

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Coal Mine

Fatal Machinery Accident  
June 3, 2008

Gopher Contracting (R828)

at

Premier Elkhorn Coal Company  
Job 49  
Myra, Pike County, Kentucky  
I.D. No. 15-18946

Accident Investigator

Robert H. Bellamy  
Mining Engineer

Originating Office  
Mine Safety and Health Administration  
District 6  
100 Fae Ramsey Lane  
Pikeville, KY 41501  
Norman G. Page, District Manager

## Table of Contents

PHOTO OF ACCIDENT SCENE.....	1
OVERVIEW.....	2
GENERAL INFORMATION.....	2
DESCRIPTION OF ACCIDENT.....	3
INVESTIGATION OF ACCIDENT.....	4
DISCUSSION.....	4
ROOT CAUSE ANALYSIS.....	8
CONCLUSION.....	9
ENFORCEMENT ACTIONS.....	10
APPENDIX A - Sketch and Photographs.....	12
APPENDIX B – Persons Participating in the Investigation.....	18
APPENDIX C – Victim Information.....	19

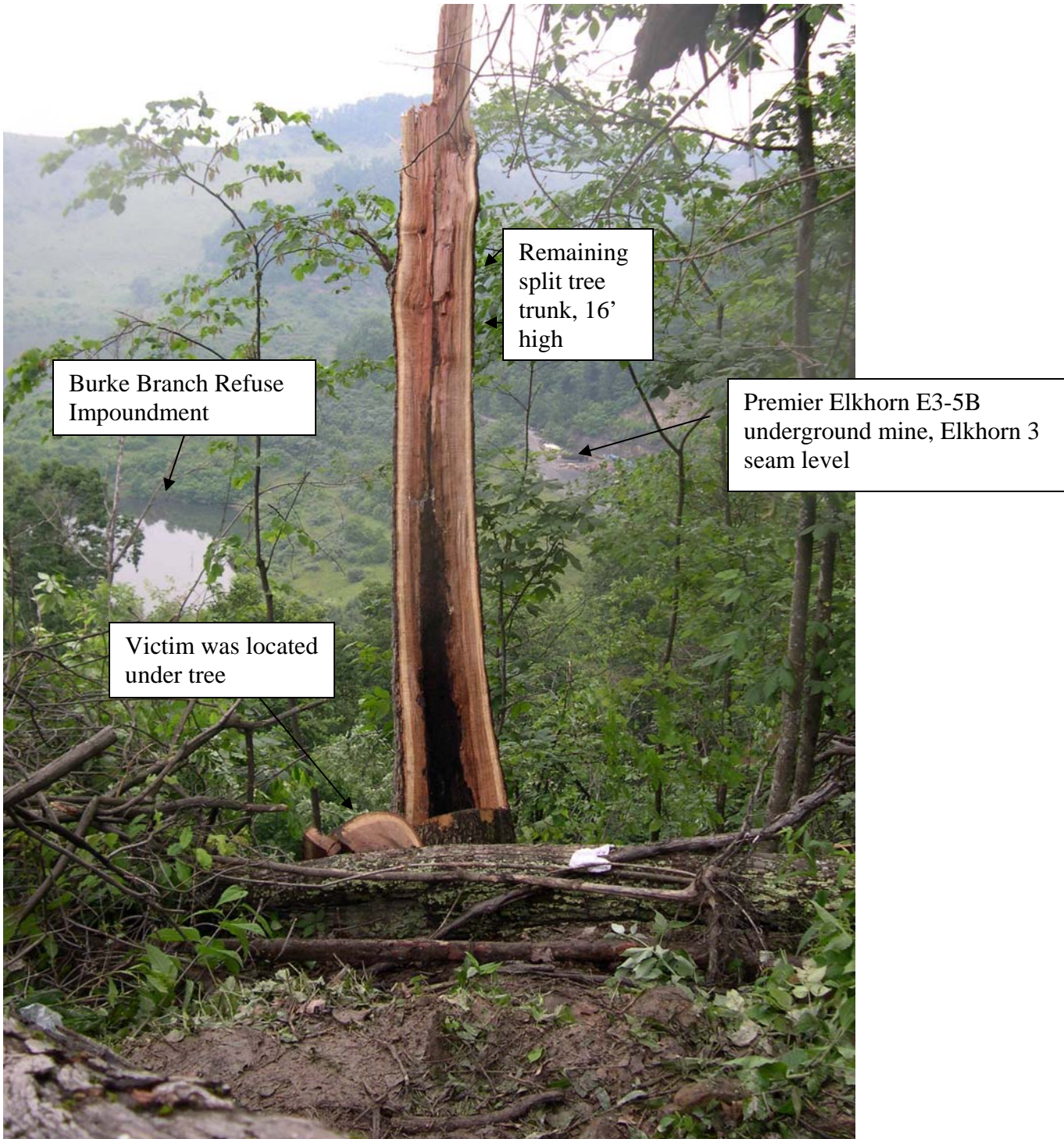


Photo of Accident Scene  
Premier Elkhorn Coal Company, Job 49  
MSHA I.D. No. 15-18946  
Gopher Contracting (R828)  
June 3, 2008

## OVERVIEW

At approximately 11:47 a.m., on Tuesday, June 3, 2008, William S. Hill, a 33-year old tree cutter for Gopher Contracting, Contractor I.D. R828, received fatal injuries when the tree which he was in the process of felling, split and fell on him. Hill had approximately 10 years experience in tree cutting according to testimony, 6 days with this contractor and two days at this mine. Hill had completed a notch cut from the downhill side of the tree and was making the final back cut when the tree split. The tree was approximately 27 inches in average diameter, had an approximate ten-inch diameter hollow center, and was leaning downhill approximately 19 degrees. As the back cut proceeded into the hollow center, the tree split sixteen feet high before breaking off and falling on the victim.

The accident occurred due to improper tree felling procedures being utilized. The tree was dangerous due to its size and lean and extra precautions should have been taken prior to and during the felling process. The tree cutting crew was not properly trained in hazard recognition and avoidance involved in tree felling. The contractor had not established a program of instruction with respect to safety regulations and procedures to be followed at the mine. Adequate workplace examinations had not been conducted.

## GENERAL INFORMATION

Premier Elkhorn Coal Company, Job 49, is a bituminous surface coal mine located at Myra, Pike County, Kentucky. The parent corporation is Tampa Electric Company, (TECO) Coal. Contour mining of multiple seams utilizing front end loaders and off road haul trucks is performed. Gopher Contracting is the independent contractor which was performing tree cutting in advance of mining operations at the time of the accident.

The principal officer for Premier Elkhorn Coal Company is Jim Lawson, Vice President of Operations. The mine operates two eleven-hour shifts, 5 to 6 days per week and employs 29 persons. The mine produces approximately 1000 tons of coal per day. The coal is transported from the mine by truck to the Burke Branch Preparation Plant, where it is prepared for the market and shipped by rail. The last regular safety and health inspection of the mine prior to the accident was completed on February 5, 2008. The injury incidence rate at this mine for 2007 was 2.77 compared to a national average of 4.64.

## DESCRIPTION OF ACCIDENT

On Tuesday, June 3, 2008, the day shift for the surface mine began at 6:00 a.m. Rodney Bentley, the surface mine foreman, conducted a pre-shift examination of the work areas between 5:00 a.m. and 5:45 a.m.

At approximately 8:00 a.m., the tree cutting crew for Gopher Contracting began work. The crew consisted of William Hill, tree cutter (the victim), Jerry Honeycutt, dozer operator, and Marcus Manns, tree cutter/site foreman. The crew began burning brush at the Whitesburg coal seam level. Hill and Manns drove to a point where the access road ended, then walked down the hillside to begin cutting trees while Honeycutt remained to tend the fire. The area to be cut was between the existing Amburgy highwall and the previously mined Whitesburg coal level. The weather that morning was a drizzling rain with light wind and temperature in the mid 70 degree range.

Manns and Hill spread out and began cutting trees near the top of the Amburgy seam highwall around 10:00 a.m. Hill felled one tree over the highwall and proceeded uphill where he felled two other trees before he began cutting the tree that ultimately fell on him. Manns felled two trees near the highwall, then the cutting chain came off his chainsaw. He walked back up the hill to get a wrench to work on the saw. As Manns was returning he heard Hill start up his chainsaw and begin cutting. He could see the tree Hill was cutting but could not see Hill. Manns heard a loud "pop" and observed the tree fall. Manns was concerned that the tree had not fallen properly due to the sound. He hurried to the site and found the tree had split and fallen on Hill. Hill was pinned under the tree from the shoulders down and he did not appear to be breathing. Manns attempted unsuccessfully to lift the tree off Hill, and then tried to reattach the cutting chain on his chainsaw to cut the tree, but the chainsaw was not functional. He observed that Hill's chainsaw was pinned under the tree and could not be used. Manns then ran for help.

Rodney Bentley, foreman for Job 49, was contacted by a dozer operator who had received Manns request for help via CB radio. Bentley contacted Jeff Cornette, Superintendent, via company radio and told him to call for an ambulance. Bentley proceeded to the accident site. Upon arriving at the site, Bentley (MET), checked Hill's vital signs and found none. After attempting to lift the tree off of Hill, Bentley started working on Manns' chainsaw to no avail, so he called for Cornette to bring another saw to the site.

Travis Hall, MSHA Surface Mine Inspector, who had been in another area of the mine and had heard Manns' request for a MET on the CB radio, arrived to assist. Hall, Scotty Little (MET for Premier Elkhorn) and Manns, who had returned to accident, worked on Manns' chainsaw but were unable to repair it sufficiently to cut through the tree. Cornette brought another chainsaw to the site and Manns cut the tree allowing it to be

lifted off Hill. Hill was pronounced dead at 1:00 p.m. by Pike County Coroner, Russell Roberts.

## **INVESTIGATION OF ACCIDENT**

Mike Sergent, Staff Assistant for MSHA District Office at Pikeville, Kentucky, was notified of the accident at 11:56 a.m. by David Wilder, Safety Director for Premier Elkhorn Company. An MSHA accident investigator and other personnel were immediately dispatched to the scene. A 103(k) Order was issued to secure the accident scene while the investigation was conducted and to ensure the safety of any person working at the mine. The investigation was conducted in cooperation with the Kentucky Office of Mine Safety and Licensing.

Photographs and relevant measurements were taken. A review of the training records was conducted. Interviews were conducted with four employees of Gopher Contracting and three employees of Premier Elkhorn Coal Company deemed to have knowledge of the facts regarding the accident. The interviews were conducted at the Kentucky Office of Mine Safety and Licensing office at Pikeville, Kentucky on June 4, 2008.

## **DISCUSSION**

### **CLEARING OPERATIONS**

Kentucky Department for Surface Mining Reclamation and Enforcement regulations require that clearing of all trees and brush, then grubbing (stump and root removal) and stripping of topsoil be completed prior to surface mining being performed. Premier Elkhorn Coal Company, Job 49, employed Gopher Contracting to conduct clearing and grubbing. Disposal of the trees and brush by burning is included in the scope of work. Gopher Contracting also performed clearing, grubbing, and burning operations for the Job 45 surface mine located nearby. Employees of Gopher Contracting worked at both mines as needed. The foremen for Premier Elkhorn Coal Company, Job 45 and Job 49, communicated with Gopher Contracting the need for clearing specific areas of the mines and Gopher Contracting employees were dispatched accordingly.

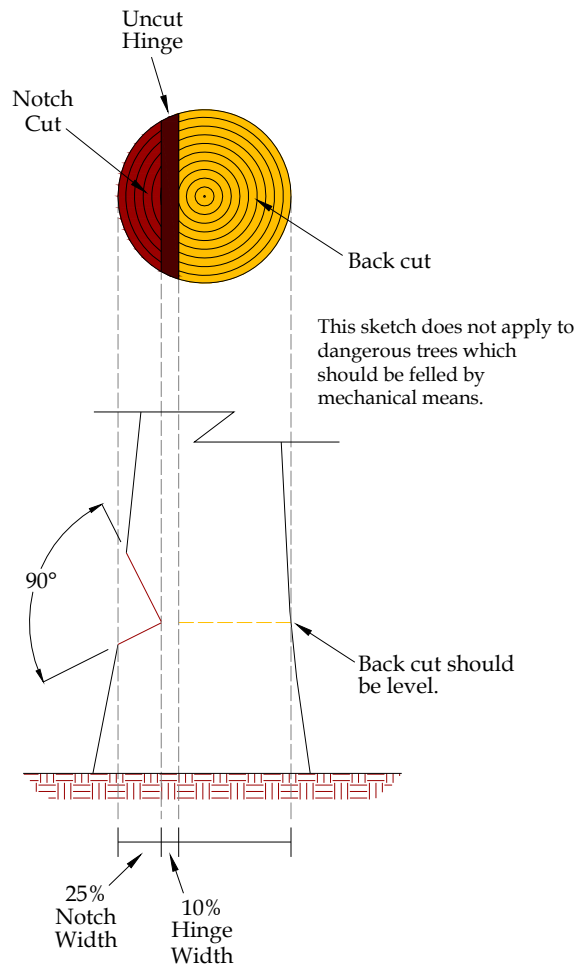
### **TREE CUTTING PROCEDURES**

The tree being cut by Hill when the accident occurred was a white oak approximately 70 feet high and 27 inches in average diameter. The tree was leaning down slope approximately 19 degrees and was heavily branched in the upper portion, making it top-heavy. In addition, the tree had an approximate ten-inch diameter hollow center, which was likely unknown to Hill prior to cutting the tree.

There are various techniques to be used for felling trees and each tree must be evaluated for the best technique to produce a safe fall.

MSHA District 6 inspection personnel have received training courses by a Master Logger covering tree cutting safety and proper tree cutting techniques. Based on the training received, safe tree cutting safety protocols include the following:

1. Mechanical means of felling dangerous trees, such as pushing the tree over with a dozer or excavator, should be considered.
2. Before starting the actual cutting of the tree, an escape route at an angle of 45 degrees opposite of the intended direction of fall should be cleared in order to be able to quickly get away from the tree during the fall.
3. Proper tree cutting procedures require that an uncut hinge of wood be provided when felling a tree in order to guide the fall of the tree and hold it to the stump during most of the duration of the fall. The hinge should be a thickness of at least 10 per cent of the diameter of the tree. The procedure for developing the hinge is to first make a notch cut on the side of the tree in the desired direction of fall. The notch cut should be of a depth equal to 25 percent of the tree diameter and the angle created should be at least 70 degrees, 90 degrees is recommended. In order to assure that a proper hinge is provided on a large tree, a bore cut through the center of the tree, leaving the hinge, should be made after the notch is completed. The final cut should be made by either continuing the bore cut through the back of the tree or by starting a level final cut from the back side of the tree into the bore cut.



The size, top-heavy shape, and lean of the tree that Hill was cutting made it a dangerous tree. Evaluation of the tree should have resulted in a decision to fell the tree by mechanical means. A dozer or excavator could have been used to push the tree down. However, Gopher Contracting employees stated during interviews that they believed every tree had to be cut down with a chainsaw.

The technique used by Hill to cut this tree was improper in several respects:

1. The notch on the downhill (intended direction of fall) side was less than 25 percent of the 27-inch diameter. The notch was only four inches deep. The angle of the notch was approximately 54 degrees,
2. A bore cut through the center of the tree was not used after completing the notch. In this case, with the center of the tree being hollow, a proper hinge could not have been developed. Had a bore cut been used, Hill would likely have realized the tree was hollow and had time to disengage the chainsaw and



retreat from the area before the accident occurred. The final cut was angled steeply downward toward the notch cut. It started 16 inches above the bottom of the notch cut.

3. A clear escape route from the base of the tree was not provided. Brush and small trees were present to Hill's backside and a fallen tree was lying on the ground immediately above Hill's location. The ground slope was steep (approximately 23 degrees), which made it difficult to retreat from the tree in the uphill direction.

## **WORKPLACE EXAMINATIONS**

30 CFR, 77.1713 (a) requires examinations by a certified person of each working area of the mine at least once during each shift.

Examinations of the work areas for Gopher Contracting were performed by Rodney Bentley, a certified foreman for Premier Elkhorn Coal Company, Job 49. Gopher Contracting did not have a certified foreman.

Reports indicate that the "brushing areas" were checked during a pre-shift examination and noted on the "Preshift-Mine Examiner's Report." A separate report for on-shift examinations is kept at the mine, but the "brushing areas" are not noted as being examined on the "Daily and Onshift Report." During his interview, Bentley stated the examinations were conducted from a remote location of the actual work areas. He would drive to a location above the area where Gopher would be working, but did not enter the area to conduct the examination.

## **TRAINING**

30 CFR, 48.26 (b) requires experienced miner training for new employees or transferred employees before beginning work duties. Experienced miner training must be conducted under the parameters of an approved training plan and the task training portion of experienced miner training must include the hazards involved with tree cutting for employees who actually perform tree cutting.

Information obtained during a review of the training records for Gopher Contracting and Premier Elkhorn Coal Company revealed that the employees of Gopher Contracting for Job 49 had not received experienced miner training.

## **SAFETY PROGRAM**

30 CFR, 77.1708 requires each operator to establish and maintain a program of instruction with respect to safety regulations and procedures to be followed. The program is to be published and distributed to each employee and distributed in conspicuous places. Gopher Contracting had not established such a program.

## **ROOT CAUSE ANALYSIS**

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

**Root Cause:** The operator failed to conduct proper oversight to ensure that suitable plans and procedures were in place, and that proper training had been conducted prior to the contractor performing tree felling operations. As a result, proper cutting methods were not used, options for felling danger trees were not given, and miners were not trained to fell trees.

**Corrective Action:** The operator created a program to thoroughly review a contractor's plans, procedures, and training prior to permitting them to work on mine property.

**Root Cause:** The operator failed to conduct adequate onshift examinations of the area where trees were to be felled during the shift. The examiner conducted the examinations from a distance where he was unable to identify hazardous conditions in the thickly vegetated workplace.

**Corrective Action:** The operator created a workplace examination policy and implemented procedures that will cause examinations to be conducted from a position whereby hazardous conditions can be identified, as opposed to viewing the area remotely.

**Root Cause:** The contractor failed to ensure that suitable plans and procedures were in place, and that proper training had been conducted prior to performing tree felling operations. As a result, proper cutting methods were not used, options for felling danger trees were not given, and miners were not trained to fell trees.

**Corrective Action:** The contractor has developed a program of instruction with respect to safety regulations and procedures to be followed. The employees of the contractor have received proper experienced miner and task training. Proper equipment for felling danger trees has been provided.

## CONCLUSION

The accident occurred because proper procedures for the felling of a dangerous tree were not used. The contractor and the mine operator did not provide experienced miner training in hazard recognition and avoidance for cutting and felling trees. The contractor did not have an established program of instruction with respect to safety regulations and procedures to be followed at the mine. Adequate work place examinations were not made. The mine operator was not conducting proper oversight to ensure compliance by the contractor.

Approved by:

  
Norman G. Page  
District Manager

12-30-2008  
Date

## ENFORCEMENT ACTIONS

1. A 103(k) Order No. 664798 was issued on June 3, 2008, to Premier Elkhorn Coal Company to assure the safety of all persons at the mine.

Condition or Practice: "A fatal accident occurred at this operation on June 3, 2008, when a contract tree cutter was crushed by the tree he was cutting. This order is issued to assure the safety of all persons at this operation. It prohibits all tree cutting and brushing activities at this mine until MSHA has determined that it is safe to resume. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or restore operations to the affected area."

2. A 104(d)(1) Citation No. 7429416 was issued to Gopher Contracting for a violation of 30 CFR 48.26(b).

Condition or Practice: "William Hill, Marcus Manns, and Jerry Honeycutt, employees of Gopher Contracting, had not received experienced miner training by a certified instructor under the parameters of an approved training plan prior to beginning work duties for Gopher Contracting."

3. A 104(a) Citation No. 7429418 was issued to Gopher Contracting for a violation of 30 CFR 77.1708.

Condition or Practice: "The contractor did not establish and maintain a program of instruction with respect to safety regulations and procedures to be followed."

4. A 104(d)(1) Citation No. 7429419 was issued to Premier Elkhorn Coal Company for a violation of 30 CFR 77.1713(a).

Condition or Practice: "Adequate on-shift examinations by a certified person were not conducted for each work area of this surface mine. Areas where tree cutting was being conducted were not examined for hazardous conditions associated with tree cutting. Records and information obtained during a fatal accident investigation indicate that the examinations were made from a remote location."

5. A 104(a) Citation No. 7429420 was issued to Premier Elkhorn Coal Company for a violation of 30 CFR 48.26(b).

Condition or Practice: "The mine operator failed to assure that employees of the contractor (Gopher Contracting) had received experienced miner training by a certified instructor under the parameters of an approved training plan prior to beginning work duties at this surface mine."

William Hill (deceased), Marcus Manns, and Jerry Honeycutt, employees of Gopher Contracting, were identified during a fatal accident investigation as employees engaged in clearing operations who had not received experienced miner training.”

6. A 104(d)(1) Citation No. 6660561 was issued to Premier Elkhorn Coal Company for a violation of 30 CFR 77. 1708.

Condition or Practice: “The mine operator neither had a program of instruction with respect to safety regulations and procedures for tree cutting nor assured that the contractor (Gopher Contracting), who conducted tree cutting, had established and maintained a program of instruction with respect to safety regulations and procedures to be followed at the mine.”

# APPENDIX A Sketch and Photographs

Area Sketch  
Premier Elkhorn Coal Company  
Job 49 15-18946  
Gopher Contracting R828  
June 3, 2008

Premier Elkhorn Coal Co.  
E3-5B Underground Mine

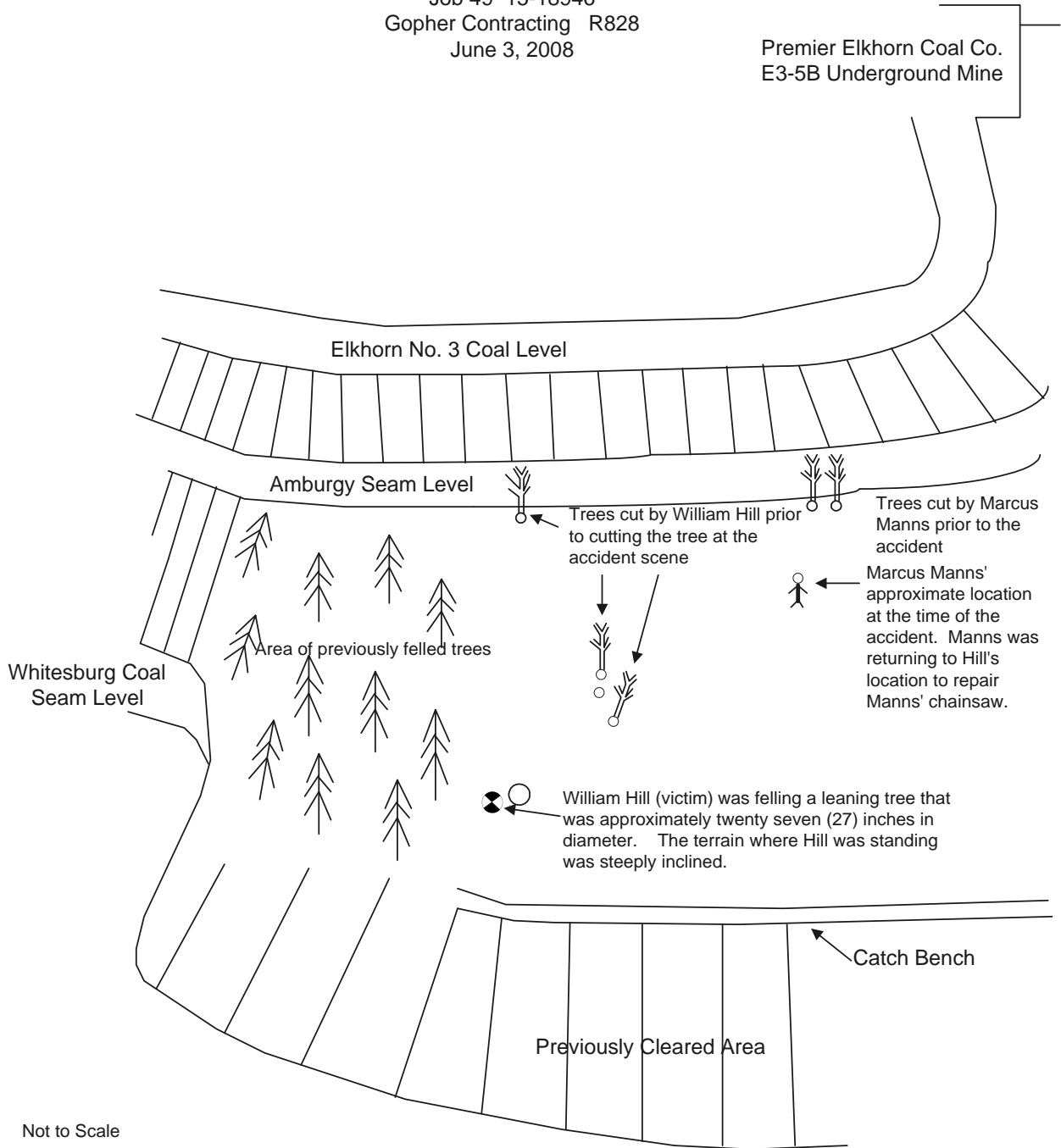




Photo 1 Orientation of tree and ground slope





**Photo 2 View showing fallen timber and brush blocking escape route. Victim's chainsaw is located under the tree.**





**Photo 3 View from side showing uncleared area in background of accident site. Note the lean of the split tree compared to standing trees in background**





**Photo 4 Dimension of notch cut on lower side of split tree**





**Photo 5 Dimensions of tree diameter and hollow area**

**Appendix A**  
**List of Persons Participating in the Investigation**

**Gopher Contracting**

Cindy Kosch	Part Owner
Jerry Johnson	Part Owner
Marcus Manns	Tree Cutter/ Site Foreman
Jerry Honeycutt	Dozer Operator

**Premier Elkhorn Coal Company**

Rodney Bentley	Foreman
David Wilder	Manager of Safety and Environmental Affairs
Keith McCoy	Safety Inspector
Noelle Holladay True	Attorney
Steve Kreutzer	Attorney

**Kentucky Office of Mine Safety and Licensing**

Greg Goins	Accident Investigator
Tracy Stumbo	Chief Accident Investigator
Randy Newsome	Surface Safety Analyst
Gary Stewart	Inspector

**Mine Safety and Health Administration**

Andrew Reed, Jr.	Surface Coal Mine Inspector
David Ison	Supervisory Coal Mine Inspector
Gerald McMasters	Accident Investigation Co-Coordinator
Debbie Combs	Training Specialist, Educational Field Services
Robert Bellamy	Mining Engineer
Greg Hall	Civil Engineer (trainee)
Christian Barber	Attorney
Robert Newberry	Mining Engineer

## Appendix B Victim Information Data

### Accident Investigation Data - Victim Information

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



Event Number:

Victim Information:

1. Name of Injured/Ill Employee: <i>William S. Hill</i>		2. Sex <i>M</i>	3. Victim's Age <i>33</i>	4. Last Four Digits of SSN: <i>4539</i>	5. Degree of Injury: <i>01 Fatal</i>										
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 06/03/2008 b. Time: 13:00</i>				7. Date and Time Started: <i>a. Date: 06/03/2008 b. Time: 10:00</i>											
8. Regular Job Title: <i>199 Tree cutter</i>		9. Work Activity when Injured: <i>098 Tree cutting</i>			10. Was this work activity part of regular job? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
11. Experience a. This	Years	Weeks	Days	b. Regular	Years	Weeks	Days	c. This	Years	Weeks	Days	d. Total	Years	Weeks	Days
Work Activity:	<i>10</i>	<i>0</i>	<i>0</i>	Job Title:	<i>10</i>	<i>0</i>	<i>0</i>	Mine:	<i>0</i>	<i>0</i>	<i>2</i>	Mining:	<i>0</i>	<i>0</i>	<i>6</i>
12. What Directly Inflicted Injury or Illness? <i>097 Tree</i>				13. Nature of Injury or Illness: <i>170 Crushing</i>											
14. Training Deficiencies:															
Hazard:		New/Newly-Employed Experienced Miner:		Annual:		Task:									
		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>									
15. Company of Employment:(If different from production operator) <i>Gopher Contracting</i>				Independent Contractor ID: (if applicable) <i>R828</i>											
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: <i>9999</i>		<i>None (No Union Affiliation)</i>									