service brakes and the park brake systems were disassembled and inspected. The service brakes were found to be in serviceable condition. The park brake had major deficiencies including; extensively worn brake pads, missing brake pads, missing dust covers, a scarred brake piston, a scarred and worn brake rotor, leaking hydraulic piston covers, a missing brake caliper guard, misaligned park brake caliper, and misaligned caliper mounting frame. Deficiencies in the electrical and hydraulic systems were also observed. An electrical coil/solenoid necessary for testing the park brake was inoperative because the coil was burned out. The park brake test could not be performed prior to operating the LHD because a valve was blocked and would not open. Foreign material in the valve indicated contamination of the hydraulic system.

A misalignment was noted in the caliper mounting frame resulting in an uneven wear pattern on the caliper and the rotor. By being misaligned, the caliper components could not apply nor release as designed. A circular pattern cut across the rear half of the caliper body and caliper pistons indicated the inability to properly release, completely wearing away the brake pads. The application between the rear caliper and the rotor was metal on metal at the time of the accident. The front portion of the caliper was able to apply only an estimated 33 percent of the pads to the rotor and were worn unevenly. The park brake caliper mounting frame had two torch-burned holes in it, affecting the integrity of the frame. It was concluded that the holes may have been for the straightening of the mounting plate at some earlier date. A metal plate, designed by the manufacturer to protect the caliper and its mounting plate from damage, was not in place.

#### DESCRIPTION OF ACCIDENT

Justus (victim) reported for work at 7:30 a.m. At approximately 4:10 p.m., she was notified that Joshua Rugh, miner first class, had called requesting fuel for the Tamrock 130 LHD he was operating. Justus was told that Rugh could be found tramming backfill in the 4850-184 area.

Justus arrived at the 4850-184 but Rugh was not there. She then contacted Willie Brown, lead miner, who directed her to the 4850-162 area. While Justus was enroute, Brown went to Rugh and told him to "rib" the loader. Rugh stopped the loader on a ten percent grade with the bucket pointed uphill and the left rear into the rib. He set the park brake, shut off the engine, and, along with Brown, checked the loader's fluid levels. Rugh and Brown waited approximately ten minutes, until about 4:15 p.m., for Justus to arrive with the service truck.

Upon arrival Justus backed the truck toward the LHD, parking about four feet from the loader motor. She pulled the diesel fill hose off the spool and passed it to Rugh who was between the motor and the rib. Brown told Justus that the LHD also needed brake fluid and hydraulic fluid. They pulled the hydraulic fluid hose off its spool and Justus climbed over the motor compartment into the area where Rugh was located. Rugh filled the diesel tank approximately one-third full. As he was replacing the diesel tank cap and passing the hose to Justus, the loader began moving. It scraped along the rib as it traveled approximately two feet. Justus was crushed and Rugh was caught between the rib and the loader.

Rugh yelled to Brown to get the LHD off them. Brown started the loader and trammed to a level area above the accident scene where he parked. Eddie Mendoza, miner third class, hearing and seeing what had happened, ran to the pager phone in the 4850 and called for help. Rugh and Odoms began first aid on Justus.

Sally Shipman, EMT, responded to the call and began emergency aid. Justus was transported to the surface on Odom's haul truck and transferred to a mine emergency vehicle. The Humboldt County ambulance met the mine vehicle approximately 20 miles from the mine and transported Justus to Humboldt General Hospital where she was pronounced dead by the county coroner.

#### CONCLUSION

The cause of the accident was the failure of the park brake, a result of poor maintenance practices. Inadequate employee training also contributed to this occurrence.

## CITATIONS/ORDERS

Order No. 4141013 was issued on January 15, 1997 under provisions of Section 103(k) of the Mine Act:

On January 15, 1997 an underground miner was fatally injured when she was pinned against the rib by a LHD. This order was issued to insure the safety of persons until the affected areas of the mine could be returned to normal operation. This order was terminated on 01/18/97 after it was determined it was safe to resume operations.

Citation No. 7951336 was issued January 15, 1997 under provisions of Section 104(a) for violation of 30 CFR 48.5(a).

On January 15, 1997 an underground miner was fatally injured when she was pinned against the rib by a LHD. The victim had not received health and safety training required to be given a new inexperienced underground miner.

The citation was terminated January 30, 1997 after the company was instructed in the requirements of 48.5(a).

Citation No. 7951549 was issued January 15, 1997 under provisions of Section 104(a) for violation of 30 CFR 48.9(a).

On January 15, 1997 an underground miner was fatally injured when she was pinned against the rib by a LHD. The company failed to provide task training records for the victim.

The citation was terminated March 18, 1997 after required records were produced.

Citation No. 7951338 was issued January 15, 1997 under provisions of Section 104(d)(1) for violation of 30 CFR 57.14101(a)(2).

On January 15, 1997 an underground miner was fatally injured when she was pinned against the rib by a LHD. The parking brake was not capable of holding the loader at the location it was parked. The condition of the brake had been reported to company agents with no corrective action taken. This is an unwarrantable failure.

The citation was terminated January 30, 1997 after the vehicle was taken out of service and shipped to the manufacturer.

Order No. 7951339 was issued January 15, 1997 under provisions of Section 104(d)(1) for violation of 30 CFR 57.14101(a)(3).

On January 15, 1997 an underground miner was fatally injured when pinned against the rib by a LHD. The park brake on the LHD was

not being maintained in a functioning condition. The condition of the brakes had been reported to company officials with no corrective action taken. This is an unwarrantable failure.

The order was terminated on January 30, 1997 after the LHD was removed from service.

Order No. 7951340 was issued on July 15, 1997 under provisions of Section 104(d)(1) for violation of 30 CFR 57.14100(b).

On January 15, 1997 an underground miner was fatally injured when pinned against the rib by a LHD. Mechanical defects reported to company officials were not corrected in a timely manner. This is an unwarrantable failure.

The order was terminated on January 30, 1997 after company officials were made aware of the requirements of 57.14100(b).

Citation No. 7951341 was issued January 15, 1997 under provisions of Section 104(a) for violation of 30 CFR 50.12.

On January 15, 1997 an underground miner was fatally injured when pinned against the rib by a LHD. Following the accident, the scene was not protected in that the lube truck had been moved and foot traffic was permitted through the area.

The citation was terminated on January 30, 1997 after company officials were made aware of the requirements of 50.12.

/s/ Stephen A. Cain  
Mine Safety and Health Inspector

/s/ Thomas E. Barrington  
Mine Safety and Health Inspector

approved by:

  
Fred M. Hansen, Manager  
Western District

## APPENDIX I

Persons participating in the accident investigation were:

### Getchell Gold Corporation

Patrick Allen, manager of loss control  
Ralph Baker, manager, turquoise ridge mine  
Craig Gimmel, underground mine superintendent  
Ray Kranovich, underground maintenance superintendent  
Virgil Hoy, mechanic foreman  
Halaran Slauter, lead mechanic  
Laura Beverage, attorney

### Tamrock USA, Inc

Bruce Jorgensen, tamrock technical representative  
Bruce Laxalt, attorney  
Jeffery Melcher, attorney

### State of Nevada, Division of Mine Inspection

James Frei, mine inspector

### Mine Safety and Health Administration

Stephen A. Cain, mine safety and health inspector  
Thomas E. Barrington, mine safety and health inspector  
Kazmir Niziol, mining engineer

**APPENDIX II  
U.S. Department of Labor  
Mine Safety and Health Administration**

Data Sheet

**Section A-Victim Data**

<b>1. Name</b>	<b>2. Sex</b>	<b>3. Social Security Number</b>
Isabelle Marcelle Justus	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female	6104
<b>4. Age</b>	<b>5. Job Classification</b>	
36	Lube Tech/Laborer	
<b>6. Experience at this Classification</b>		<b>7. Total Mining Experience</b>
One year three months		One year three months
<b>8. What activity was being performed at time of accident?</b>	<b>9. Victim's Experience at this Activity</b>	<b>10. Was victim trained in this task?</b>
Servicing a 3 ½ yard LHD	9 months	no

Section B-Victim Data for Health and Safety Courses/Training Received (related to accident)	Date Received
11.	
12.	
13.	
14.	

**Section C-Supervisor Data (supervisor of victim)**

<b>15. Name</b>	<b>16. Certified</b>
Hal H. Slauter	<input type="checkbox"/> Yes <input type="checkbox"/> no NA (coal)
<b>17. Experience as Supervisor</b>	<b>18. Total Mining Experience</b>
6 months	One year eleven months

Section D-Supervisor Data for Health and Safety Courses/Training Received (related to accident)	Date Received
19.	
20.	
21.	
22.	

<b>23. When was the supervisor last present at accident scene prior to the accident?</b>	<b>24. What did he do when he was there?</b>
N/A	N/A

<b>25. When was he last in contact with the victim?</b>	<b>26. Did he issue instructions relative to the accident?</b>
In the underground shop earlier in the shift	NO

<b>27. Was he aware of or did he express an awareness of any unsafe practice or condition?</b>
No