

# 3 MINE RESCUE

The discussion in this section does not attempt to draw conclusions. Conclusions can be found in the investigation sections that follow. Instead, this section attempts to present the facts, as determined by the investigators. The hope is that this section will provide insights, which will assist in making all mines safer.

This section has dozens of authors. The text is based on the notes and testimony of those involved. During the hundreds of hours spent preparing this section, over seventy transcripts were reviewed. Logs from the participants in the command center and most of the mine rescue teams along with technical reports from dozens of groups on hundreds of subjects were searched for facts and confirmations.

# **3 THE RESCUE**

**3.1 Day Shift**

**3.2 Initial Response**

**3.3 Joint Response**

## 3.1 Day Shift

On Monday January 2, 2006, the day shift production crews for the first-left and second-left working sections were scheduled to start work at 6:00 a.m. Due to the New Years holiday, the mine had not produced coal<sup>1</sup> since 7:30 p.m. on December 30, 2005, when the afternoon shift ended. Only a small maintenance shift worked during the break.<sup>2</sup>

Before the arrival of the production crews at the mine, James Fred Jamison and Terry Helms, both certified pre-shift examiners, were required to complete their pre-shift examination<sup>3</sup> of the mine.

That morning Mr. Jamison and Mr. Helms planned to jointly examine the areas of the mine containing one-, two-, three-, and four-belts and tracks. Mr. Helms planned to then examine the first-left section including 5-belt and track. Mr. Jamison would then examine the second-left section including 6-belt and track.<sup>4</sup> The old-second-left seals were not part of the required pre-shift examination, rather were part of a separate weekly exam, last completed by John Nelson Boni on December 28, 2005.

William (Bill) Chisolm, dispatcher, directed people in and out of the mine, monitored communications and the belt system. Mr. Chisolm was also designated as the “Responsible

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<sup>1</sup> Page 48 starting on line 12 of statement under oath of Carl Lee Crumrine February 16, 2006

<sup>2</sup> Statement under oath of Nathan Harold Eye February 17, 2006 – Mr. Eye is the dispatcher who worked the Friday, Saturday and Sunday shifts immediately prior to the January 2, 2006 shift. The carbon monoxide monitoring system records show that the belts were energized on January 1, 2006 at 09:42:27 a.m. then de-energized ending at 09:49:16 a.m. and not restarted until 5:27:16 a.m. on January 2, 2006 when they were again restarted beginning with one-belt through four-belt. There is no record of the belts in first-left or second-left having been started on January 1, 2006. On page 54 starting on line 11 of the statement under oath of Carl Lee Crumrin taken February 16, 2006 Mr. Crumrine indicates that fans had not been shut off at any time prior to beginning of the January 2 pre-shift.

<sup>3</sup> Prior to beginning any work underground West Virginia law requires that a designated mine examiner conduct a safety inspection of each area in which miners will be working.

Person”<sup>5</sup> charged with contacting others in case of an emergency<sup>6</sup>. Mr. Jamison and Mr. Helms notified Mr. Chisolm that they were entering the mine at 3:00 a.m.<sup>7</sup>.

When he reached the mantrip at the head of five-belt, Mr. Jamison used it to travel to the track switch leading to the second-left section. At this location he left the mantrip and walked into the section where he conducted his examination at approximately 4:00 a.m.<sup>8</sup>. He estimated that he spent 25 minutes walking up to the section face, examining each entry and taking air readings, all of which indicated zero percent methane. He examined the rock dusting, location of equipment, and curtains and noted that there was lots of air movement at the faces. Mr. Jamison called the dispatcher to report that he was leaving the section at 4:35 a.m. and requested that Mr. Chisolm tell Mr. Helms that he would leave his lunch pail at the first-left track switch.<sup>9</sup>

After he completed his examination, Mr. Helms remained in the mine approximately 500 feet from the old-second-left seals near the number-six belt discharge. After making a stop to check for blockage in the number three-belt head and to turn on a pump, Mr. Jamison exited the mine shortly before 5:30 a.m. He parked the mantrip at a charger, since its battery was getting low, and proceeded to the foreman’s office to report on his pre-shift examination.

The mine safety director, James Allen Schoonover, arrived on site around 5:00 a.m., checked his email and notes left by foremen and joined others arriving in the foremen’s office to discuss any outstanding issues.<sup>10</sup> Mr. Denver Wilfong, maintenance chief, also arrived at the mine around 5:00 a.m. He reviewed notes from the previous shifts, until the production crews started to arrive. As they arrived, he helped them gather materials or parts that they would need during their shift.

The day shift production crews began arriving about 5:15 a.m. for their scheduled 6:00 a.m. start. The weather was unusual for the first part of January noted Mr. Schoonover, “...I went to the door

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<sup>4</sup> Statement Under Oath of James Fred Jamison taken January 17, 2006

<sup>5</sup> Defined at WV 36-5-2.2

<sup>6</sup> Statement Under Oath of William (Bill) Chisolm, February 15, 2006

<sup>7</sup> Statement under oath of William (Bill) Chisolm, February 15, 2006

<sup>8</sup> Statement under oath of James Fred Jamison taken January 17, 2006 taken by OMHS&T & MSHA

<sup>9</sup> Page 42, line 5 of Statement under oath of William (Bill) Chisolm February 15, 2006

<sup>10</sup> Statement under oath of James Allen Schoonover taken January 18, 2006 by OMHST&T and MSHA

and opened the door because it was lightning and thunder carrying on so bad and it was so warm for the second day of January.”<sup>11 12</sup>

Mr. Jamison reviewed his pre-shift report with second-left section foreman Martin Toler Jr.<sup>13</sup> Mr. Helms phoned his report to the surface at 5:25 a.m. from the second-left track switch phone.<sup>14</sup> The carbon monoxide monitoring system log indicated that Mr. Chisolm energized the belts from his control panel at 5:27 a.m. following receipt of the pre-shift reports.<sup>15</sup>

At approximately 5:30 a.m. Jeffery Keith Toler, mine superintendent, arrived on site and joined the others for the pre-shift meeting. After the production crews left for the mantrips he went to his office and began reviewing administrative reports.<sup>16</sup>

At approximately 6:00 a.m. the second-left crew entered the mine via a battery powered, track mounted man-trip. The crew was under the direction of Mr. Martin Toler, Jr., their Section Foreman and consisted of:

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| Alva M. Bennett,<br>Continuous Mining Machine Operator | Shuttle Car Operator                               |
| Fred Ware, Jr.,<br>Continuous Mining Machine Operator  | George J. Hamner,<br>Shuttle Car Operator          |
| Jesse L. Jones,<br>Roof Bolting Machine Operator       | James A. Bennett,<br>Shuttle Car Operator          |
| David W. Lewis,<br>Roof Bolting Machine Operator       | Marshall C. Winans,<br>Scoop Operator              |
| Jerry L. Groves,<br>Roof Bolting Machine Operator      | Jackie L. Weaver,<br>Section Electrician           |
| Thomas P. Anderson,                                    | Randal L. McCloy,<br>Roof Bolting Machine Operator |

<sup>11</sup> Page 24 line 25, Statement of James Allen Schoonover taken January 18, 2006

<sup>12</sup> The National Climate Data Center reports that the Buckhannon station located 5 miles northwest of the Sago site was reporting a storm passing in the direction of the mine at this time. Wind speeds increased from zero at 5:40 a.m. to 12 miles per hour at 7:40 a.m. then dropped back to zero by 11:40 a.m. The visibility dropped from 10 miles at 4:40 a.m. to 4 miles at 6:40 a.m. while humidity moved from 58 percent to 100 percent during the same period. Wind directions fluctuated during this period as well from 180 degrees to 100 degrees.  
<http://cdo.ncdc.noaa.gov/ulcdsw/ULCD>

<sup>13</sup> From statement under oath of Fred Jamison January 17, 2006 starting page 95

<sup>14</sup> Page 45 line 5 of Statement under oath of William (Bill) Chisolm February 15, 2006

<sup>15</sup> Sago’s Carbon monoxide monitoring system printed reports indicate that the belts were de-energized starting with number four-belt and 9:48:58 and sequentially through one-belt at 9:49:16 a.m. on the January 1, 2006. The belts were next energized starting with the one-belt at 5:27:16 a.m. then sequentially through four-belt at 5:32:17 a.m. on January 2, 2006

<sup>16</sup> Statement under oath of Jeffrey Keith Toler January 18, 2006

Mr. J.N. Boni, a certified forman, received the pre-shift report from Mr. Helms in the foreman's office over the mine phone and wrote it in the book. He was supposed to ride in the mine on the second-left mantrip. He had a conversation with Mr. Jamison concerning a pump that would not start and, was therefore too late to catch the second-left mantrip. He decided to ride with the first-left crew, who had not yet left. However, there was not enough seating on the first-left mantrip for Mr. Boni, so they all switched to a larger mantrip vehicle. This delayed their departure by a few minutes.

The first-left crew and three passengers entered the mine under the direction of Owen Mark Jones, Section Foreman, a few minutes behind the second-left crew. This crew consisted of:

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| Gary Rowan,<br>Roof Bolting Machine Operator             | Randy Helmrick,<br>Roof Bolting Machine Operator |
| Gary D. Carpenter,<br>Continuous Mining Machine Operator | Eric Hess,<br>Scoop Operator                     |
| Roger Perry,<br>Continuous Mining Machine Operator       | Denver Anderson,<br>Scoop Operator               |
| Chris Tenney,<br>Equipment Operator                      | Hoy Keith,<br>Electrician                        |
| Paul Avington,<br>Equipment Operator                     | John Patrick Boni,<br>Belt-man                   |
| Joe Ryan,<br>Roof Bolting Machine Operator               | Ron Grall,<br>Mine Examiner                      |
| Alton Wamsley,<br>Roof Bolting Machine Operator          | John Nelson Boni,<br>Pumper-Mine Examiner        |

At this time Mr. Jamison reentered the mine and walked to the number two-belt conveyor where he began his shift duties, monitoring belts.

Mr. J.N. Boni exited the first-left mantrip at the first-right track switch and checked the pump Mr. Jamison had reported would not start near 22-block, three-belt. He checked the pump, replaced a part, started it, and then began his rounds.<sup>17</sup>

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<sup>17</sup> Statement under oath of John Nelson Boni taken January 19, 2006 by OMHS&T and MSHA

John Patrick Boni, beltman, exited the man-trip at the number four-belt drive. He was to work where the numbers three and four belts connect. Both belts were running when he arrived.<sup>18</sup>

The second-left crew arrived on their section and began to set up for work. The first-left crew was nearing the track-switch heading into their section. It was almost 6:30 a.m.

Shortly after the men entered the mine the weather turned worse. Mr. Chisolm, who was in the dispatcher's office, recalled "the wind was blowing and a heck of storm came through."<sup>19</sup> Around 6:25 a.m. Mr. Toler reported talking with Mr. Schoonover about the storm coming through and noting how unusual it was.<sup>20</sup> Mr. Toler was on the mine phone with Mr. Chisolm asking about the storm, when Mr. Chisolm commented on a flash of lightning that was immediately followed by a loud clap of thunder.<sup>21</sup> Mr. Chisolm reported at the exact moment of the lightening that his phone made a popping noise that hurt his ear and instinctively "...I threw the phone down..."<sup>22</sup> He picked the phone up and reported to Mr. Toler that "...there's something wrong. I have immediately lost all communication...as soon as it happened; I said I lost all the belts and everything."<sup>23</sup> Mr. Toler recalled, "I could hear the carbon monoxide alarms going off on the carbon monoxide monitoring system." By now Mr. Wilfong had joined them on the mine phone. "Our first thought was that the lightening had just shorted out the carbon monoxide alarms. They'll blow fuses on them,"<sup>24</sup> noted Mr. Toler. Mr. Wilfong pointed out that the monitors have only 250 milliamp fuses, "...we thought that fuses had blown, because that occurs during storms a lot."<sup>25</sup> At this point Mr. Wilfong gave Vernon Hoffer, maintenance foreman, who happened to be sitting in the office, a handful of fuses and told him to "...go down there and check the system and replace what fuses he needs."<sup>26</sup> Mr. Hofer gathered his light and headed toward a mantrip.

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<sup>18</sup> Statement under oath of John Patrick Boni taken February 20, 2006 by OMHS&T and MSHA

<sup>19</sup> Page 26 line 14 Statement under oath of William (Bill) Chisolm February 15, 2006

<sup>20</sup> Page 25 line 1 Statement under oath of Jeffery Keith Toler January 18, 2006 – also see footnote above regarding NOAA weather data

<sup>21</sup> Page 25 line 3 Statement under oath of Jeffery Keith Toler January 18, 2006

<sup>22</sup> Page 34 starting at line 2 through page 35 line 6 Statement of William (Bill) Chisolm taken February 15, 2006 by OMHS&T and MSHA

<sup>23</sup> Page 33 starting at line 15 Statement of William (Bill) Chisolm taken February 15, 2006 by OMHS&T and MSHA

<sup>24</sup> Page 25 line 18 Statement under oath by Jeffery Keith Toler on January 18, 2006.

<sup>25</sup> Page 41 line 2 Statement under oath by Denver Wilfong January 16, 2006

At approximately the same time the first-left crew was getting ready to turn from the main track onto the first-left track. The crew was in a straight line approximately 1,000 feet from the seals of old-second-left section. Just as Arnett Roger Perry sat back in the mantrip after throwing the track switch, "...here comes this hurricane of dust and rocks and no warning, no sound, nothing, just there out of nowhere." Mr. Perry continued, "...its blowing hard and you can't see through the dust and it blew my hat off, my light. And then it stopped and I said there's been an explosion guys."<sup>27</sup> Owen Mark Jones, first-left foreman, who was operating the mantrip, immediately stood up from his seat in the open center of the mantrip "... somewhere, somehow, and it blows me off the top of the mantrip, the wind does. And I'm standing there and it's pushing me forward. It's making me walk. And I'm thinking it's going to absolutely pick me up and throw me, and I mean, then it just quits." "There was no warning, no nothing, just was right there on us."<sup>28</sup> Eric Michael Hess noted, "I didn't hear an explosion, no boom, no nothing --- the only thing we heard was you could hear like when you run your car off the road and you hear gravel hitting underneath your car, you could hear that hitting the end of the mantrip and that's all we heard and just the wind was all we heard."<sup>29</sup> Then it stopped, "It was dead. Everything was completely dead. There was no sound. There was no wind. The dust and everything...it just hung there. There was no air, no nothing," noted Harley Joe Ryan.<sup>30</sup>

The blast of air was accompanied by dust, "I don't know if you've ever been in sandstorm, but that's exactly what it felt like. Somebody just took a handful of sand and threw into a fan and just --- you could feel it pelt you," noted Christopher Tenny.<sup>31</sup> The perceived duration of the air blast varied among the first-left crew. Gary B. Carpenter noted, "I couldn't tell you how long the explosion lasted, you know, because it seemed like, you know, a long time going through this, debris flying, hitting us, coal, mud, everything."<sup>32</sup> Mr. Tenny remembered, "It seemed like it

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<sup>26</sup> Page 41 line 2 Statement under oath by Denver Wilfong January 16, 2006

<sup>27</sup> Page 20 starting on line 16 of Statement under oath of Arnett Roger Perry, January 26, 2006

<sup>28</sup> Page 22 starting line 14 through page 23 line 6 of Statement under oath of Owen Mark Jones, January 17, 2006

<sup>29</sup> Page 36 starting at line 20 of Statement of Eric Michael Hess, February 14, 2006

<sup>30</sup> Page 44 starting at line 8 of Statement under oath by Harley Joe Ryan January 26, 2006

<sup>31</sup> Page 38 starting on line 9 of Statement by Christopher Tenney, January 23, 2006

<sup>32</sup> Page 22 starting at line 19 of Statement under oath of Gary B. Carpenter January 19<sup>th</sup>, 2006



lasted forever but, approximate to me, it lasted about five to ten seconds actually.”<sup>33</sup> Mr. Jones in his debriefing after returning to the surface at 10:30 a.m. estimated the duration at 3 to 4 seconds.<sup>34</sup>

The first reaction of the crew was similar to that of Gary Rowan who stated, “...for the first couple seconds I thought we had a roof fall right in front of the mantrip. But then, you know, when it didn’t quit and then after a few seconds, we felt the heat come across.” “...It wasn’t nothing that, I mean, would burn you or anything like that, but you could definitely tell there was heat coming off it.”<sup>35</sup> The heat was accompanied by a smell, “It smelt --- kind of warm smell, kind of a burning smell,” noted Mr. Carpenter.<sup>36</sup> Mr. Grall explained that “...when that heat hits you, you couldn’t -- you didn’t have any oxygen, you just couldn’t breathe. It was very hard to breath. It made my heart --- my heart was pounding.”<sup>37</sup>

At the same time the first-left crew experienced the blast, it was felt outby at the number four-belt drive, where J.P. Boni was servicing a trickle duster some 5,800 feet from the old-second-left seals. “I walked down the belt and had taken two steps and pop and just air hit me and dust.”<sup>38</sup> The dust was sufficient to reduce Mr. Boni’s visibility. He noted he could see, “probably 14, 15 feet or something like that.”<sup>39</sup> Mr. Boni also noted that he “didn’t smell anything, just covered with dust.”<sup>40</sup> He further noted that the blast of air lasted “maybe a second and half or a second. It just hit me and that was it, it was over.” The force was such that although he was facing into the path of the air, he stated, “it hit me in the face, but it really didn’t get into my eyes.”

Further from the old-second-left sealed area, some 7,600 feet away, was Mr. J.N. Boni who was working on pumps in the return at 22-block, three-belt. Mr. Boni related “The air came at me and hit me, and then kind of backed up like a small pillar fall would be.” “...when I was in the return, I never saw any dust or anything. But when I walked back over --- I went through the man door

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<sup>33</sup> Page 23 starting on line 1 of Statement under oath of Christopher Tenny January 23, 2006

<sup>34</sup> Notes of John Collins OMHS&T District Inspector

<sup>35</sup> Page 45 starting on line 1 of Statement under oath of Gary Rowan February 15, 2006

<sup>36</sup> Page 45 starting on line 23 of Statement under oath of Gary B. Carpenter January 19, 2006

<sup>37</sup> Page 49 starting on line 11 of statement by Ronald Grall January 19, 2006

<sup>38</sup> Page 30 starting at line 11 of Statement by John Patrick Boni February 20, 2006

<sup>39</sup> Page 33 starting at line 1 of Statement by John Patrick Boni February 20, 2006

<sup>40</sup> Page 32 starting at line 22 of Statement by John Patrick Boni February 20, 2006

back over to the belt and track there it was real dusty, mostly rock dust. It was white dust.” Mr. Boni walked to a mine phone and called Mr. Chisolm, the dispatcher, “...what’s going on? And he said “a big lightening strike and we lost the power on three and four belts. He said one and two is still running.” By this time there were other people on the mine phone. Mr. Boni then told Mr. Wilfong and Mr. Hofer to hold up on coming in to work on the belt system until he looked for a roof fall. Mr. Boni stated that “I walked up the track probably eight or ten blocks, then came back down the belt line and no fall, and he said, there might be fall on the line...” Mr. Boni heard his son J.P. Boni report heavy dust near his location some 1,800 feet outby, “I was figuring something else happened” “I called the dispatcher and asked him if any --- we had any CO detectors picking up CO. And he says yes, the second-left detectors are pegged. And at that time, I said we’ve had an explosion.”<sup>41</sup>

At that point Mr. Toler and Mr. Wilfong, who had been monitoring the conversation in the office phone, broke in and asked Mr. J.N. Boni where he was. Just then first-left section foreman, Owen Jones, who was leading the first-left crew through the dust on foot, heard the voices on a mine phone. While he could not see the phone, he made his way to the sound and reported the blast that the first-left crew had just experienced. It was approximately 6:35 a.m.<sup>42</sup>

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<sup>41</sup> Starting at page 24 line 10 of statement under oath by John Nelson Boni January 19, 2006

<sup>42</sup> Statements under oath of Jeffery Keith Toler, Denver Wilfong, John Nelson Boni, and Owen Mark Jones

## 3.2 Initial Response

Upon hearing the report from the first-left crew and others, Mr. Toler instructed Mr. Jones to get his men into the intake escapeway and start exiting the mine. Mr. Toler related that while this was going on "...my thoughts were, you know, we hadn't heard from the second-left crew at all." Mr. Toler, Mr. Schoonover and Mr. Wilfong got their gear and headed for the mine entry. Along the way they were joined by Mr. Hofer. They entered the mine at approximately 6:45 a.m.<sup>1</sup>

After the blast Mr. Jones "...requested everybody to stay in one spot until he got a head count to make sure everybody was there and everybody was okay and able to move." "At that point, we more or less kind of grabbed onto each other, because you couldn't see until we found the rib, we felt our way down the rib" related Mr. Tenny.<sup>2</sup> Mr. Jones directed the crew outby with the intent of crossing into the intake escapeway, where they expected to find clean air. The nearest mandoor was approximately 150 feet outby at 48-block four-belt, "...we went through the mandoor and the intake escapeway looked just like the track. Of course at this time we did not know that the stoppings outby had been blown out" related Mr. Hess.<sup>3</sup> As they proceeded in near zero visibility they felt their way by reaching for the ribs and holding on to each other, "you couldn't see your feet, so you just had to put your hands --- you know, we were --- everybody was just about close enough where you could keep --- you know, grab a shirt or belt or a belt loop or something, just so everybody could stay kind of together" remembered Mr. Hess.<sup>4</sup> The crew searched for a way to the intake escapeway "and every time we'd look for a mandoor, a place to go in the intake, the stopping would be gone, it was blown out. So we finally did go into it and started down. It started to clearing up a little bit" related Mr. Perry.<sup>5</sup>

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<sup>1</sup> Statements under oath of Jeffery Keith Toler, Denver Wilfong, John Nelson Boni, Owen Mark Jones, James Fred Jamison, and James Allen Schoonover

<sup>2</sup> Page 40 starting at line 4 of the statement under oath of Christopher Tenny January 23, 2006

<sup>3</sup> Page 24 starting at line 2 of statement under oath of Eric Michael Hess February 14, 2006

<sup>4</sup> Page 41 starting at line 4 of the statement under oath of Eric Michael Hess February 14, 2006

<sup>5</sup> Page 21 starting on line 16 of the statement under oath of Arnett Roger Perry January 26, 2006

Some of the first-left crew donned their self-contained self-rescuers at once “...someone said let’s get our rescuers on, you know, and all --- about some, two or three I think said that, you know, and we pulled them and put them on” remembered Mr. Anderson.<sup>6</sup> However, others waited, thinking that they would find fresh air in the intake, “...when we went through the mandoor (at 48-block four-belt) and saw that there was no fresh air there, that’s when we put our self rescuers on” said Mr. Hess<sup>7</sup> Some of the first-left crew never donned their self-rescuers. Even though his detector was alarming carbon monoxide and low oxygen, Mr. Grall said “I figured as long as I could breathe, I wasn’t putting mine on. And Paul Avington asked me if we should go ahead and put them on. I said, not yet, because I was trying to get the fresh air. We should have probably put them on.”<sup>8</sup>

While making their way inby Mr. Toler, Mr. Wilfong, Mr. Schoonover, and Mr. Hofer encountered, separately, Mr. Jamison and Mr. J.N. Boni. After making sure they were okay they instructed Mr. Jamison, and Mr. Boni to continue out of the mine. Near 35-block, four-belt they stopped at a mine phone to check in and determine if there had been any contact with the crews. As they were talking on the mine phone the first-left crew heard them as they were passing the same block in the intake. One of the first-left crew came through a mandoor at 37-block four-belt and said one of the crew was having trouble. Since the air was clear in the track Mr. Toler instructed the first-left crew to cross over and had them load up on the mantrip. Mr. Wilfong was on the phone and instructed Mr. Chisolm to call for “...mine rescue and notify both agencies that we had an explosion, because those guys (first-left crew) were covered in smoke and told me what had happened.”<sup>9</sup> The dispatcher then connected an outside call with John B. Stemple, assistant director of safety and employee development, to Mr. Toler through the mine phone<sup>10</sup>. At that point Mr. Toler instructed Mr. Stemple to “...notify mine rescue...” and instructed him to stay at home making all the calls. He later noted that that was a smart move as it expedited logistics, not

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<sup>6</sup> Page 35 starting on line 6 of the statement under oath of Denver Anderson February 14, 2006

<sup>7</sup> Page 24 starting on line 8 of statement under oath of Eric Michael Hess February 14, 2006

<sup>8</sup> Page 69 starting at line 1 of statement by Ronald Grall January 19, 2006

<sup>9</sup> Page 62 starting at line 12 of statement under oath of Denver Wilfong February 16, 2006

<sup>10</sup> While the mine phone does not have the ability of make outside calls the dispatcher had the ability to manually connect an already established call through to the mine phone system.

having that person caught up in the dynamics at the mine. Mr. Toler then instructed Mr. Wilfong to take the first-left crew to the surface. It was approximately 7:00 a.m.<sup>11</sup>

The first-left crew also informed Mr. Toler that Mr. Jones had gone back inby. After he was sure his men were in the intake escapeway Mr. Jones told Mr. Grall that “I’m looking to see that we got everybody. I’m telling my men, I said, you men get out of here immediately. Get going down the intake. I said I’m going to stay in here and see what I can do because I got a brother up here. And I know --- you know what I mean, I’m thinking that they’re still trapped up there somehow, someway. My men beg me to go with them, but I said no, you all go. I said I got to go see if there’s anything I can do.”<sup>12</sup>

Randal L. McCloy, the sole survivor of the second-left crew indicated that they had gotten out of their mantrip and had started to walk up to the face when the explosion occurred. This is compatible with the fact that the crew had not called into the dispatcher to report they were at the section yet. Drill steels were found near the face that had been brought from the surface with the men.<sup>13</sup> It is also compatible with the recollection of the first-left crew that the second-left mantrip was five to ten minutes ahead of them because they changed mantrip units.

As described by Mr. McCloy the force of the air blast at the second-left face was not sufficient to knock people down. When asked “Did it knock you over?” he responded “No, no. It wasn’t that -- it was just like wind, you know.”<sup>14</sup> Mr. McCloy did not recall the single<sup>15</sup> initial air blast containing smoke or dust “...the time that I seen the smoke was the time that --- actually, that we had went back to the face, where we hung curtain to try to escape the gas.”<sup>16</sup> When asked about the density of the smoke he noted that “...because there were so many stoppings knocked down, it actually did kind of change. It kind of took everything, the air, into a circle, so it never did actually

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<sup>11</sup> Statements under oath of Jeffery Keith Toler, Denver Wilfong, Owen Mark Jones, and James Allen Schoonover

<sup>12</sup> Page 25 starting on line 7 of statement by Owen Mark Jones January 17, 2006 taken by OMSH&T and MSHA

<sup>13</sup> Page 41 line 2 Statement under oath by Denver Wilfong January 16, 2006 taken by OMHS&T and MSHA

<sup>14</sup> Page 13 line 18 of statement under oath by Randal McCloy June 19, 2006 taken by MSHA - OMHS&T was not provided advance notice of the interview and has subsequently been unable to schedule an interview to ask further question.

<sup>15</sup> Page 18 line 20 of statement under oath by Randal McCloy June 19, 2006 taken by MSHA

<sup>16</sup> Page 15 starting on line 2 of statement under oath by Randal McCloy June 19, 2006 taken by MSHA

leave. So you know, it was just --- stayed right there. No one really knew what to do because it was just confused.”<sup>17</sup> This is consistent with the description of the movement of the smoke and dust by Mr. Toler, when he was at 59-block of number four-belt, near the second-left section entry.

After the blast the second-left crew attempted to leave on their mantrip, but were turned back by debris on the track, as related by Mr. McCloy. Their way was blocked by debris “...something that was definitely in the way. I don’t know if the structure --- I don’t know what it was. It was just kind of --- some kind of structure.”<sup>18</sup> They then drove back inby to 12-block, six-belt where the mantrip was abandoned. The crew exited and apparently walked inby for one crosscut before crossing to the intake escapeway. The damage to stoppings in this area and the large amount of debris likely contributed to the difficulty of their progress. Since many stoppings were destroyed, it is likely that the air quality was the same in all the entries. The covers for the self-rescuers were found near 12-block, of six-belt, in a crosscut to the intake escapeway. The arrangement of the covers indicated that the visibility was such that the crew gathered in a circle as they donned their units. By this time, the crew would have traveled outby in the mantrip and back. They then walked approximately 1,000 feet in air with potentially high carbon monoxide levels before donning their units. When the first borehole allowed sampling of the second-left area, carbon monoxide was 1,280 ppm. This was almost 24 hours after the explosion. It will never be known what the levels were before they donned their self-rescuers.

While he is unclear of the location at which the self-rescuers were donned, Mr. McCloy stated that the attempt to walk out was aborted by the section foreman because three of the twelve rescuers were not functioning “...this isn’t safe like this. Let’s go head back to the section.”<sup>19</sup> According to Mr. McCloy the second-left crew then returned to the face and built a barricade of curtain material to protect themselves from the dust and smoke.

Meanwhile in the main intake escapeway inby 37-block, four-belt, Mr. Toler and Mr. Schoonover spotted Mr. Jones, first-left section foreman, who had stayed in the mine, after sending his crew

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<sup>17</sup> Page 19 starting on line 1 of statement under oath by Randal McCloy June 19, 2006 taken by MSHA

<sup>18</sup> Page 42 starting on line 8 of the statement by Randal McCloy June 19, 2006 taken by MSHA

<sup>19</sup> Page 30 starting on line 25 statement under oath by Randal McCloy June 19, 2006 taken by MSHA

outside. Mr. Toler recalled, "I noticed he didn't have a hard hat. He had lost his hat in that --- in whatever happened. So I told him to just stay right there by that telephone...me and Mr. Schoonover would go up and assess the damage."<sup>20</sup> After assessing some of the damage they called outside and instructed Mr. Wilfong and Mr. Hofer to bring materials to erect temporary stoppings and extra self-rescuers. The three men sat down and waited. With great urgency, Mr. Wilfong and Mr. Hofer had the surface crew load a vehicle with stopping materials, tools, and other equipment and headed back into the mine. Once Mr. Wilfong and Mr. Hofer reached Mr. Toler and Mr. Schoonover, the four of them and Mr. Jones, started working their way inby, hanging curtains as they advanced. "We trammed inby the 42 (42-block, four-belt), and started picking up some --- the carbon monoxide alarms --- some of the carbon monoxide alarms was starting to go off. So we made the decision to leave the mantrip there. We de-energized it." "So from 42 we were on foot... but gradually we worked our way in, keeping fresh air on our backs." When the group reached 50-block, four-belt which was adjacent to the first-left track switch, "I noticed the overcast at that point was damaged, so --- and I knew that everybody that we were looking for was on second-left. So we put up a solid curtain up there as well to direct all of the air current toward the second-left panel."<sup>21</sup>

As the group worked its way inby they reached the 57-block, four-belt only some two-hundred feet from the mouth of the second-left section. Mr. Toler, Mr. Schoonover and Mr. Wilfong were together as Mr. Jones and Mr. Hofer had been sent to recheck the areas outby this point for any missed damage. Mr. Jones related that Mr. Toler tells "you stay here." He says, "I don't want you going up there. I know why he's saying that, in case my brother is up there and he didn't want me seeing. I'm thinking to myself, I don't want to see this either." At 58-block, four-belt "...the smoke at this point was extremely dense. And our eyes, it seemed that the smoke was just kind of swirling, that it wasn't wanting to dissipate, but knowing now what I know, I think what it was, it was dissipating, but it was just continuing to roll out of the panel, and it was dissipating. Mr. Schoonover and Mr. Wilfong, both with mine rescue training, became concerned "if there is something in here that could still --- the potential to still explode, we may be pushing fresh air

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<sup>20</sup> Page 31 starting at line 8 of statement under oath by Jeffrey Keith Toler January 18, 2006

<sup>21</sup> Statement under oath of Jeffrey Keith Toler January 18, 2006

overtop of a possible explosion and creating another explosion.”<sup>22</sup> “I don’t have any idea how long we stayed there and wrestled with it” “We would listen. You would hear something fall, and when I did, I would yell as loud as I could in that direction. Maybe we were hearing somebody moving...” “And with the smoke and stuff as heavy as it was and the damage that I saw, the place was devastated. I didn’t think we could get any further. One of us would go down. We were going to have to --- well, I knew we were going to have to put our self-contained self-rescuers on. And we didn’t have but a couple extras with us. And there were three of us there at that time, after Owen Jones and the others had gone out. And I knew if we put those --- if we all put our rescuers on and tried to go in there with no line or no ways to communicate other than hollering at each other, that we would --- somebody would --- maybe all of us would perish or one of us, at least. I was concerned about that. I told Jeff that we didn’t know what we had. You couldn’t see where the damn --- you know, you couldn’t see to go”<sup>23</sup> “...but finally we just needed to go...to back out and let the professionals come in, people that were trained in this. So we made the decision to leave the mine. I stopped by the phone on the way out...to let people outside know that we had decided to leave.”<sup>24</sup> The time was 9:30 a.m.

By that time John Collins District Inspector for the West Virginia Office of Miners’ Health Safety and Training was on site and had issued a control order ... the next phase of the rescue was poised to begin.

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<sup>22</sup> Page 28 starting at line 2 from statement under oath by Owen Mark Jones January 17, 2006

<sup>23</sup> From statement under oath of Denver Wilfong February 16, 2006 starting on page

<sup>24</sup> Starting on page 30 of the statement under oath of Jeffery Keith Toler January 18, 2006



### 3.3 Joint Response

At 7:46 a.m. a call was placed to the home of John Collins. Mr. Collins is the District Inspector with the West Virginia Office of Miner's Health, Safety and Training (OMHS&T) assigned to the Sago mine. While Mr. Collins' phone did not ring, his message recorder started, and his wife heard John Stemple, safety director for Sago leave the following message:

*“Hey John Collins this is Johnny Stemple it’s about 15 till 8 Monday morning we have got a situation up at Sago mine where we have men underground that we have not been able to get a hold of and it’s been more than 30 I mean more than 60 minutes. I have tried to get a hold of Mark Wilfong and no answer, I have tried to get a hold of Brian Mills and the number I have for him is listed as disconnected and you are next on my list. We don’t know anything at this time. At 6:30 when the power went off, which is probably why I can’t get a hold of you probably because your phone is out when the power went off we have not been able to get a hold of one of our crew underground so we are trying to get to that crew right now. It has been more than 60 minutes my home phone number is ...”<sup>1</sup>*

Mr. Collins immediately returned the call and was briefed on the situation. After discussing the situation with Mr. Stemple for just a few moments Mr. Collins told him that he was going to the mine, and consider that the State had been notified. Mr. Collins phoned Brian Mills, OMHS&T Region One Inspector at Large, and left for the mine arriving at 8:15 a.m. Mr. Mills contacted OMHS&T Inspectors Barry Fletcher and Jeff Bennett directing them to assist Mr. Collins.

Upon arriving at the mine, Mr. Collins met with Charles Dunbar, Sago General Manager, and Carl Lee Crumrine, Sago General Mine Foreman, both of whom had arrived shortly before. The three

began to organize efforts to secure the area, verify who was in the mine and begin collecting air measurements at the return. Mr. Collins joined the first-left crew to gather as much information as he could. The first-left crew was being examined by EMT's and volunteer firemen<sup>2</sup> who had just arrived, and oxygen was being administered to several people, who were having trouble breathing. Mr. Collins then attempted, unsuccessfully, to contact MSHA. It was approximately 8:15 a.m.

Mr. Fletcher arrived at 8:20 a.m. and Mr. Collins asked him to work with the Sago staff to secure the site and keep non-essential persons out. Mr. Bennett arrived at 8:23 a.m. and was asked to work on collecting the names of everyone on site and determine whether they were underground or on the surface. Mr. Bennett also initialed, dated and timed all entries into the record books.

Based upon what he had learned Mr. Collins issued a control order<sup>3</sup> to Mr. Crumrine requiring that as of 8:30 a.m. January 2, 2006, the Sago mine was closed, and that prior approval must be requested and given before any other underground activities could take place.

At approximately 8:30 a.m. James Satterfield MSHA Bridgeport Field Office Supervisor was reached by Mr. Stemple and informed of the accident.

Having gathered the initial facts, at 8:37 a.m. Mr. Collins talked to Doug Conaway, OMHS&T Acting Director, who was in route to the mine and provided him with an update.

Mr. Toler called from near the first-left track switch and requested that Mr. Crumrine enter the mine and work on the ventilation to get more air to the face, however, Mr. Crumrine remembered Mr. Collins advising, "...anything you do might hurt these guys, not help them." "I tried to call

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<sup>1</sup> Transcript on message left on Mr. Collins home answering machine.

<sup>2</sup> Page 31 starting on line 10 of statement under oath of Carl Lee Crumrine February 16, 2006 and treatment is confirmed in many of the statements of the first-left crew

<sup>3</sup> WV §36-19-7.1 stipulates that unless granted permission by OMHS&T, no operator may alter an accident site or an accident related area until completion of all investigations pertaining to the accident except to the extent necessary to rescue or recover an individual, prevent or eliminate an imminent danger, or prevent destruction of mining equipment

Jeff. I called inside --- I tried calling him. I couldn't contact him.”<sup>4</sup> The time was approximately 8:45 a.m.

Mr. Crumrine remembers trying to get hold of those in the mine “...I put somebody in charge of calling every five minutes...trying to get hold of Mr. Toler...I think it was Mr. Chisolm, but...I don't remember who.”<sup>5</sup> At this point Mr. Toler and the four others with him were inby the first-left track switch, beyond which there were no working phones. It was not until they returned to this point after abandoning their advance that they were able to make contact with Mr. Collins on the surface. At 9:30 a.m. Mr. Toler called outside and reported to Mr. John Collins that they had made it to 58-block, four-belt, but had encountered heavy smoke and soot. He also indicated that their detectors had burned up, and that there was not enough air to move the smoke. Mr. Toler stated that they were coming outside via the intake escape-way because the smoke and dust had now traveled outby in the track entry.<sup>6</sup> Mr. Hofer and Mr. Jones had already started out-by in the intake escape-way looking for damage to the ventilation controls. Mr. Toler, Mr. Schoonover and Mr. Wilfong caught up with these two men at 12-block, four-belt, where they were repairing an overcast that had been damaged during the explosion. The damaged overcast was allowing intake air to short circuit. Temporary repairs were made to the overcast and the men continued outby in the intake escape-way, arriving on the surface at 10:30 a.m.<sup>7</sup>

With multiple aspects of the response happening in parallel, it is difficult to provide a perfect chronology of activities. After the first-left crew, outby personnel and those that participated in the initial response were out of the mine, the focus was then on assessing the risks that the mine rescue teams would face. Coordinating the logistics of all the resources required to support the rescue was also a major focus.

At this point principal Sago management along with seven OMHS&T inspectors were on site. Multiple mine rescue teams were in route, local ambulances were on site and two of the first-left

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<sup>4</sup> Page 37 starting on line 17 of statement under oath of Carl Lee Crumrine February 16, 2006

<sup>5</sup> Page 41 starting on line 1 of statement under oath of Carl Lee Crumrine February 16, 2006

<sup>6</sup> Page 102 line 1 of the statement under oath of Jeffery Keith Toler taken January 18, 2006 by OMHST&T and MSHA

<sup>7</sup> OMHS&T Inspector's timeline

crew had been transported to the hospital. The Red Cross had been contacted to assist with families, victims, and responders. MSHA had been contacted and their personnel were in route. The Upshur County Sheriff's Department had been requested to secure the entrances to site. At the same time the engineering firm for the mine was working on more maps for use by the command center and the rescue teams. Air sampling at the mine portal was showing levels of carbon monoxide increasing from 47 ppm at 8:40 a.m. to 505 ppm at 10:27 a.m.

MSHA personnel began arriving shortly after 10:30 a.m. Mine rescue teams began arriving at 10:45 a.m., beginning with the Barbour County Mine Rescue Team and followed throughout the day by others. The teams began setting up near the bathhouse. Monitoring of air at the mine portal continued to show increased levels of carbon monoxide. At 12:12 p.m. the measurements which had been near 500 ppm jumped to 2,000 ppm. As a precaution, the bathhouse area was evacuated in case these readings warned that a potential danger existed to the bathhouse. Over the next several hours, the readings remained at or near this higher level. Methane remained below 1.0 percent. At 1:00 p.m., the OMHS&T control order was modified to allow for the installation of a monitoring tube inby in the number one entry.<sup>8</sup> This was accomplished by one of the mine rescue teams.

Simultaneously OMHS&T inspector John Meadows was working with the company and a local drilling company in an effort to determine locations for boreholes, which would be used for sampling the mine atmosphere and supporting rescue options. Mr. Meadows contacted Mike Ross, who obtained the services of four drilling companies. While Mr. Ross was arranging the drilling rigs, permission was secured from landowners for surface access above the mine to construct emergency access roads and level pads for the drill rigs. OMHS&T Chief Engineer Monte Hieb arrived to assist in the final borehole placement. Based on information provided by the first-left crew and those that advanced to 58-block four-belt, it was decided that drilling would first commence into the second-left section near the belt feeder. The entry at that point is approximately 20 feet wide and was located approximately 260 feet below the drill point.

The location of the second-left drilling pad was first determined by using mapping-grade GPS devices that have an accuracy of approximately three to nine feet. By the time a dozer arrived at 5:00 p.m. a road into the wooded area and a pad had been staked out.

The pad upon which the drill rig would sit had to be on cut into solid ground. If the ground were soft, the drilling rig's vibrations would cause it to settle thereby moving the drill off perfect level. If that were to happen the borehole could miss the entry, end up in solid coal and be of no use.

The mapping-grade GPS location had to be refined by using a survey-grade GPS to ensure that the borehole location was accurate. A call was placed to Alpha Engineering Services, the contract surveyor for the mine, to provide a higher accuracy location for the borehole.

Gary Hartsog, Alpha President, was in Atlanta at the time of the explosion. When contacted by cell phone, he in-turn could not reach his surveyors to respond. Mr. Hartsog arranged to contact Marshall Robinson who had done surveying at the mine until August, 2005. Mr. Robinson had been without cell coverage, hosting visitors at the time of explosion. He just happened to stop by his office at 3:30 p.m. to check on things, and returned the urgent call left by Mr. Hartsog. Mr. Robinson immediately contacted several other surveyors from around the state who gathered equipment and headed to the mine. Those who responded were able to bring state-of-the art GPS and surveying software. Mr. Hartsog maintained in contact via cell phone throughout the night and the next day.

To achieve the fractional inch accuracy needed for the borehole, the group had to first calibrate the survey-grade GPS unit's reading to that of a known location. Fortunately those who arrived happened to know the location of permanent monuments (survey reference points). Two points at the mine mouth and one at a mine five miles away were checked against the survey-grade GPS readings. Correction factors were used to calculate the exact location of the borehole at second-left. To save time, an attempt was made to use direct radio linkage between the survey-grade GPS

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<sup>8</sup> Covered in state order with this date and time issued by Mr. Collins and the action taken is described in the notes from Jeff Rice in his description on the activities of the Barbour County Mine Rescue Team

units on the monuments and the one near the drill site. However, the weather and local terrain limited radio communication. The correction factors had to be driven to the drill site. Because the terrain and trees limited line-of-sight for satellite access at the drill pad the last several hundred feet had to be done by conventional surveying from a point located in a clearing. Four hours after arriving on site at 11:30 p.m. the final stake was set. The mapping-grade GPS had been off by approximately thirty feet requiring the pad to be enlarged. Drilling began on the second-left borehole at approximately midnight. The proposed penetration point into the mine was near the center of the entry. Working from the tailgate of their pickup truck, the survey and drill teams had targeted this location on their computer.

Carbon monoxide readings at the portal continued to be high, but had begun to decrease, dropping steadily from 2,252 ppm at 4:00 p.m. to 1,662 ppm at 5:20 p.m. Methane had also dropped and was reading 0.3 percent. Approval was given for the first mine rescue team to begin exploration of the mine at 5:20 p.m.

For their own protection mine rescue team members must be privy to as much information as possible from the command center. A coordinated process has evolved to balance an understanding of the overall effort from the command center to those teams in the mine. During a rescue there is always one team on the surface ready to go in, one at the last point that fresh air has been established (the fresh air base) and one team exploring. As the mine rescue teams advance in leapfrog manner, new teams were rotated to replace those that come out.

The first mine rescue team entered the mine at 5:25 p.m. The team methodically advanced while maintaining contact with the command center through a combination of handheld radios, messengers, and the mine phone system. The team read 1,749 ppm carbon monoxide on the return-entry and zero percent methane on the track-entry. After advancing approximately 2,000 feet in the intake escapeway to the number three-belt drive they found 33 ppm carbon monoxide in the track entry and 17 ppm in the belt entry. No methane was detected in either entry. It had taken them 25 minutes to cover this 2,000 feet. This pace would prove to be one of the fastest, as mine rescue is tedious business. The next 900 feet required 30 minutes. At the 8-block, three-belt the

carbon monoxide had increased to 565 ppm in the belt-entry. By 8:25 p.m., the working team had reached 28-block three-belt, 4,700 feet into the mine and almost 7,800 feet from the second-left crew. They were reading no methane and 4 ppm carbon monoxide at this point.

Behind the mine rescue teams in fresh air, a mine crew reenergized a pump near the number two-belt drive. There had been a concern that due to the dip in the mine at that location, flooding could compromise the integrity of the return. Because there was not sufficient information on the mine atmosphere to ensure that such action would neither trigger a secondary explosion nor expose the personnel reconnecting the pump to hazards, it was decided to wait until the mine rescue teams had been able to advance sufficiently beyond that point to determine if such risks existed.<sup>9</sup>

On the surface additional rescue teams had arrived. The OMHS&T mine rescue truck with its spare equipment and facilities for recharging rescue air packs was then fully functional. The command center was staffed by representatives from the company, the OMHS&T, and MSHA. The drilling activity made progress. The drillers had been told to stop drilling 20 feet above the top of the mine roof. This direction was given in order to give the command center time to order the mine rescue teams out of the mine. There was concern that as the drill penetrated the roof it may encounter methane that could cause a secondary explosion. While the first drill rig was working, locations for the second and third boreholes had been determined. Site preparation was begun.

As January 3, 2006 began, one mine rescue team had reached 8-block, four-belt and for the first time light smoke was reported. The team also observed damage in the form of a 2-foot by 10-foot hole in overcast. Carbon monoxide here was 1,000 ppm in the return and methane was 0.5 percent. The rescue teams were almost halfway to the second-left section, some 6,900 feet into the mine with 6,400 feet to go. It was 12:15 p.m., 18 hours since the explosion.

Based on apparent high concentrations of carbon monoxide, and evidence found with the second-left crew as well as reports from the medical examiner, it appears that only Randal McCloy survived until January 3.

Led by their section foreman Martin Toler Jr.,<sup>10</sup> the second-left crew made an unsuccessful attempt to exit the mine on their mantrip. They backtracked, and then walked to the intake escapeway covering an estimated 2,000 feet<sup>11</sup> before they donned their self-rescuers. The crew then attempted to walk out, as witnessed by footprints found in the dust by the rescue team. Finding their way blocked by smoke and debris, the crew was forced to return to the face, gathering materials to build a barricade as they went.

At the face they erected curtains across number three entry, providing a shelter against the dust and smoke. According to Mr. McCloy, It was a good location with enough room and with curtains and tools close by. The barricade provided some protection, “It kept a lot of smoke out, but I guarantee it didn’t do too much on gas.” The smoke that was behind the curtain hung in the still air “...for a short period of time and then it just faded out because no air was moving in there...”<sup>12</sup> After the barricade was erected all 12 of the second-left crew were inside; however, occasionally members would venture out to check conditions and look for the rescue teams.

Those inside the barricade used a sledge hammer to hit roof bolts in the roof of the crosscut just outby the face entry, in an attempt to signal surface seismic listening equipment. The MSHA seismic truck was not deployed. The procedure that is prescribed for the MSHA seismic location system is to wait for a signal from the surface, then respond by hitting a roof bolt. The miners obviously expected that someone would be listening.

Mr. McCloy reported that there were too few self-rescuers to go around, since four miners had been unable to make theirs work.<sup>13</sup> Those who had working units shared with those next to them. Mr. McCloy reported trying to assist Jerry L. Groves with getting his SCSR started “...we tried to

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<sup>9</sup> Request for modification to control order number one and resubmitted as number seven along with discussions with Mr. Mills and Mr. Collins.

<sup>10</sup> Page 31 starting on line 17 of the statement by Randal McCloy June 19, 2006 taken by MSHA

<sup>11</sup> Distance from face to end of track then forward to assumed furthest point driven then back to where the mantrip was found then to the point where all the covers for the SCSRs were found

<sup>12</sup> Page 43 starting on line 23 and page 44 line starting on line 21 of the statement by Randal McCloy June 19, 2006 taken by MSHA

<sup>13</sup> Section 5.6 of this report covers SCSRs in greater detail



get it working, and it didn't work" "...it aggravated me the most because really I wanted his to work." "I fought with it for I don't know how long, trying to mess with that valve, blow air through it or anything I could do, but nothing would work."<sup>14</sup> In addition to sharing units, the miners who did have working units took them off when building the barricade and to talk to each other which required that they be removed. The cumulative exposure to carbon monoxide before, during, and after their SCSRs apparently stopped producing oxygen exposed the individuals to levels that were fatal.<sup>15</sup> It would seem to be a miracle that Mr. McCloy survived.

As the mine rescue teams worked their way toward the second-left section they reported a red light slightly above the floor near 36-block four-belt. They were given permission to investigate the light at 2:10 a.m. It was a battery back up light for a carbon monoxide sensor. There was uncertainty about the effect on sensors in by this point if this unit was deenergized<sup>16</sup>. There was a further concern that the carbon monoxide system might respond to this unit being disconnected by turning on the battery of a unit that was in an explosive atmosphere, triggering a secondary explosion. This concern was heightened by the fact that the teams were now witnessing significant damage in this area. They knew that ventilation controls were likely missing in by their location.

It was decided to remove the teams to the surface while the carbon monoxide system was deenergized. The carbon monoxide system was deenergized at 3:57 a.m. Since the first bore hole was expected to breakthrough the roof of second-left within hour, it was decided to not allow the rescue teams to reenter the mine until after the borehole was through.

The drill rod broke through the roof of second-left only 200 feet from the barricade. The drilling team improvised a signaling system by using the drill rod as a sound source, hitting it on the surface with a hammer and placing their ears to it listening for return signals. From 5:42 a.m. to

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<sup>14</sup> Page 33 starting on line 12 and page 34 starting on line 7 of the statement by Randal McCloy June 19, 2006 taken by MSHA – the 'valve' Mr. McCloy is referring to is the level on the SR-100 that activates the oxygen starter cylinder when a fabric tag is pulled as part of the donning procedure

<sup>15</sup> The carboxyhemoglobin saturation levels for all the victims exceeded 64 percent with some as high as 78 percent these levels lead to diagnosis of anemic hypoxia as the cause of death.

5:52 a.m. silence was observed across the site to listen for any tapping on the drill bit that now extended into second-left --- there was no response. This was almost exactly 24 hours from the time that the second-left crew had started boarding their mantrip.

Samples of air from the new borehole indicated 1,280 ppm carbon monoxide, 20.3 percent oxygen, and 0.4 percent methane. The drill steels were withdrawn and a camera lowered. The drill team had hit perfectly in the entry inby the belt head. A camera was lowered through the hole and it was clearly visible that there was no damage in this area. There was no sign of any persons. Smoke was wafting past the camera in slow thin wisps.

It was decided to hold the second and third bore holes short to avoid having to remove the rescue teams again.

At 6:22 a.m., the mine rescue teams re-entered the mine. They took with them an experimental mine rescue robot. The robot was deployed near 32-block, four-belt but, developed technical problems because of the mud and water in the mine at 33-block, four-belt. This unit was not used again after 8:50 a.m. Carbon monoxide was measured here at 203 ppm with 20.6 percent oxygen and zero percent methane.

By noon the rescue teams had only made it as far as 44-block, four-belt. The extensive damage to the ventilation control stoppings was requiring that significant repairs be made in order to advance the fresh air base. These repairs slowed progress significantly. By this time teams had been changed several times.

At 2:15 p.m. a rescue team reached the first-left mantrip at 49-block, four-belt. They found nine dinner buckets. They disconnected the batteries on the mantrip. There was 44 ppm carbon monoxide and zero percent methane at this location. Readings taken on the entries of first-left showed 310 ppm and 335 ppm carbon monoxide in the belt entry and intake escapeway

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<sup>16</sup> The concern was that taking this unit off its battery backup might activate the backup on a unit inby in an unknown atmosphere.

respectively with oxygen in the normal range and methane below 0.2 percent. Significant damage was reported in the area.

The rescue teams did a preliminary search of the entries on first-left. Since all of the first-left crew had been accounted for, it was determined to break with mine rescue protocol and only look for signs that the second-left crew may have taken refuge on that section. They found no signs that anyone had been in the section, and were directed to proceed toward second-left.

At 3:55 p.m., the teams were instructed to advance to 56-block, four-belt. The significant damage required considerable work, but the teams were nearing the second-left track switch and were working hard. They moved the 600 feet by 5:08 p.m. and requested permission to advance.

The first victim was found between 57- and 58-block, four-belt. Mr. Helms, the mine examiner, had been in the direct path of the blast less than 500 feet from the old-second-left section seals.

The principal means of communication to the surface was the mine pager phones. On the surface there were two pager phones in the mine office, one in the dispatcher's building, one just inside the mine portal and a new one installed near the OMHS&T mine rescue truck. In addition there were now over 100 people on the surface many of whom had cell phones. Although the site was being secured by the police, the national media had by now set up observation positions for their camera crews attempting to get images. What was not known at the time was some of these media crews also had directional listening devices pointed at the mine portal and were able to hear the pager phone. There was concern among mine management that if victims were found that the media would over hear and report such before there was time to individually talk with the families. Therefore, the mine rescue captains were asked to identify any victims as 'items' rather than use names when reporting to the command center. At 5:20 p.m. on January 3, 2006, the rescue team reported "...one item."

While disheartened by the discovery of Mr. Helms, the teams were even more anxious to move forward in the hope of finding the second-left crew. At 5:49 p.m. the forward most team was

instructed to move to the seals of the old-second-left section. At 6:08 p.m., the team reported they had walked into the old-second-left section and that seal-10 appears to be gone.

After discussion among those in the command center, at 6:22 p.m. the instruction was given to advance across the seals toward the second-left section mouth. While the teams had been reporting significant damage, none of them had been prepared for the level of destruction they found. The seals were not simply blown apart as they had seen with the stoppings...they were gone. Nothing remained. Some reported seeing markings in the ribs and floor where the seals had been. Also, the first reports were making their way to the surface that the explosion had occurred in by the seals. Until then the assumption had been that the explosion originated in the second-left section. The teams were now at the second-left mains, 1,800 feet from the barricade.

At 7:00 p.m. the instruction was given to advance into second-left. The tangle of metal and debris that had blocked the second-left crew's escape slowed the progress of the rescue teams. By 7:25 p.m., they had only progressed 260 feet to the 6-block, six-belt crosscut. Air samples indicated 306 ppm carbon monoxide, 20.6 percent oxygen and 0.6 percent methane. The smoke was still swirling in the air, but the team reported seeing what appeared to be a mantrip several blocks ahead of them. Before advancing they were instructed to recheck the area between second-left and the point where they had found Mr. Helms to ensure they had not missed anyone. By 7:50 they had reached the mantrip located at 10-block, six-belt in second-left.

Excitement increased as they found footprints in the intake escapeway and followed them to the covers for 12 self-rescuers near 12-block, six-belt. It was 8:10 p.m. and the rescue team was only 1,300 feet from the barricade. By 9:34 p.m., the teams had advanced 400 feet to 16-block, six-belt with air readings of 362-ppm carbon monoxide, 20.7 percent oxygen, and 0.2 percent methane.

At 11:39 p.m. January 3, 2006 the first team reached the barricade. They entered to silence. It appeared that most of the victims were obviously deceased. As mine rescue members began to check for vital signs they heard what sounded like a moan from the inby, left side of the barricade ... it was Mr. McCloy.

It had been over 40 hours since the explosion. The world was literally hanging on every message from the teams to the command center. The message that was ultimately recorded in their command center notes by the OMHS&T staff at 11:45 p.m. was “All are okay behind barricade – 12 men”. This mistake was due to passing the message through several individuals. The MSHA command center notes record at 11:46 p.m. “12 people alive”. The ICG command center notes recorded “All twelve at the face – barricaded at the face” At 12:18 p.m. another report came back that the “rescue team at face are bringing 12 people coming with them.” The command center erupted in excitement, Harrison Tyrone Coleman, ICG’s command center representative, related “I never saw so many old hairy guys cry in my life.”<sup>17</sup> But it was not to last. A confirmation report came to the command center at 12:23 a.m. “11 items” and was confirmed at 12:30 a.m. as “11 fatalities and 1 survivor behind barricade”. This miscommunication and the anguish its premature release caused are immeasurably regretted by all involved. This regret has been expressed many times.

While the communication issues were playing themselves out, the rescue team was evacuating Mr. McCloy. He was barely breathing, and had difficulty holding an SCSR breathing tube in his mouth. The rescuers used several SCSRs as they carried him to the fresh air base where they were able to put a positive pressure oxygen mask on him.

By 1:00 a.m. January 4, 2006 Randal McCloy was in an ambulance, on the way to the hospital. Mr. McCloy had been in the mine over 43 hours, most of which were high levels of carbon monoxide.

The process of recovering victims continued through the night and into the morning. The victims were transported from the mine in mantrips at 9:55 a.m. January 4, 2006 and left the site by ambulance.

Killed in the explosion and its aftermath were:

Martin Toler, Jr.,

Alva M. Bennett,

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<sup>17</sup> Statement under oath by Harrison Tyrone Coleman February 21, 2006 starting on page 75

Fred Ware, Jr.,  
Jesse L. Jones,  
David W. Lewis,  
Jerry L. Groves,  
Thomas P. Anderson,

George J. Hamner,  
James A. Bennett,  
Marshall C. Winans,  
Jackie L. Weaver,  
Terry Helms

Those who survived the explosion, the initial response, and those that supported them on the surface while not suffering from physical injury are forever changed.

Surviving the January 2, 2006 day shift includes:

John Nelson Boni  
William (Bill) Chisolm  
Randal L. McCloy  
Gary Rowan  
Gary D. Carpenter  
Roger Perry  
Chris Tenney  
Paul Avington  
Joe Ryan  
Alton Wamsley  
Randy Helmrick

Eric Hess  
Denver Anderson  
Hoy Keith  
John Patrick Boni  
Ron Grall  
James Fred Jamison  
Jeffery Keith Toler  
James Allen Schoonover  
Denver Wilfong  
Gary Marsh

At 10:00 a.m. on January 4, 2006 the last of mine rescue personnel were out of the mine.

The rescue phase was complete and the mine recovery/investigation began.



Photo 1

First-Left mantrip  
Mantrip in buggy barn after it was  
transported to surface



Photo 2

Example of the debris at track  
overcast that would have prevented  
the crew from escaping in their  
mantrip



Photo 3

Second-left mantrip  
Mantrip buggy barn after it was  
transported to surface

