

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Underground Coal Mine
Fall of Face, Rib, Pillar or Highwall
August 20, 2009

Big Laurel Mining Corporation
Mine No. 2
Roda, Wise County, Virginia
ID No. 44-07087

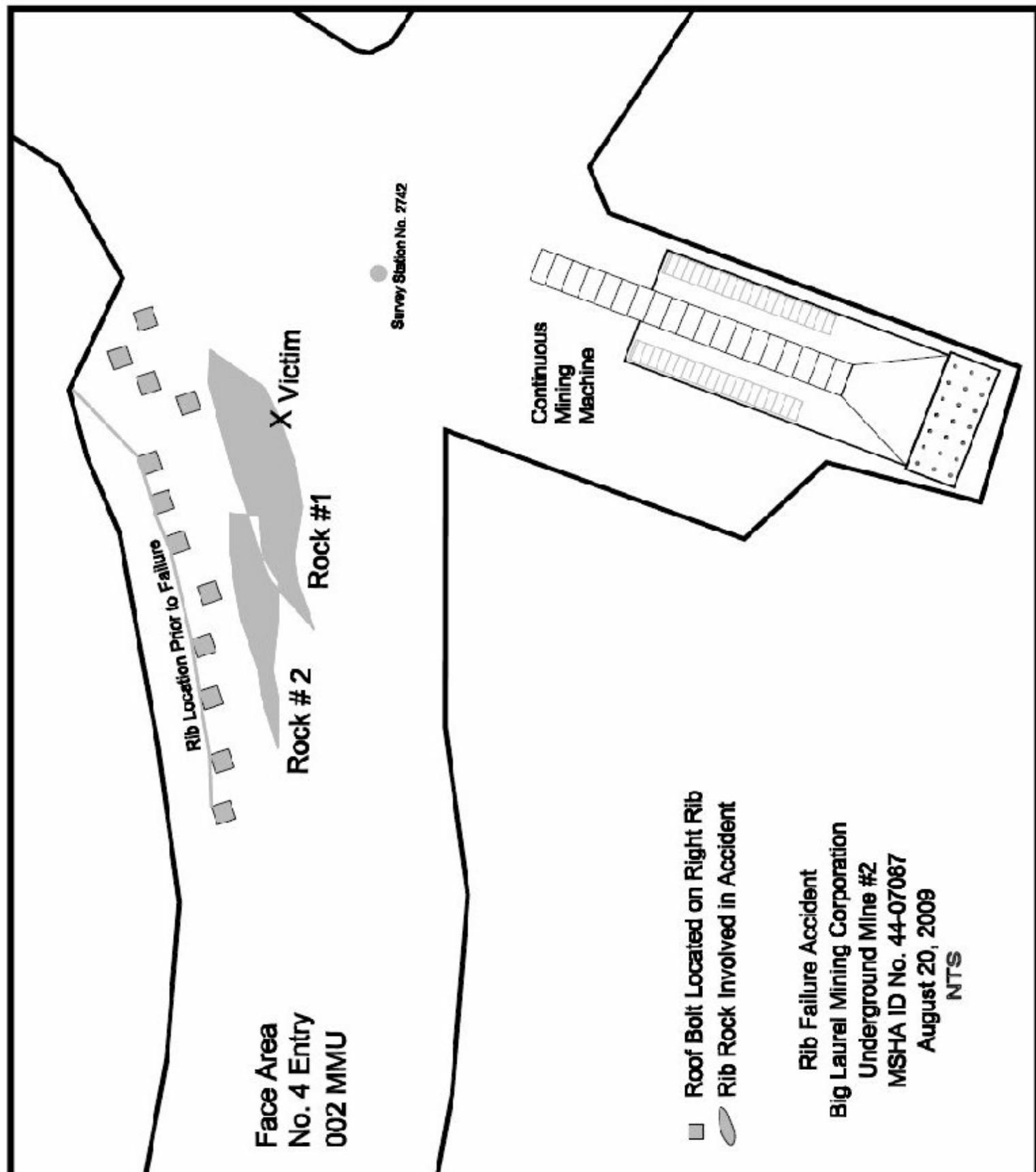
Accident Investigator

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Overview

At approximately 6:18 a.m., on Thursday, August 20, 2009, William W. Parrott, Electrician/Repairman, was fatally injured when a portion of mine rib collapsed. The accident occurred while Parrott was preparing to set timbers in No. 4 Entry, approximately 20 feet inby Survey Spad No. 2742. Parrott was preparing to set timbers under the brow of the right rib when the rib toppled and struck Parrott, causing fatal crushing injuries. The rib which fell broke into two pieces. The first rock, which caused the crushing fatal injuries, measured approximately 26 feet 1 inch long, by up to 2 feet 6 inches wide, by up to 5 feet high. The second rock measured approximately 17 feet 10 inches long, by up to 2 feet wide, by up to 3 feet high.

General Information

Big Laurel Mining Corporation's Mine No. 2, MSHA ID No. 44-07087, is an underground coal mine located approximately six miles from Appalachia, Wise County, Virginia off State Route 685, on Mudlick Road. Cumberland Resources Corporation, located in Wise, Virginia, is the parent company of Big Laurel Mining Corporation. The principal officers for the mine at the time of the accident were:

R. Thomas Asbury
Steve Moore

Safety Director
Superintendent

Employment is provided for 58 underground and 3 surface miners. The miners work on two production shifts and one maintenance shift per day, five days per week. The miners were developing the 2 West Mains [002 mechanized mining unit (MMU)] with eight entries developed on 70 feet entry centers, by 80 feet crosscut centers. The approximate distance from the surface to the section is 12,000 feet, and there was approximately 700 feet of overburden at this location. The mine produces approximately 900 clean tons of coal per day from two production units. One remotely controlled continuous mining machine is used on the 002 MMU to extract coal. The coal is transported from the face by shuttle cars. The raw coal is transported to the surface by a belt conveyor system. Diesel and battery powered, rubber tired, self-propelled, mantrips are used to transport both men and materials. Two dual boom roof bolting machines are used to install permanent roof support.

The mine extracts coal from the Low Splint coal seam by the room-and-pillar and retreat mining methods. The mine has five drift openings and an average mining height of 56 inches. The average height on the 002 MMU (section) at the accident site ranged from 92 inches to 112 inches. The section face areas are ventilated with line

curtains utilizing the exhaust and blowing systems of face ventilation. Laboratory analysis of return air samples collected on July 7, 2009, indicated an average methane liberation rate of zero cubic feet per day.

The Mine Safety and Health Administration (MSHA) completed the last regular health and safety inspection of the mine on June 29, 2009. The Non-Fatal Days Lost (NFDL) injury incidence rate for the mine in 2008 was 4.76 compared to a National NFDL rate of 4.41.

Description of the Accident

On Wednesday, August 19, 2009, at approximately 10:00 p.m. the third shift crew for the 002 MMU, under the direction of Robert Silcox, Jr., Section Foreman, entered the mine via a diesel-powered, rubber tired, self-propelled mantrip. They arrived on the active 002 MMU at approximately 10:20 p.m. and began normal production operations.

The crew members were in the following locations immediately before the accident. Silcox was located in No. 3 Entry, one crosscut outby the fire curtain (ventilation curtain) getting wooden header boards to set timbers at the power center. Ronnie Muse, Continuous Mining Machine Operator, was cutting the No. 4 Left Crosscut for the second time during the shift. Charles Dean, Shuttle Car Operator, was operating the shuttle car partially under the conveyor of continuous mining machine in No. 4 Left Crosscut. Shawn Head and Carl Pass, Roof Bolters, were completing the roof bolting in No. 2 Right Crosscut. Logan Pittman, Scoop Operator, was cleaning (scooping) the No. 7 Entry. Bobby Owens, Shuttle Car Operator, was instructed to travel toward the surface and pick up the day shift crew at the water hole located at the No. 3 Conveyor Belt Drive, and transport them to the 002 MMU.

Muse had loaded approximately 3 to 4 shuttle cars before the accident and had briefly talked to Parrott (victim), immediately prior to the accident. Parrott was located on the right side of No. 4 Entry preparing to set timbers under the exposed brow. Dean trammed his shuttle car under the continuous mining machine and Muse began loading the shuttle car. At approximately 6:18 a.m., as the shuttle car was being loaded, Dean heard the rib roll and Parrott's light flashed across Dean's face. Dean and Muse looked toward Parrott and saw him under the rib rock. They proceeded as quickly as possible to find Silcox. Muse went to the left side of the section and Dean trammed the shuttle car to the feeder looking for Silcox. Muse encountered Head and informed him of the accident. Head found Silcox outby the fire curtain in No. 3 Entry and informed him of the accident. Silcox instructed Head to call outside immediately to get an ambulance. Silcox then proceeded as quickly as possible to the accident scene.

Head called outside and spoke with Steve Moore, Mine Superintendent, and Wiley Holbrook, Outside Person, informing them of the serious accident. Once Silcox arrived at the accident scene and saw the seriousness of the accident, he returned to the mine phone and called outside to request help.

Moore, Dustin Mullins, Chief Electrician, David Arnold, 002 MMU Day Shift Section Foreman, Michael Thomas, 002 MMU Day Shift Electrician/Repairman and Billy Marion, Day Shift EMT, traveled to 002 MMU and began to make preparations to recover Parrott. Moore, Mullins, Thomas and Arnold proceeded to the accident site to start the recovery. Marion transported roof support header boards and wedges to the accident site; then, per the instructions of Moore, traveled outby to ensure that the water hole at No. 3 Belt Drive was pumped down. Moore called outside to get 50-ton jacks to aid in the recovery of Parrott. Arnold Day and Claude Parsons, Day Shift Outby Persons, delivered the jacks to the section. The victim was removed and transported outside by Day, Parsons, and Arnold on a diesel powered mantrip. The mantrip was followed by Mike Sanders, 001 MMU Day Shift Section Foreman, in another diesel powered mantrip.

The mantrip arrived outside at approximately 7:59 a.m. and Parrott was transported to the Wellmont Lonesome Pine Hospital, at Big Stone Gap, Virginia by the Appalachia Ambulance Service. The ambulance arrived at the hospital at approximately 8:36 a.m., where the victim was pronounced dead. An autopsy was completed by Dr. Christina L. Roberts at 6:30 p.m.

Investigation of the Accident

On August 20, 2009, at 6:25 a.m. a company representative contacted the Mine Safety and Health Administration (MSHA) Emergency Hotline Call Center to report the accident. The Call Center contacted Jim Kiser, MSHA's District 5 Conference Litigation Representative (CLR), at 6:37 a.m. to inform him of the accident. A 103(j) order was issued verbally at 6:49 a.m. to ensure the safety and health of persons in the affected area of the mine until the accident investigation could be completed. Duane Beggs and Terry Sheffield, MSHA Mining Engineers, arrived at the mine site at approximately 9:00 a.m. The 103(j) order was reduced to writing and then modified to a 103(k) order at the mine site. A joint investigation team was established, consisting of MSHA, Virginia Department of Mines, Minerals and Energy (DMME), and Company personnel. Preliminary information was gathered before proceeding underground. The accident scene was examined, photographed, and measured for a scale drawing. (See Accident Scene Drawing-Page 1)

A total of fifteen (15) interviews were conducted on August 21 and 28, 2009. Additional questions were submitted and answered by company personnel, to obtain further

information. Sandin Phillipson, MSHA-Pittsburgh Safety and Health Technology Center, Technical Support-Roof Control Division, Pittsburgh, Pa., visited the mine and accident scene on August 21, 2009, and provided a summary of geological observations to the accident investigation team.

Discussion

The August 19, 2009, preshift examination conducted by David Arnold, 002 MMU Day Shift Section Foreman, between 1:00 p.m. and 2:04 p.m. was called outside at 2:20 p.m. This examination listed a "Wide" hazardous condition in the No. 4 entry and the corrective action taken was "Hung Ribbon and Setting Timbers". The onshift report listed an "Offset at Angle" hazardous condition in the No. 4 entry. The August 19, 2009, preshift examination conducted on the 2nd Shift by Steve Reasor, 2nd Shift Foreman, from 8:30 p.m. to 9:30 p.m. was called outside at 9:34 p.m. The preshift and on shift examinations did not identify a hazardous condition in the No. 4 entry. Excessive widths were present in the entry and had been observed and previously recorded during the day shift preshift examination by Arnold. No corrective action had been taken on the 2nd Shift and this condition was not carried over to the 2nd Shift preshift or onshift reports.

The 2nd shift was a maintenance shift. Maintenance work was being performed on the 002 MMU. Reasor performed an inadequate preshift and onshift examination. Reasor was exposed to the hazards of this brow when he walked by the brow.

Robert Silcox, Jr., 002 MMU Owl (3rd) Shift Section Foreman, conducted the preshift examination on August 20, 2009, from 4:11 a.m. to 5:17 a.m. The preshift record was called outside at 5:25 a.m. A hazardous condition of "Overhanging Brow" was listed in the No. 4 Entry and "Timbering Now" as the corrective action taken for the condition. The onshift report listed a hazardous condition of "Overhanging Brow" and "Timbering" as the corrective action taken for the condition. Silcox performed an inadequate preshift and onshift examination.

When the "Wide" hazardous condition was recorded in the Day Shift preshift report on August 19, 2009, the area was ribboned off or flagged according to standard mine procedures. The investigation revealed that this procedure was ineffective due to the fact that no one on the other shifts recognized the flagging as an indication of a "hazardous condition." Consequently, regular mining activities continued in the No. 4 Entry. Robert Muse, Continuous Mining Machine Operator, had cut the No. 4 Heading once and the No. 4 Left Crosscut once during the 3rd shift on August 20, 2009. Muse was mining in the 2nd cut of the 4 Left Crosscut at the time of the accident.

Muse, Charles Dean, Shuttle Car Operator, and Wayne Parrott (victim), were in the immediate area of the accident. Muse and Dean were cutting and loading coal in the 2nd cut of 4 Left crosscut. Muse had loaded 3 to 4 shuttle cars when the accident occurred. Dean stated he did not see what happened, but heard the rib fall and Parrott's light flashed across Dean's face. He turned and saw Parrott under the rib roll.

The cut which created the wide entry was taken on the 3rd shift on August 18, 2009 and the wide condition was noted as a hazardous condition on the day shift onshift and preshift reports for August 19, 2009. All subsequent cuts taken in the No. 4 heading inby Survey Station 2742 were taken by the 3rd shift crew. The actual mining of the turn from 2 West Mains to 3 West Mains in the No. 4 Entry exposed entry widths of 28.5 to 31.8 feet. If this projected turn had been mined properly, an approximate additional 6.5 to 9.8 feet of coal would have remained in place in the turn area. This additional coal could have mitigated the consequences of the rib roll. Survey spads had been set in the No. 4 Entry on August 18, 2009. These survey spads were not utilized properly to accomplish the change in mining direction from 2 West Mains to 3 West Mains. (See Projected Mining vs Actual Mining Drawing -Appendix B)

The operator's corrective action of placing timbers under the rock brow was not an appropriate corrective action for the excessive width of the entry. Additional rib support was needed in the No. 4 Entry in the form of rib bolts/brackets and floor to roof standing support to correct the brow hazard and excessively wide entry hazard. Two rib brackets had been installed inby the accident site in the No. 4 Entry to control a rib condition.

A systematic mining problem was present across the 002 MMU. Wide areas occurred across the section in six other entries at the turn location (2 West Mains to 3 West Mains). Deep cuts were being mined in the turn area, although 20 feet or less cut depths would have been appropriate due to conditions and the change of mining direction. Conflicting information was being posted in the record books, i.e. preshift examination book information did not agree with production records. The third shift section foreman in the "Remarks" section of the onshift reports for August 19 and 20, 2009, stated, "Section safe to work and travel to the best of my knowledge at time of exam. Section has draw rock and soft ribs in random locations. Scaling top, pulling ribs, 20' cuts, extra support as needed." The production reports for August 19 and 20, 2009, showed seven 32 foot cuts and five 32 foot cuts, respectively. A 104(d)(2) closure Order was issued for this condition in a subsequent E-16 (spot) inspection.

Thirty additional citations and/or orders were written on the spot inspections performed in conjunction with the fatal accident investigation inspection. Fourteen of those citations/orders were written under the Title 30, Code of Federal Regulations (CFR), § 75.202(a) standard-Protection from Falls of Roof, Face and Rib.

The Company has submitted a revision and received approval to the Roof Control Plan (RCP) to address rib control. This revision addresses rib brackets and rib bolts.

Geology

The Big Laurel Mining Corporation's Mine No. 2 is underlain by abandoned workings in the Taggart Seam, approximately 150 feet below, which is shown by mine maps to have been retreat-mined in the 1940's. Mine maps did not indicate the presence of isolated remnant pillars or gob-solid boundaries in the vicinity of the accident site.

The fatality site was located just inby the last open crosscut in the No. 4 (Belt) Entry where the 2 West Mains was transitioning to the 3 West Mains, accompanied by a 27 degree, 20 minute change in mining direction.

The immediate roof, where exposed, contains three gradational rock types, such that fossil plant debris gray shale is intermixed with very well cemented, gray shale, and well cemented dark siltstone. Within three crosscuts from the accident site, well cemented shale increases in thickness to represent 24 inches of the nominal 70-inch mining height, with a corresponding decrease in coal thickness. The immediate roof hosts more prominent, randomly oriented fossil plant debris in brownish gray mudstone.

Outby the accident site, coal ribs exhibit light to moderate sloughing beneath the non-fossil plant debris, with well cemented gray shale immediate roof, forming prominent brows. Pillar corners have commonly sloughed off, defining a series of rock brows. In many cases, rock brows, especially where dismembered by joints, have failed in tension when the coal sloughs out to a depth of approximately 12 inches. Rock brows were supported with short, wood posts, particularly at pillar corners. The coal has a well developed cleat system, spaced two inches apart, and oriented N 60° E and N 37° W. For several crosscuts outby the accident site, prominent joints are present in the roof, striking N 80° E and dipping 60° SE.

The fatal rib roll represents a long slab that toppled from the right rib along geological planes of weakness. Although the original complete slab may have contained coal, it appears to have broken up and turned to rubble during the failure, such that the remaining solid slab is composed of hard shale and siltstone (Figure 1). The intact slab is estimated to weigh 20 tons. Based on the distribution of rock dust, it does not appear that the failure occurred as a cantilever of shale after being undercut by sloughing coal. Instead, the slab separated along prominent N 65° E-striking coal cleat and a steeply dipping N 65° E-striking joint that isolated the edge of the pillar, and toppled outward

and rotated out into the entry (Figure 2). The slab separated from the immediate roof along a prominent bedding parting that hosted randomly oriented, plant fossil debris (Figure 3). The actual failure surface of the shale is not controlled by a single, planar joint, but is instead composed of a series of parallel, non-persistent joints that result in a slightly curved surface (Figure 3). The controlling joint was exposed in the last open crosscut, where it was turned right from the No. 4 Entry (Figure 4).



Figure 1. Long, thin slab of shale separated from smooth bedding parting characterized by plant fossil debris, rotating down and out into entry. Smooth, flat surface at left represents top of rock.

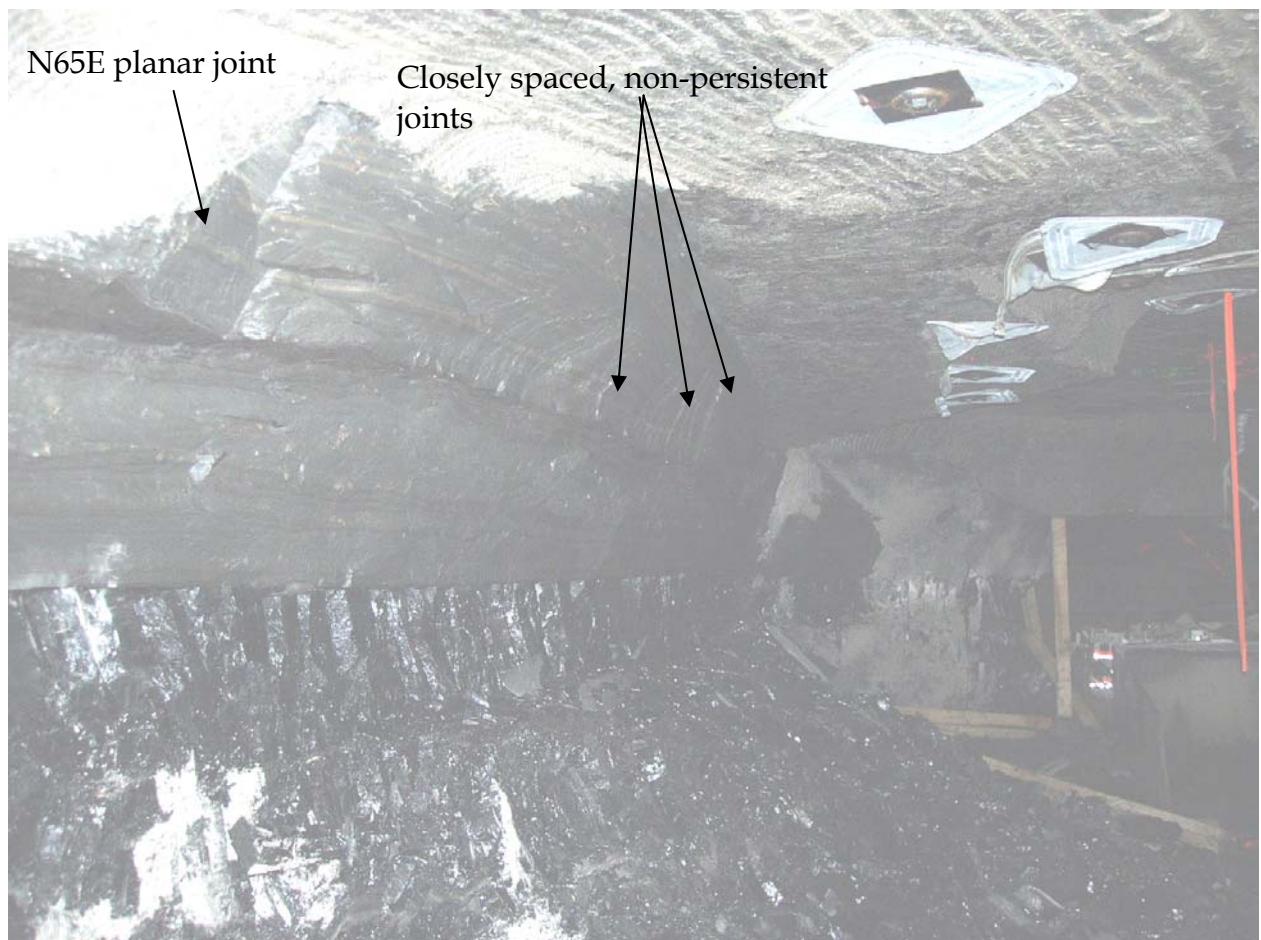


Figure 2. Planar joint strikes N 65° E and projects behind failed slab into outby right-hand crosscut, isolating the pillar corner that resulted from changing orientation from 2 West Main to 3 West Main. Rear bounding failure surface is composed of closely spaced, but non-persistent joints that parallel the smooth-surfaced joint.

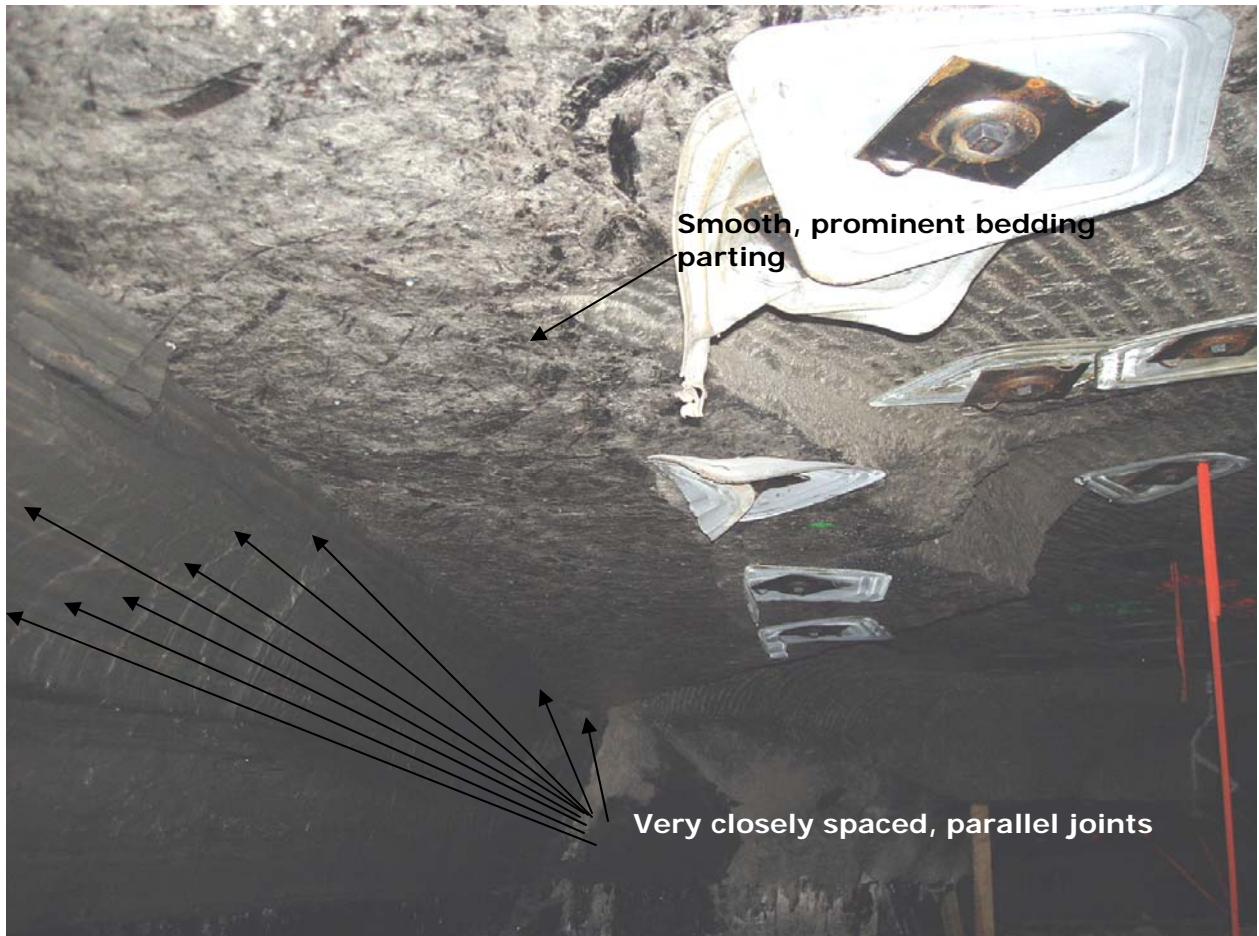


Figure 3. Smooth, prominent bedding parting exposes fossil plant debris, matching surface of failed slab. The failed slab delaminated from the roof along this plane of weakness. Slightly darker area represents freshly exposed surface, indicating extent of failed slab. Left of photo shows smooth surface defined by very closely spaced, parallel joints that acted as rear bounding failure surface.

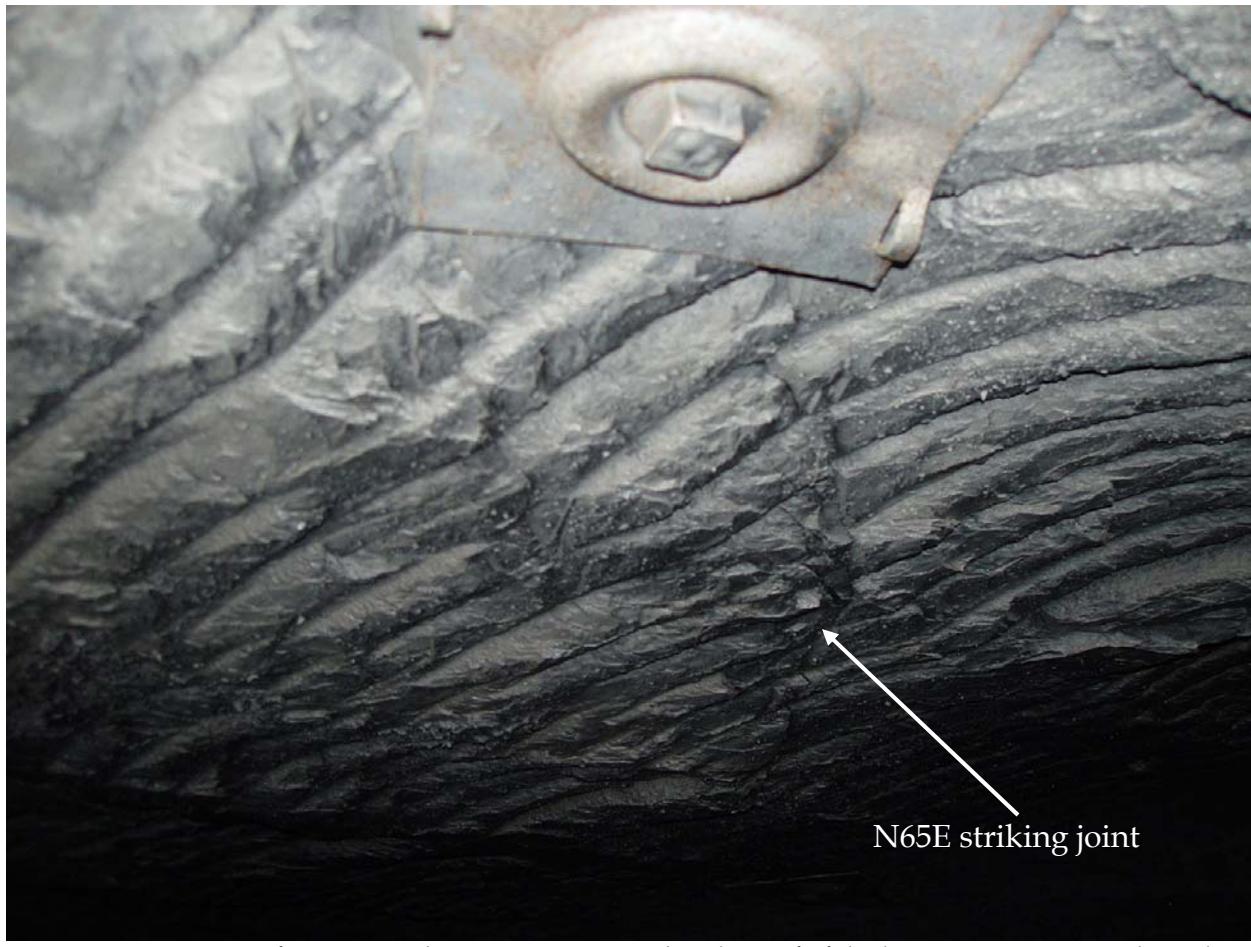


Figure 4. Expression of N 65° E striking joint as exposed in the roof of the last open crosscut to the right of No.4 Entry, outby the accident site.

Very well developed joints that exhibited a strike of N 70-80° E were observed from the faces to four crosscuts outby on the 2 West Mains. The N 57° W azimuth of the 2 West Mains placed the joints in a diagonal “corner to corner” orientation that minimized their impact on instability. When the 3 West Mains began to be turned in the new orientation of approximately Due West (N 84 degrees, 20 minutes W) the joints became approximately parallel to the new rib line. In the No.4 Entry, where the fatality occurred, a N 65° E joint trended through the right-hand crosscut inby into the No. 4 Entry, isolating the south pillar corner and defining the tall slab. The same geometry was observed in the No.1, No.2, and No.3 Entries, where the turn to the new orientation had also been made. (See Section Map of Plotted Roof Joints-Appendix B)

Roof Support

The accident site was bolted with 5-foot, fully grouted resin bolts with 18 inch by 18 inch draw rock shields (pizza pans) and supplemented with 8-foot super bolts. The site was bolted with 6 to 9 bolts per row and the rows were spaced 4 feet apart. The No. 4 Belt Conveyor Entry could be developed 22 feet wide for a distance of 200 feet, as per the approved Roof Control Plan to facilitate the installation of the belt drive and take-up. Two rib brackets had been installed inby the accident to control a broken rib. The accident site had been developed from 92 inches, up to 111 inches high with approximately 42 inches of coal. This particular method of mining exposed excessive roof rock measuring from approximately 50 inches to 69 inches. The No. 4 Entry was driven (developed) from 28.5 feet to 31.8 feet, for a distance of 9 feet. The outby crosscut was driven 32 feet wide on the right side of the No. 4 entry and 26 feet 9 inches on the left side. The No. 4 Entry of 2 West Mains was overdriven before the 27 degree, 20 minute turn to the left was made to start 3 West Mains. Also, turning the 3 West Mains to the new bearing of N 84 degrees, 20 minutes W aligned the well developed roof joints approximately parallel to the new rib line.

Root Cause Analysis

An analysis was conducted to identify the underlying cause of the accident that was correctable through reasonable management controls. Listed below are root causes identified during the analysis and the corresponding corrective actions implemented to prevent a recurrence of the accident:

1. Root Cause: Inadequate mine planning by management to factor in geological conditions in the area of the 002 MMU that were not favorable to the change in direction of mining.

Corrective Action: The Company performed a geologic study of the 002 MMU area. The location of the 002 MMU and direction of mining was changed subsequent to this study. Future mining will address geological conditions for all areas of the mine.

2. Root Cause: Inadequate supervision to control a 32 feet depth, by 28.5 feet to 31.8 feet wide, by 8.3 feet high cut in the No. 4 Entry prior to making the turn from 2 West Mains to 3 West Mains.

Corrective Action: The Roof Control Plan (RCP) was revised and approved August 28, 2009, to address rib control. The RCP revision included eliminating the deep cut provision, eliminating the 22 feet wide entry in the belt entry at belt

drive/takeup locations, guidelines to allow development only 5 feet beyond the turn location to prevent excessively wide entries at turns and provisions for rib bolting. The Company trained all miners in the new provisions of the revised RCP.

3. Root Cause: Management failed to assure that the status of the hazardous condition in No. 4 Entry listed from the Day shift examiners report of 8-19-2009 was corrected.

Corrective Action: The Company trained all foremen in hazardous condition recognition and proper corrective actions.

4. Root Cause: Management failed to adequately support the rib in the No. 4 Entry.

Corrective Action: The Company submitted and received approval for a revision to the RCP to provide rib control at this mine. This rib control includes the installation of rib brackets and rib bolts. The Company has changed roof bolting machines to provide the required rib bolting.

Conclusion

William Wayne Parrott, Electrician/Repairman, while preparing to set timbers on the right rib, was fatally injured when a rib roll occurred in the No. 4 Entry inby Survey Spad 2742. A hazardous condition noting excessive (wide) entry width in the No. 4 Entry had been entered in the preshift book on the day shift August 19, 2009. This condition was not corrected and was absent from the onshift and preshift evening reports for August 19, 2009. A combination of factors occurred prior to the accident, including excessive rib rock mined ranging from 50 inches up to 69 inches, excessively wide entry ranging from 28.5 feet up to 31.8 feet, and the alignment of well developed roof joints approximately parallel to the new rib line in the 3 West Mains. The extra mining height further exposed a horizontal joint and the excessive entry width exposed vertical joints (See Figures 2, 3 and 4). The accident occurred when a long slab of brow rock toppled from the right rib along geological planes of weakness, resulting in fatal crushing injuries.

This geologic condition and other observable adverse conditions were not detected and/or corrected during onshift/preshift examinations, thus resulting in failure of rock/rib at the accident site. There was inadequate oversight by management to ensure hazardous conditions were detected and/or corrected, and that prudent mining methods were followed.

Enforcement Actions

1. Section 103(j) Order No. 8158993 was verbally issued August 20, 2009, to Big Laurel Mining Corporation, Mine No. 2. The 103(j) Order No. 8158993 was reduced to writing and stated: An accident occurred at this operation on 8-20-09 at approximately 06:18. 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 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 Big Laurel Corporation, Mine No. 2 except to the extent necessary to rescue an individual or prevent or eliminate an imminent danger 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 06:49. The 103(j) Order No. 8158993 was modified to a 103(k) order and stated: The initial order is modified to reflect that MSHA is now proceeding under the authority of Section 103(k) of the Federal Mine Safety and Health Act of 1977. 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 modified nineteen (19) times and terminated on September 9, 2009.
2. Section 104(d) (2) Order No. 8158997 of Code of Federal Regulations (CFR) 30, § 75.203(b) was issued as follows - Information obtained during the Fatal Accident Investigation beginning August 20, 2009, revealed the following. The company did not properly utilize a sightline or other method of directional control to maintain the projected direction of mining in No. 4 Entry, 002 MMU at the turn from the 2 West Mains to the 3 West Mains inby Spad 2742. The No. 4 entry was over mined resulting in a wide entry (See Attached Sketch). The No. 4 entry was mined from 28.5 feet to 31.8 feet wide for a distance of 9 feet inby Spad 2742. The outby crosscut was developed 32 feet wide on the right side and 26 feet 9 inches on the left side. Measurements were made with a standard tape and an engineering tape. The approved Roof Control Plan (RCP) for this mine has a maximum entry width of 22 feet for a

maximum length of 200 feet for the No. 4 (Belt) entry to facilitate the installation of a belt drive and take-up. The crosscuts have a maximum width of 26 feet for the turn-in at the beginning of the crosscuts. This violation is an unwarrantable failure to comply with a mandatory standard. The company has engaged in aggravated conduct constituting more than ordinary negligence. This violation is a contributing factor to the fatal accident.

3. Section 104(d) (2) Order No. 8158998 of Code of Federal Regulations (CFR) 30, § 75.202(a) issued as follows - Information obtained during the Fatal Accident Investigation beginning August 20, 2009, revealed the following. The company failed to adequately support the coal/rock ribs in the No. 4 (Belt) entry. A loose inadequately supported coal/rock rib was present along the right side of the entry on the 002 MMU, inby the accident site. This condition was evident by the installation of two rib brackets installed along the right rib and visual examination of this location after the accident indicated at least part of the rib had already failed by the presence of rock dust being distributed behind the open rib during the clean up and rock dusting of the No. 4 (Belt) entry. The right rib at the accident site failed during inadequate support efforts of setting timbers under a small brow where coal had fallen (spalled) away from the rock portion of the brow leaving a ledge approximately 4 inches wide as indicated by testimony during the fatal accident investigation. This area had been flagged by the day shift foreman, on August 19, 2009, indicating a hazardous condition needing additional supports due to excessive widths. The third shift foreman continued to mine in the No. 4 entry taking at least two deep cuts before attempting to install additional support. This violation is an unwarrantable failure to comply with a mandatory standard. The company has engaged in aggravated conduct constituting more than ordinary negligence. This violation is a contributory factor to the fatal accident.
4. Section 104(d)(2) Order No. 8158999 of CFR Code of Federal Regulations (CFR) 30 , § 75.220(a)(1) was issued as follows - Information obtained during the Fatal Accident Investigation beginning August 20, 2009, revealed the following. The company failed to follow the approved Roof Control Plan (RCP) dated June 21, 2009, in that entry widths exceeded the maximum allowable width as set forth in the plan. The method of mining in the No. 4 (Belt) entry of the 002 MMU exposed miners to hazards caused by excessive widths of crosscuts and entries. The No. 4 entry was driven from 28.5 feet to 31.8 feet wide for a distance of 9 feet inby Survey station 2742 (See Attached Sketch) The outby crosscut from the accident site was driven 32 feet wide on the right side (facing inby) and 26 feet 9 inches on the left side. The approved RCP allowed the development of a 22 feet wide entry for a distance of 200 feet

to facilitate the installation of a belt conveyor drive and take-up. Also, the approved RCP allowed a 26 feet wide entry at the mouth of the crosscut.

"Wide" entry was recorded in the day shift preshift examination on August 19, 2009, and the condition was not corrected on the 2nd shift. The condition was omitted on the 2nd shift preshift report and deep cuts continued inby this location on the 3rd shift. This violation is an unwarrantable failure to comply with a mandatory standard. The company has engaged in aggravated conduct constituting more than ordinary negligence. This violation is a contributing factor to the fatal accident.

5. Section 104(d)(2) Order No. 8159000 of Code of Federal Regulations (CFR) 30, § 75.360(a)(1) was issued as follows - Information obtained during the Fatal Accident Investigation beginning August 20, 2009, revealed the following. Adequate preshift examinations were not performed on August 19 and 20, 2009, on the 002 MMU in the No. 4 (Belt) entry inby Survey Station 2742 on the 2nd and 3rd shifts. The following deficiencies in the examinations were noted:
 1. The 2nd shift report for August 19, 2009, did not identify a hazardous condition of wide entry in the No. 4 (Belt) entry.
 2. The 3rd shift report for August 20, 2009, did not identify the hazardous condition of a wide entry in the No. 4 (Belt) entry. It also did not identify a broken rib located on the right rib inby the accident site. Production continued in the No. 4 entry on the 3rd shift for the entire shift and the condition of wide entry was not addressed.

The day shift report on August 19, 2009, had identified a hazardous condition of "wide" entry and had flagged the location in the No. 4 entry; however, the condition was not corrected or carried forward onto the 2nd and 3rd shift examinations.

This violation is an unwarrantable failure to comply with a mandatory standard. The company has engaged in aggravated conduct constituting more than ordinary negligence. This violation is a contributing factor to the fatal accident.

6. Section 104(d)(2) Order No. 8159001 of Code of Federal Regulations (CFR) 30, § 75.362(a)(1) was issued as follows - Information obtained during the Fatal Accident Investigation beginning August 20, 2009, revealed the following. Adequate onshift examinations were not performed on August 19 and 20, 2009, on the 002 MMU in the No. 4 (Belt) entry inby Survey Station 2742 on the 2nd and 3rd shifts. The following deficiencies in the examinations were noted:
 1. The 2nd shift report for August 19, 2009, did not identify a hazardous condition of wide entry in the No. 4 (Belt) entry.
 2. The 3rd shift report for August 20, 2009, did not identify the hazardous condition of a wide entry in the No. 4 (Belt) entry. It also did not identify a broken rib located on the right rib inby the accident site. Production continued in the No. 4 entry on the 3rd shift for the entire shift and the condition of wide entry was not addressed.

The day shift onshift report on August 19, 2009, had identified a hazardous condition of "Offset at Angle" and the preshift report had identified a hazardous condition of a "Wide" entry and the location had been flagged in the No. 4 entry; however, the condition was not corrected or carried forward onto the 2nd and 3rd shift examinations.

This violation is an unwarrantable failure to comply with a mandatory standard. The company has engaged in aggravated conduct constituting more than ordinary negligence. This violation is a contributing factor to the fatal accident.

Signature Page

Approved: Ray M c K i n n e y
Ray McKinney, District Manager

Date: JANUARY 14, 2010

Appendix A

Persons Participating In the Investigation

The following people provided information and/or were present during the investigation:

Cumberland Resources Corporation

Rick Craig-Vice President of Operations
R. Thomas Asbury-Safety Director
Forest Lambert-Safety Analyst
Melanie J. Kilpatrick-Attorney
Cameron Bell-Attorney

Big Laurel Mining Corporation

Steve Moore-Mine Superintendent
Robert Silcox, Jr.-Section Foreman, Owl Shift
David Arnold-Section Foreman, Day Shift
James Coker-Mine Foreman, Second Shift
Stephen Reason-Second Shift Foreman
Dennis Clark-Second Shift Foreman
Josh Fields-Mining Engineer
Billy Marion-Outby Utility Person
Ronnie Muse-Continuous Miner Operator
Shawn Head-Roof Bolting Machine Operator
Carl Pass-Roof Bolting Machine Operator
Bobby Owens-Shuttle Car Operator
Charles Dean-Shuttle Car Operator
Logan Pittman-Scoop Operator
Chris Belcher-Surveyor (Transitman)-Mining & Property Specialists, LLC (MAPS)
Thomas Dene-Attorney-MAPS

Virginia Department of Mines, Minerals and Energy

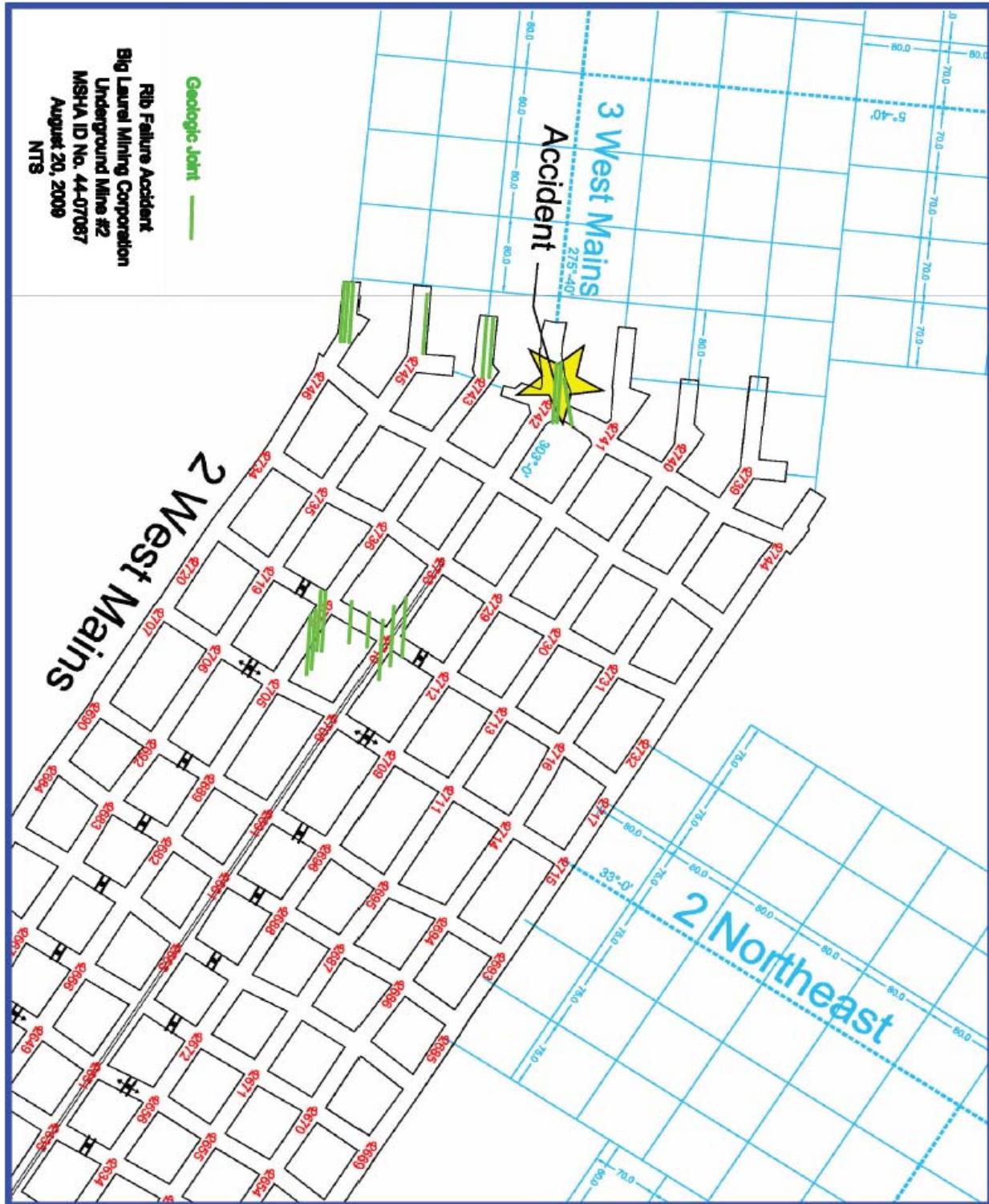
Frank Linkous-Chief, Division of Mines
Carroll Green-Mine Inspector Supervisor
Gary Cutting-Coal Mine Technical Specialist
Matt Smith-Coal Mine Technical Specialist
Sammy Fleming-Coal Mine Inspector
Brett Childress-Coal Mine Inspector
Danny Mann-Coal Mine Inspector
Anthony Sturgill-Technical Engineer
Mike Willis-Mine Safety Engineer
Chris Whitt-Emergency Response Coordinator

Mine Safety and Health Administration

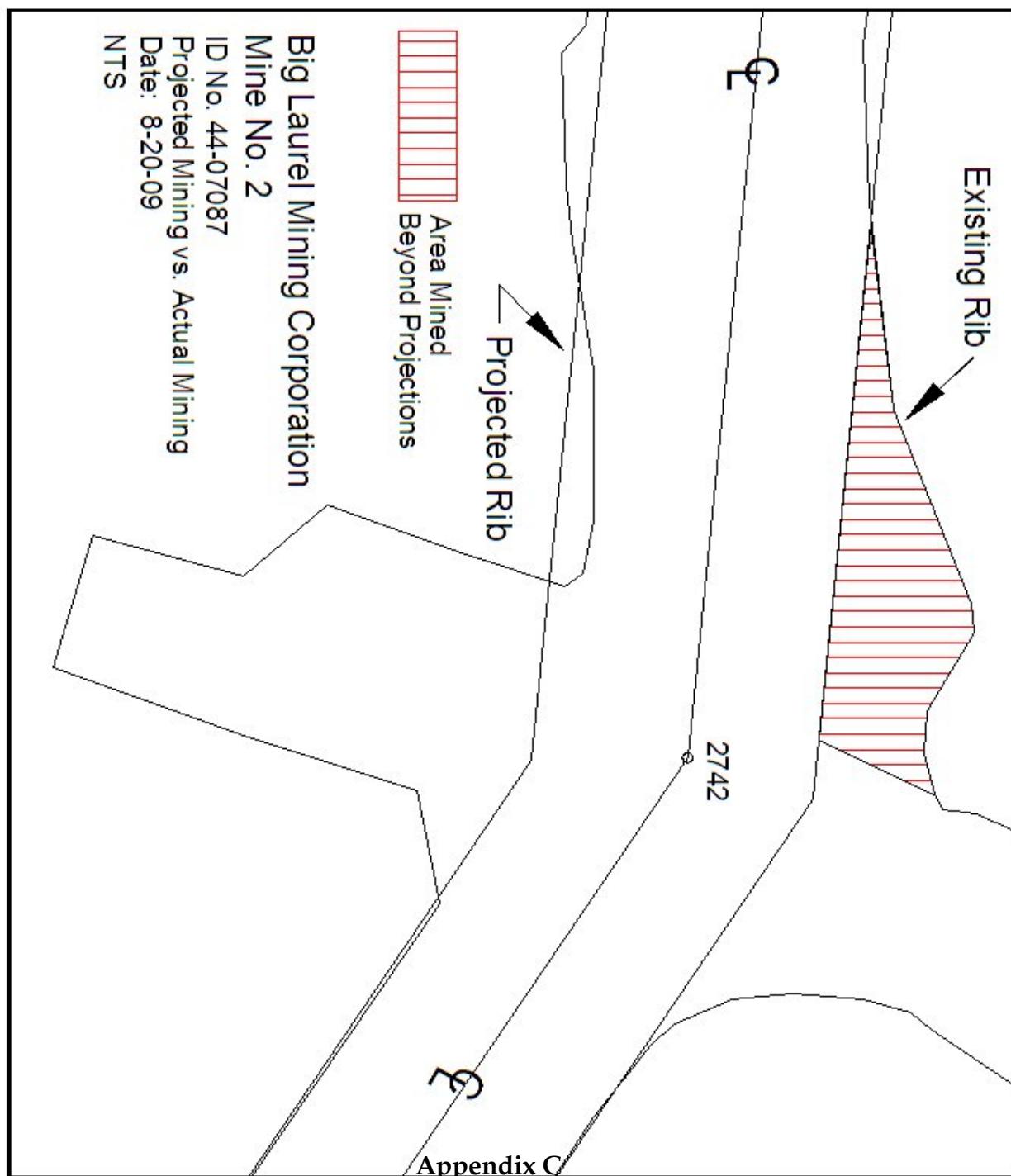
Ray McKinney-District Manager
Nicholas Rasnick-Assistant District Manager, Inspection Division
Greg Meikle-Assistant District Manager, Technical Division
Benjamin Harding-Staff Assistant
Lloyd Robinette-Ventilation Supervisor
James Kiser-Conference and Litigation Representative (CLR) Supervisor
Daniel L. Johnson-Roof Control Supervisor
Sandin Phillipson-Geologist-Technical Support, Roof Control Division
Fred Martin-Educational Field Services Specialist
Johnny Turner-Coal Mine Safety and Health Inspector, Roof Control
Scott Beverly-Coal Mine Safety and Health Inspector, Roof Control
Ernie Sexton-Coal Mine Safety and Health Inspector
Russell Dresch-Electrical Engineer
Duane Beggs-Mining Engineer, Roof Control
Terry Sheffield-Mining Engineer, Roof Control

Appendix B

Section Map of Plotted Roof Joints



Projected Mining vs. Actual Mining Drawing



Victim Information-7000-50b Report

Accident Investigation Data - Victim Information
 Event Number: 4 4 0 6 1 1 0

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



Victim Information: 1												
1. Name of Injured/Ill Employee: William W. Parrott	2. Sex: M	3. Victim's Age: 58	4. Last Four Digits of SSN: 8836	5. Degree of Injury: 01 Fatal								
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: 08/20/2009 b. Time: 6:18			7. Date and Time Started: a. Date: 08/19/2009 b. Time: 22:00									
8. Regular Job Title: 104 Repairman/Electrician			9. Work Activity when Injured: 089 Timbering			10. Was this work activity part of regular job? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
11. Experience Years Weeks Days	b. Regular Job Title: 4 0 5	c. This Mine: 4 0 5	d. Total Mining: 33 0 0	Years Weeks Days	Years Weeks Days	Years Weeks Days						
a. This Work Activity: 4 0 0												
12. What Directly Inflicted Injury or Illness? 122 Side or Rib			13. Nature of Injury or Illness: 170 Crushing Injuries									
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner:			Annual: Task:									
15. Company of Employment:(if different from production operator) Operator												
16. On-site Emergency Medical Treatment: Not Applicable: First-Aid: CPR: EMT: Medical Professional: None: <input checked="" type="checkbox"/>												
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim: 9999		None (No Union Affiliation)			
Victim Information:												
1. Name of Injured/Ill Employee:	2. Sex:	3. Victim's Age:	4. Last Four Digits of SSN:	5. Degree of Injury:								
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:			7. Date and Time Started:									
8. Regular Job Title:			9. Work Activity when Injured:			10. Was this work activity part of regular job?						
11. Experience Years Weeks Days	b. Regular Job Title: Years Weeks Days	c. This Mine: Years Week Days	d. Total Mining: Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	
a. This Work Activity:												
12. What Directly Inflicted Injury or Illness?			13. Nature of Injury or Illness:									
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner:			Annual: Task:									
15. Company of Employment: (if different from production operator)							Independent Contractor ID: (if applicable)					
16. On-site Emergency Medical Treatment: Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:												
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim:					
Victim Information:												
1. Name of Injured/Ill Employee:	2. Sex:	3. Victim's Age:	4. Last Four Digits of SSN:	5. Degree of Injury:								
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:			7. Date and Time Started:									
8. Regular Job Title:			9. Work Activity when Injured:			10. Was this work activity part of regular job?						
11. Experience Years Weeks Days	b. Regular Job Title: Years Weeks Days	c. This Mine: Years Week Days	d. Total Mining: Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	Years Weeks Days	
a. This Work Activity:												
12. What Directly Inflicted Injury or Illness?			13. Nature of Injury or Illness:									
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner:			Annual: Task:									
15. Company of Employment: (if different from production operator)							Independent Contractor ID: (if applicable)					
16. On-site Emergency Medical Treatment: Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:												
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim:					