STATEMENT UNDER OATH

OF

JOHN GIBSON

Taken pursuant to Notice by Richard J. Lipuma, CCR, a Court Reporter and Notary Public in and for the Commonwealth of Pennsylvania, at MSHA Technical Support Office, Building 2, Industrial Park Drive, Triadelphia, West Virginia, on Monday, December 17, 2007 beginning at 9:04 a.m.

Any reproduction of this transcript is prohibited without authorization by the certifying agency.

A P P E A R A N C E S

THOMAS MORLEY
Mine Safety & Health Administration
Industrial Park Drive
Triadelphia, WV 26059

RICHARD A. GATES
U.S. Department of Labor
District Manager, District 11
135 Gemini Circle
Suite 213
Birmingham, AL 35209

GARY SMITH
Mine Safety & Health Administration
619 Paintersville Road
Hunker, PA 15639

TIM WATKINS
Mine Safety & Health Administration
100 Fae Ramsey Lane
Pikeville, KY 41501

A P P E A R A N C E S (cont.)

JOSEPH O'DONNELL, JR.
Mine Safety & Health Administration
Suite 2231
1100 Wilson Boulevard
Arlington, VA 22209

JENNIFER CASEY, ESQUIRE
Trial Attorney
Denver Solicitor's Office
1999 Broadway, Suite 1600
Denver, CO 80202-5710

JOSEPH ZELANKO
Mine Safety & Health Administration
Cochrans Mill Road
Pittsburgh, PA 15236

ALSO PRESENT:
Suzanne Escott, Notary Public

INDEX

INTRODUCTION	6 - 9
WITNESS: JOHN GIBSON	
QUESTIONS	
By Mr. Morley	9 - 30
QUESTIONS	
By Mr. Gates	30 - 32
QUESTIONS	
By Mr. Morley	32 - 76
QUESTIONS	
By Mr. Gates	76 - 77
QUESTIONS	
By Mr. Morley	77 - 92
CONCLUDING REMARKS	92 - 93
CERTIFICATE	94

EXHIBIT PAGE

NUMBER	DESCRIPTION	PAGE IDENTIFIED
One	Map of geophone arrays (with changes)	34
Two	Map of initial layout of geophone arrays	37

1 P R O C E E D I N G S
2 -
3 MR. MORLEY:
4 My name is Thomas
5 Morley. I am an accident
6 investigator with the Mine
7 Safety & Health Administration
8 (MSHA), an agency of the U.S.
9 Department of Labor. With me
10 is Richard Gates, also from
11 MSHA. We will be conducting
12 the questioning today.
13 I, together with other
14 government investigators and
15 specialists, have been
16 assigned to investigate the
17 conditions, events and
18 circumstances surrounding the
19 fatalities that occurred at
20 the Crandall Canyon Mine in
21 Utah in August 2007. The
22 investigation is being
23 conducted by MSHA under
24 Section 103(a) of the Federal
25 Mine Safety & Health Act and

the Utah Commission of Labor. We appreciate your assistance in this matter.

After the investigation is complete, MSHA will issue a public report detailing the nature and causes of the fatalities in the hope that greater awareness about the causes of accidents can reduce their occurrence in the future. Information obtained through witness interviews is frequently included in these reports. Your statement may also be used in other enforcement proceedings.

A court reporter will record your interview. Please speak loudly and clearly. If you do not understand the question asked, please ask me to rephrase it. Please answer each question as fully as you can, including any information

you have learned from someone else. I would like to thank you in advance for your appearance here. We appreciate your assistance in this investigation. Your cooperation is critical to the success in making the nation's mines safer.

After we have finished asking questions, you will have an opportunity to make a statement and provide us with any other information that you believe to be important. If at any time after the interview you recall any additional information that you believe might be useful, please contact Richard Gates.

Ms. Escott, would you swear in the witness?

MS. ESCOTT:

If you would, raise your right hand.

1 ----------
2 JOHN GIBSON, HAVING FIRST BEEN DULY
3 SWORN, TESTIFIED AS FOLLOWS:
4 ----------
5 MR. MORLEY:
6 Ms. Escott, are you
7 empowered as a notary in the
8 State of West Virginia?
9 MS. ESCOTT:
10 Yes.
11 MR. MORLEY:
12 When does your
13 commission expire?
14 MS. ESCOTT:
15 9/23/2015.
16 MR. MORLEY:
17 And have you sworn in
18 Mr. Gibson?
19 MS. ESCOTT:
20 Yes.
21 BY MR. MORLEY:
22 Q. Mr. Gibson, do you have any
23 questions about the interview process
24 as I have described it?
25 A. No.

Q. Can I call you John?
A. Yeah.
Q. John, who is your present employer?
A. The Mine Safety & Health Administration.
Q. And how long have you worked there?
A. Twelve (12) years.
Q. What is your job title?
A. Engineering technician.
Q. Where do you work and what are your primary areas of responsibility?
A. I work in Pittsburgh Safety & Health Technology Center. And my primary responsibilities are working on the mine emergency operations equipment and also some of the MEU equipment.
Q. How long have you been in that position?
A. Actually, with MSHA, my whole career of MSHA, 12 years. Plus I worked on that equipment previous to that when I was with Westinghouse.

Q. How long was that?
A. Since 1985, in between there I had two or three years where I traveled, working on aircraft radar, until I was rehired with MSHA.
Q. Okay. Who is your current supervisor?
A. Current is John Urosek.
Q. As of --- was that the same on August 6th?
A. I believe John was my current supervisor at that time. However, Jeff Kravitz was still acting in that position. Nothing had changed from that position, and it really hasn't changed much yet.
Q. So it's been ---?
A. So it's been Jeff Kravitz mostly.
Q. Okay. How were you notified of the August 6th accident and by whom?
A. I was notified by Jeff Kravitz. I was at work at the time he told me about it.

Q. Okay. Can you describe your role in the rescue operation, starting from the time you were first notified, going through when you arrived at the property, the whole way through? Just kind of give me your description and what you did and when and where you worked.

A. Yeah. I have a bit of a timeline put together. Can I go through that?

Q. Sure. Can we get a copy of those notes?

A. Yeah. In fact, I was going to make a copy before.

Q. Okay.

A. On 8/6, I was notified of the accident. And at that point, things were sketchy but I just started to pack up the equipment, the supply trailer, the seismic truck, the auxiliary truck, for deployment. Approximately 12 o'clock noon, we had Kerr Trucking come and pick up our supply trailer. And the supply

trailer pretty much houses all the spare equipment, any extra parts, and it has a workshop inside of it where we can work out of if we have a complete seismic deployment. They picked it up at around noon. And about 2:00, 2:30, we started to travel out to the 911th Air Force wing, where we had tried to --- we started the process of loading the equipment onto a C-130. At that point, we had some problems and --- they had a K-loader that was broken. We usually drop the box off and slide it into the C-130. Well, that was broken, so we played around with that for quite some time.

And then later on we had a C-17 come. And at that point we were able to just drive this stuff right into the trucks and fly. It was like a half an hour when we got there. It was amazing. We just pulled up, opened up the tail wing and (makes sound effect). We pulled them in

there, they strapped us down and we took off. It was just amazing. It was like a big --- it was just amazing, putting all that big equipment on there and just taking off.

We had --- we were able to get there probably --- I'm trying to think. I think I did have it written down. About 4:30 in the morning we arrived at Grand Junction, and we offloaded the vehicles and proceeded to drive out to the site. And we scouted the area and set up the seismic system and was able to at least communicate with seismic.

Approximately --- let's see. I think I had that prior. 10:30 p.m. on 8/7 is when we first set up the equipment and was able to communicate.

Q. What day did you fly out?

A. We flew out on 8/6. Well, actually it turned into 8/7 because it was 2:00 a.m. in the morning I

think when we finally got onto the plane. So it was 8/7.

Q. Okay.

A. And then at 10:30 p.m. on 8/7 was when we set up the seismic system. And this is just coming from memory. And that's when we first were able to say that, you know, the system was ready to go. We then relocated a day later. We had talked to some people from the National Forest Service and they said that there was a better site. So they were able to give us a better area to actually set up our seismic system that we could set up all the arrays, and we were able to communicate with all of the arrays that were set up on top of the mountain by shooting them down the mountain.

I do have some photos if you guys want to see how we had to set up. It will give you a good idea. We were able to set the arrays up on the mountain and you could see the

seismic system almost from --- well, for most of the arrays.

Q. Yes, we'd like to get a copy of this.

A. Okay. From that point, we --- let's see. I'm trying to --- you want pretty much the whole works; huh?

Q. We'll go back over some of it.

A. Okay. There was a lot of different things that happened in between all that. I don't know if you want me to elaborate on everything or ---.

Q. Whatever you think is important.

A. Okay. Well, we then were able to --- let's see. On 8/9, August 9th, we worked on pretty much setting up equipment and surveying different points of our arrays, where we were going to set things up. And we were also starting to monitor seismic. Kind of the same thing happened on 8/10. One thing that happened, on

August 11th, we were able to --- I guess at that point we were looking into different situations, and we had the capsule delivered out to us, just in case we needed that.

On August the 15th we had monitored --- we had hit a drill steel at bore hole three. And when we hit it, they were spaced about every one to two-second intervals. For approximately a five-minute period we had received signals that were significant enough to speak of. And at that time we had called the command center and let them know about it, and they took our records and went over them. They wanted to take a look at those.

On August 18th we did another test. It was hitting the drill steel at the number four bore hole three times. And then we repeated that several times. And we put off explosive charges that day also.

Q. Okay.

A. Let's see. On August 22nd, we did another test at bore hole number five by hitting a drill steel with like a sledgehammer. And on August 25th we did a similar test at bore hole six. And on August the 30th we did a similar test, hitting bore hole number seven. Let's see. On August 30th we were involved also with using a robot. We had an exploratory robot brought in. That was put together by Jeff Kravitz. He contracted some people out to assist in getting a small robot together. And it basically was just a --- it looked like a little toy on tracks. And we put that --- we proceeded to try and get that lowered into the mine.

So that was on number --- I'm looking at my notes here, robot down the number three bore hole. But the hole had shifted and the mine opening wasn't --- we weren't able to get it all the way through.

And then on 8/31, we tried a

similar thing at bore hole number four. And let's see, we recovered the robot from the mine, but --- okay. It was stuck in the bore hole. And what happened there, it collapsed and we got the robot stuck in there. And we ended up --- it was a real fiasco. But we ended up trying to get it out. I mean, we had to try whatever we could. It was small potatoes at that time, trying to get something into the mine to see what we could see. And they tried to do whatever possible.

And, you know, we had the family members wanting as much information as we could, so ---. Unfortunately, we didn't have a cased hole, so we had --- it was a chance. So they put the --- slid the robot down in there. And with what was going on, the 1,800 feet, it caved in. Actually, I think it just might have shifted. We were able to clear that out with a vacuum

truck. We pumped water down in there like a water jet, and they were knocking stuff out and sucking all this stuff out to get it to move. But we kept getting hung up on one area. We'd get like --- I think we were close to like 50 feet from the top. And we had it almost out, and then we'd get to that same point and there must have been a rock or something. And then finally, after playing with it for, I don't know, quite some time, I don't remember exactly, but said, okay, we're going to give a pull and see what happens, and it snapped and that was the end of that.

Q. Okay.

A. And that pretty much was our final try for everything. Once we tried to get that out, it broke, and I think that was pretty much how things kind of went. Things didn't --- you know, I mean, no matter what we tried --- we had a lot of good

things to try, and just every step of the way there was a roadblock it seemed.

Q. When did you leave?

A. September 3rd. Yeah, I think it was September 3rd.

Q. Okay. Let's go back over some of that.

A. Okay.

Q. When you first arrived on the mine property, who did you report to and what were your instructions?

MR. GATES:

Maybe let's just go back a little bit before that. You talked about loading the equipment onto the Air Force plane.

A. Yeah.

MR. GATES:

Well, maybe even back before that. Who made the decision to send the seismic?

A. I really don't know who the ultimate person was that made that

decision. Jeff told me to get it written. And I'm not sure if --- you know, when he got the word to send it or how that all worked out. I'm not sure.

BY MR. MORLEY:

Q. When were you first told to get it ready to go? When did you first learn that you were going?

A. Actually, we were getting things ready before we actually knew we were going to go. You know, there was always that maybe we'll go, maybe we won't go. But we were getting things packed up to go. I can't say exactly for sure. It must have been like 10:00 or 11:00 in the morning on 8/6. It might have even been earlier. I can't recall.

Q. So when you arrived on the property, what instructions did you get?

A. Well, the first night --- we had actually --- we drove the seismic truck around to find spots to set up.

We actually didn't check into the mine actually. We were just --- Jeff was contacting people, and I was in the truck just following where we were going to set up. And pretty much the whole first part of that operation we were trying to find locations to set the seismic system up.

Q. Were you in communication with the people at the mine before you got there?

A. Jeff was. I wasn't. I was just driving the truck.

Q. Okay. Were you involved in setting up the seismic equipment?

A. Yes.

Q. What all exactly did you guys have to do?

A. Well, when we first set up the equipment, there's kind of a whole bunch of different operations that you have to go through. We powered up the generator. We have a generator truck and we powered it up.

You have to plug into the truck and set out steps and go through and fire up all the electronic equipment inside. And then we have pre-amps that we set up outside of the truck that we take out and put in the field. And what we usually do is we'll set them up in an area above the mine in a double-diamond shape so that we can --- and hoping that we can communicate back to the truck. Sometimes when you're out there, if you're in certain terrain, you just don't communicate. You have to move things around until you do communicate by telemetry.

Q. Can you just describe the pre-amps and the geophones and how that's all ---

A. Yeah.

Q. --- set up?

A. What we would do is we have a large base antenna that we would put onto the seismic truck. Well, we actually have two. One is for

communications. We have radio communications back to the seismic truck. And one is for the seismic equipment --- the telemetry equipment that we would set up out in the field. And what we do is we take pre-amps and we put the pre-amps on the surface and we plug seven geophones into them. And the geophones will detect a seismic vibration from underground. And what basically it is, it's a little magnet inside there with a spring-loaded little spring on it. And it bounces, and that signal, whenever someone is pounding, is amplified --- is set into the pre-amp and then that is then sent back to the seismic truck, where we can actually look at different areas above the mine.

And we would set them up hoping that we can get an area directly above the mine. And that's why we do surveys. We have a survey team surveying points above the mine

at that time also. And we would set them out in strategic locations so that if someone is underground in that area we can pick that signal up with them pounding.

Q. You mentioned a double-diamond array.

A. Yes.

Q. Is that an array of the pre-amps or of the geophones themselves?

A. Well, the pre-amps and the geophones pretty much --- okay. The pre-amps and the geophones are the same. Each array has a pre-amp and seven geophones and an antenna and a battery case.

Q. Okay.

A. And then that is one actually station, okay?

Q. Okay.

A. And then you would have seven of those set up in a double-diamond shape.

Q. Okay.

MR. GATES:

Why the doubled diamond? What's the significance of that?

A. What we want to try and do is get at least three signals that --- if someone is underground, if we can pick up three signals, then we can run a program in the seismic truck to locate. We're limited to depth, which we were on that limit. But at least if we can get three, then we can actually use a program and locate pretty close to like a 50-foot radius of where that person might be pounding.

We were at our limits at Crandall Canyon, but we can still detect a signal. And we're not sure exactly how deep we can go, but we have in the past had signals at 2,000 feet.

BY MR. MORLEY:

Q. You've tested it at 2,000 feet?

A. Yes. And we have had signals

that were picked up at 2,000 feet. We like to say 1,500 foot is when we can try to angulate, locate.

MR. GATES:

Where was that at? Where would that have been at 2,000 feet?

A. I'm not real sure. We did a lot of --- in the old days, we did a lot of field testing. We went to different areas of the country and tested the equipment quite a bit.

MR. GATES:

Do you still do that?

A. Not enough, no. Not like we used to. We used to have a team of guys that were pretty much dedicated just to that, that whole system. It kind of changed.

BY MR. MORLEY:

Q. When was that system put together?

A. In the early '70s. That's when the system was put together. And then we --- it had different

generations of upgrades. It's due for an upgrade, in my opinion.

Q. This double-diamond array, how big of an area did that encompass?

A. I'm not sure. I'm not sure. I'm not real sure exactly.

Q. So you don't know how large of an area underground that affected?

A. I'm thinking it was approximately like a 1,500 foot section. I think that might be --- it might be a lot more than that, but it wouldn't be less.

Q. How long does it usually take to position all the units and the arrays to get it to operate?

A. That's a good question.

Q. How many people?

A. Well, that's another --- that's a good point. Depending on the situation, sometimes you just can't get things in an area where you can communicate. You have to keep moving things around. We were pretty lucky out there. We had set up the

arrays in different areas, and we were able to communicate back to the truck pretty quick. Some areas you just have to keep picking them up and moving them. Sometimes you have to direct your antennas and things, but we were pretty much overlooking --- that whole mountain we were overlooking the seismic truck. I was surprised that some of them when they communicated, but it was really working out well.

BY MR. GATES:

Q. Were you part of a crew then that was assigned to set the system up?

A. Yes.

Q. When you said we, that was you and you had some folks working ---?

A. Well, we --- yeah. In the beginning I had stayed back and made sure that the seismic system was set up correctly, powering it up. We have to get the generators up and running --- well, one generator up

and running and turn on all the electronics. And then we also have to look at the chart recordings to see if we are getting signals. And then we look at the signal strength. We have meters that we look at to make sure everything is up and running. Once that part of it was okay, then I would go out and help set up in the field the arrays.

Q. Who was doing --- you said you would help. Were there other people who had already started that?

A. Yes. I really don't know how many people because I was busy with that part of the setup down there. I know Virgil was involved. I think we had Shawn Stage at one point helping. Tom Barkand was really a big help. I mean, Tom kind of fell into this thing, but it was excellent to have him because he knew how to read the chart recordings. I mean, you know, he has that background. And to have an electrical guy in the truck and

helping you is just --- it's a bonus. It was a big bonus because he fit right in.

BY MR. MORLEY:

Q. How many people are trained in setting up these arrays?

A. At one time --- when I first came back to MSHA, they had gone out and set up like state grants, and we would have rescue team people from different places and we would train them. It was like a --- and you know how that goes. If you don't keep up on something like that, then it just goes away. As far as our guys, there's not a whole lot of people that are trained actually to go out. Setting them out in the field and just hauling them out there is a big part of the job. And if you can get people to carry them up on the mountain and show them one time how to plug them, it's helpful. Even if they don't plug them in, if you go down and finish the rest of it

because you plugged them in wrong and have problems, but it's pretty basic, that part of it, out in the field, unless you have a problem, then you got to just play with it.

As far as trained --- Virgil has been trained. He's been out with us quite a few times.

Q. So who was up on the mountain leading that part of it?

A. I think Virgil and Tom Barkand. And at that point Tom was pretty new at setting them up, but it's pretty straightforward. He's seen enough to know how to put them up out there. And all it was, was go to a certain point, put out a tripod, put out your antenna, put out a battery, and then you take and you dig a little hole for each geophone and you cover them up. It's basic stuff. And then turn it on. And if we get a communications between the truck and the seismic system, then we're good, then we go on.

MR. GATES:

The locations had already been decided upon when you got up on the mountain?

A. Yes. Yes. That was something that was --- actually, I believe that we had survey crews that were on site even putting stakes in before we got there. That part of it I think was --- and I think that's the best way to do it. If something is happening, they know their mine. Tell somebody to do that. So that's one step we don't have to fool with, get it out of the way before we even get there.

BY MR. MORLEY:

Q. Here's a map that Tom Barkand gave us. Is this where the geophone arrays are located at?

A. Yes.

MR. MORLEY:

We can call this Gibson Exhibit One.

(Gibson Exhibit One marked for

identification.)

A. Yes, that's ---.

BY MR. MORLEY:

Q. Is this where you initially set them up at? You mentioned earlier that you had moved them during the operation. Is my question clear?

A. Well, there is some on here that we had actually moved. This is initially and then there's also some that we moved in different points.

Q. Okay. So out of these seven, which one remained intact? Because we can't record your pointing.

A. Oh, okay.

Q. You need to verbalize.

A. We moved some things around. I'm not sure exactly how many times we moved, okay, but number one I think stayed pretty much intact. Number two was intact. Number --- pre-amp number five stayed intact. We moved the rest of them around accordingly.

Actually, pre-amp number one, I did have it moved again in the end. Basically we were trying to cover certain areas of the mine. As we thought --- we were signaling in different areas, and as we thought that someone might be in those areas, we would take one that might not be a significant pre-amp and move it closer to an area where we were doing testing.

Q. How did that affect your double-diamond layout?

A. Some of the double-diamond layouts would not have been exact at that point, but at a certain point we were just at that point trying to possibly locate a signal.

MR. MORLEY:

Let's take a short break.

SHORT BREAK TAKEN

BY MR. MORLEY:

Q. John, we were talking about the layout of the geophones on this

Exhibit One. I believe you said this was the initial layout, or do you believe that that was the initial layout at that time?

MR. GATES:

Maybe I'll just ask, do you have any --- do you or did anybody in your group keep --- have a map of the initial setup?

A. I believe that this map here was what we were going by in the truck.

MR. MORLEY:

And this will be Gibson Exhibit Two, which was ---

A. I believe ---.

MR. MORLEY:

--- from Tom Barkand also.

(Gibson Exhibit Two marked for identification.)

BY MR. MORLEY:

Q. Who decides where the

geophones go, where the arrays go?
A. Jeff Kravitz pretty much worked on that.
Q. So you don't make that call?
A. No. I was just basically out in the field while they were --- whoever talked with people at the mine would have worked with Jeff to set that up.
Q. And why do they move them during the operation?
A. Well, if we are testing in a certain area and we feel that we're too far out of that area or if we want to just get a better feel for that particular area, where we're doing the testing, then we would want to move it closer to get a detection. If we got a detection, then that would make a setup --- a double-diamond shape differently, once we got a detection. If we didn't have a detection, we're just kind of like trying things or moving along. We may move in different

directions just to get that initial detection.

Q. So if I'm hearing you correctly, the double-diamond array is necessary to locate the location of any area, but the array is good for detecting a signal?

A. Yes. Yes. The double-diamond shape would be for locating. We would try to get a detection. And then if we did get a detection, then we would reset that double-diamond shape up to get a good signal and get it to locate ---.

Q. So was there ever a record kept that, say for instance on this day we moved this sensor from here to here, that you know of?

A. Just --- basically just remarking things on the map. There was no real good record that I know of.

Q. So you couldn't say where any geophone was on any particular day, where any array was on any day?

A. Not right offhand.

MR. GATES:

Did it move with each bore hole, John? As each bore hole would get ready to go in, would the arrays move in relation to the location of the particular bore holes?

A. Yes. We did do that. As they would break through with a bore hole, we would move things. Like if we had an array that we knew was way far away from that area, ---

BY MR. MORLEY:

Q. Okay.

A. --- then we would bring it in closer to where we were working in that bore hole area so that if there was something to be detected, it would help us.

MR. GATES:

So that's what dictated the location of the arrays then was essentially the location of the bore hole ---

A. Yes.

MR. GATES:

--- that was being drilled?

A. Yes.

BY MR. MORLEY:

Q. Was the system tested during this operation? Did anybody try and like pound on the roof underground?

A. Not underground. But we can do a basic test with each ---. What we do, when we set up the arrays, we would go and we would plug them all in and have a person on the surface get so far away from the array because if you're too close, you'll saturate. These geophones are pretty sensitive.

Q. Okay.

A. And so you have to step back away from the array and then just --- what I like to see, and this is my personal --- I'll ask them by radio to give us the test and you step back and give us ten stomps with your foot

lightly. If you hit too hard, you'll saturate it, it will go away. You know what I mean? It will just be noise. So you step back and you pound with your foot, basic stomps with your foot, ten of them. And then you can actually watch them on a chart recorder and you'll see the signals. And it will be from that station.

Q. Do you do that for each array?

A. Yes.

Q. And if you change batteries --- the batteries will last two or three days. So if you go change batteries, it's common practice to do that, unless there's nobody in the truck, and then we would go back and ---. Well, you can look at the --- anything around there you'll see noise. And if somebody is walking, you can tell someone walking if you look at it long enough. And sometimes you stare at those things. You can tell walking. You can tell

something fell --- like your antenna fell over and you're not getting a signal, you know. We were lucky enough to have a four-wheeler we could haul up there. And it was a two --- sometimes a two-hour drive just to go check an array.

Q. And where was your center of operations? Where was the truck?

A. It was actually in a place called --- it was set up initially in Joe's Valley. And then it was Indian --- I think it was on my timeline. Indian Campgrounds or something like that.

Q. Okay.

A. I'm pretty sure it was. Indian Creek Campground, that's what it is.

Q. So you set up a --- who operated it from the truck?

A. Myself, Jeff Kravitz and Tom Barkand at different intervals. Pretty much what we --- what we did is had it set up in the morning, and

sometimes we record when we're out doing other things and go back and look at it. Other times, if we were doing significant things at bore holes, we would have someone in there and we would watch the chart recordings and then --- in the beginning we basically just sat there and watched it, you know, make sure that anything --- if we can get anything. Then after it started to stretch on, then we would try and do some recording.

And then sometimes we would ---- actually ran paper, constant paper. You saw some of the stacks of paper that we had. And other times we would do recordings. And then we would go back the next chance we got, go through the recordings, and then if we didn't see anything significant, we would basically just keep a paper recording and then go on.

Q. How long did the system

operate once you got set up?
A. Constant. From August --- say, August 7th until the end.
Q. Until the --- I think you left on the third?
A. Yeah. September the 2nd, something like that, yeah.
Q. Okay. Do you have to establish quiet times to listen?
A. Yeah. That's always a difficult thing. When we try to tell people to be quiet, they think that quiet is talk. Well, you pretty much got to --- and it's hard because even us trying to tell somebody, make sure those people are quiet, and I'll be down in the truck and I'll say, well, there's somebody walking over near array number four. And they'll say, wait a minute. Yeah, there's a guy down over the hill walking. I mean, it's just hard. It's hard to ---.
Q. It's that sensitive?
A. Yeah. Oh, yeah. You'll see somebody walking far --- pretty far

away from it.
Q. Can you hear anything --- do you have a chance of detecting anybody during nonquiet times, when they're drilling or driving trucks around?
A. Yeah. It just all depends. If they're working over here above an area and there's a lot of noise, we'll still have other areas of the mine --- or other arrays that are fine. Sometimes if they're really banging away in one place, it's going to wipe you out. You just pretty much write that one off while they're working. But if they're over in this area, you can still monitor different arrays.
Q. How long would the quiet time be?
A. It differed. As long as we needed it. You know, we would set up and if someone was up --- we try to get people up in that area to keep it quiet and we'd do our testing, but it

will differ.
Q. How many times did you do that?
A. Pretty much any time that --- well, what we did is whenever they broke through with a bore hole, we would do testing. I really can't say how many times, I'm not sure.
MR. GATES:
Did the quiet time also apply to activities underground?
A. No.
BY MR. MORLEY:
Q. Could you hear the mining or loading material?
A. No. We were far enough away from that area where they were loading that we --- at times you see the noise, you don't know what that noise is, in certain arrays, but I don't think that was really affecting us, where we were set up.
Q. Before we go on, some other questions back on some previous

things. When you had the seismic truck flown into the site, what else was flown and what was driven?

A. As far as the seismic system or everything?

Q. Your MEU equipment.

A. Oh, ME ---?

Q. As far as you know, everything.

A. Okay. Well, I'll start out with what was flown.

Q. Okay.

A. The seismic truck, the generator truck, we call it the auxiliary truck.

Q. And that operates with the seismic truck?

A. Yes.

Q. Okay.

A. That's what powers us up. And then we had a contractor drive our supply trailer out. And that pretty much has all of our spare parts, battery chargers, any of the other equipment that might be needed as far

as the seismic system goes. Plus there's other equipment in there, radio equipment and things. And it has a workshop in there so you can actually fix things if it's broke, you know. Things do happen out there. You're always working on something. That's all the equipment that --- the seismic system.

Now, there was other equipment, ventilation brought equipment. Virgil brought equipment. Well, actually, initially, Virgil flew out. He was in Pittsburgh at the time. I forgot about this. He flew out commercial. He took the mini-seismic system.

Q. Okay.

A. So that system was separated from us. And he and I think Scott Johnson used it underground.

Q. Okay. We'll get into that.

A. They had problems with things that happened. It got tore apart in transit.

Q. You said the system has been upgraded several times. Do you know when the last time it was upgraded was?

A. Yeah. That would have been about --- well, like a major upgrade. Little things --- they're always --- we're always doing little things. But the major upgrade was probably in about 1995, '96, something like that.

Q. How effective is the system? Is it --- is there something better out there or is it still pretty much ---?

A. It's sort of --- there's a lot of things that could be done to make it better and there's a lot of people that say that there's stuff that works better, but I haven't seen it. This system is a one-of-a-kind thing that was put together in the '70s, and I haven't seen anything better. There are small systems out there that you can detect a signal certain places, but you go out and you do a

field test on them and they don't work like ours. It's a one-of-a-kind thing. I have never seen anything that good.

Q. This system was built specifically for this task?

A. Yes. There's other systems out there that do other functions, but they aren't built specifically for the mining industry. And they work as far as seismic and things, but as far as I know, there's not a system out there that's been designed similar to this.

And with the pre-amps, they're old, they're put together --- they were put together in the '70s and they're still working, it's just amazing that, you know --- and it was done by Westinghouse Defense Center, so they designed all this stuff. They knew what worked and what didn't, and it's just amazing that they still do work and some of the equipment that we actually are still

using.
Q. Do you have --- are there any reports of the field testing that were done as far as to --- activities at different depths? Do you guys ever write reports about that?
A. Yes, there were. I don't know if there's anything like that available, but there was cabinets full of reports, I mean, just file cabinets filled with all that information, old stuff --- not electronic. It's all just typewritten stuff that started in the '70s. They did a report every time there was a field test, a big number of reports. And they would turn them over I guess to the government because they were under contract with the government at that point.
Q. Does the strata above the mine affect the sensitivity, effectiveness of depth?
A. Yes.
Q. And do you know about when?

A. Yeah. The speed of the seismic signals would differ depending on your strata and the voids. It will differ.

Q. As far as your detection ability?

A. It will differ. You need to know that. It's something that --- different parts of the country are different. These guys who are real good with seismic know that. You know, the strata, you know, what kind of things to look at. I don't know that off by heart, but there are ways of finding out and doing other types of tests to find out the speed that your seismic signal is going to travel through the earth, whether there are voids or a fill or water or different --- the signal will travel different.

Q. Who trained you on the seismic system?

A. Westinghouse. Westinghouse --- the Mine Emergency Operations

Team was where I learned it.
Q. Okay. You mentioned some attempts to signal the miners. How was that done, pounding, microphones, cameras, charges?
A. All that. We did explosives. We did pounding. There were cameras, microphones.
Q. Let's talk about the explosives. How were those charges designed? How do you know how much explosive to use?
A. I really don't know what they decided on, but it's --- I'm not sure exactly how they figure that, but there's a certain amount for a certain depth what they put into a charge.
Q. Who determined it for this case?
A. It wasn't me. I'm not sure.
Q. Okay.
A. It was probably Jeff Kravitz. He was involved in all that, and the command center. I'm not sure how

they figured it all out.
Q. All right. Do you know when they did that, when they drilled the holes or ---?
A. The holes were drilled right in the beginning and they were loaded. When we first got there, they surveyed in some points and they loaded them.
Q. Okay.
A. And they waited until we told them, you know, this is what --- we blocked off that area and put signs up, explosives or don't go into this point. But we didn't do the explosives until there was a --- until the time came to do that.
Q. Do you know when that was?
A. I believe I have that on my timeline somewhere here, approximately.
Q. So they drilled the holes and charged the holes early on and they sat loaded for days?
A. Yeah. I don't believe that

they --- I'm not sure how they --- what they actually did, but I don't believe whatever they do, they shunted them or whatever, to ---.

Q. And they dangered off the area?

A. Yeah.

Q. Okay. Do you guys keep like a log of the size of a charge or the time they were set off or anything? Are there any notes or records that are kept on those type of things?

A. We pretty much just wrote things down on the maps and on the chart recordings, significant things. We would just note some things on the chart recordings.

Q. Did you have any results from that, meaning after you set off the explosives?

A. Yes. There was chart recordings on there.

Q. I mean, any positive --- did you hear anything?

A. Not doing explosives, no.

Q. Not during those tests?
A. No.
MR. GATES:
Who made the call when to set the charge off?
A. The command center, I believe.
BY MR. MORLEY;
Q. Do you know why they didn't set them off earlier in the rescue attempt?
A. No, not for sure. It has a lot to do with, you know, stopping surface work. And sometimes when you're drilling holes and doing surface work, that's important, too. And you know, that sometimes will wipe us out. So it might have been that type of a situation where --- I know at QueCreek that was the big thing. They were not stopping the drilling, and so we didn't put off any explosives or anything.
There may be --- if there was some money thrown into the system, to be able to filter things like that

out. But at this point, it doesn't do that. That would be a nice feature, to be able to filter out certain levels of surface noise and then be able to know the difference. Those kind of things can be done. It's just a matter of money.

Q. Are you aware that the University of Utah had seismic equipment installed at the site?

A. Yes.

Q. And was there any interaction between MSHA's seismic people and U of U seismic people?

A. I believe that there was some interaction at the command center but not personally with me. I talked to some of the people from the National Forest Service that one fellow was involved with seismic, but we didn't --- I'm not sure where the interaction actually was.

Q. You don't know the extent of that interaction?

A. No. No. I know they did have

meetings. I'm not sure what came from that.

Q. Did you let them know when the shots were set off?

A. Did we let them know? I'm not sure. That's a good question.

Q. Was there any other seismic equipment deployed that you know of?

A. Not that I know of. There might ---.

Q. By you or by anyone else?

A. Not that I know of. There was equipment in the area, but I don't know to what extent that equipment was.

Q. Okay. Earlier you had mentioned that during the testing that was done with the bore holes, after the third bore hole had penetrated the mine, it was reported that some --- it was reported some type of seismic signal was heard. Can you describe what was detected and what it was believed to be and who interpreted it?

A. What it was, was a signal that actually --- it was strange, but it was a signal that we detected that went on for approximately five minutes that I could not explain. It was almost too perfect for someone to pound, especially if they were underground that deep. It was just --- it would had to have been a piece of equipment or something. And I couldn't say what it was.

We did have one array that was very sensitive that could have gone into an oscillation, where it just kept going. I've never seen one go that long. It also --- we thought, well, maybe it was an echoing of something underground. I didn't --- I couldn't explain it. But for five minutes it wasn't --- it was almost like the intervals of it were just too perfect, you know what I mean? When you're underground, smacking something, you're not going to go for five minutes. I know. I did it. I

mean, you hit ten times, you're tired. After a few tries, you --- it would have had to have been --- I really can't explain it.

Q. So what was the final conclusion in regards to that?

A. Probably like a reverberation or some kind of an oscillation that --- I have seen these arrays go into an oscillation-type thing, but I've never seen it to that extent. It was just different. It was a signal that just kept on going. It could have been an oscillation or a reverberation that kept echoing.

Q. Would you be the one to interpret that? I mean, are you the most experienced at interpreting these signals?

A. No.

Q. Who ---?

A. That would have been Jeff.

MR. GATES:

When you said you thought it could have been

some type of equipment, was that some type of equipment on the surface ---

A. It could have ---.

MR. GATES:

--- or possibly some type of equipment underground?

A. I thought surface because it was just almost too strong of a signal to be way underground. I would have thought that it would have --- and this is just my opinion. I would have thought that it would have been a smaller signal. This was a real strong signal. But if it was --- it was one we --- I think it could have been like a ringing that kept echoing. I think that was when we hit the one drill steel area. And it just --- I couldn't explain it. I don't know how an echo could bounce like that, but it was really a different type of thing. It just kept coming back, you know, for almost like five minutes long.

BY MR. MORLEY:
Q. What's your interpretation? Do you think it ---?
A. I think it was some type of a oscillation, some type of echoing and some type of surface-type ---.
Q. Not an actual signal from the miners?
A. No, I don't think so.
MR. GATES:
Could you hear a bolt hole --- roof bolt hole being drilled from underground?
A. I would imagine you could. I don't know if you could distinguish what it was on seismic. If someone was pounding on it, you could --- you know, if --- you could distinguish that. If someone was actually pounding with something?
BY MR. MORLEY:
Q. But continued for five minutes, the signal?
A. It would have to be so perfectly done, it would ---.

Q. You're saying it continued for five minutes?
A. Yeah. It was like five minutes long.
Q. Okay.
MR. GATES:
Were you able to in some way determine the location of the noise?
A. We actually thought it was close to bore hole number four, I believe. And I'm not sure if it was bore hole number four or pre-amp number four. I think it was pre-amp number four at that time, where we were stationed. It was, it was pre-amp number four.
BY MR. MORLEY:
Q. Was that information used in any decision making?
A. Yes.
Q. What was that?
A. We had actually relocated a couple of arrays in that area and we did some more testing. And the

command center, once we saw this, they were very interested in that information. And they actually sent a helicopter over to pick it up and took Jeff with them, who went through it all with them and explained things. And I'm not sure what came of all the meetings that they had there with that.

MR. GATES:

Did that not factor into the location of the number four bore hole?

A. Yes. I believe it did, yes. Yes, it did. It did.

BY MR. MORLEY:

Q. Did you ever detect another signal of this type during the operation? Was this a one-time occurrence?

A. Nothing like that, not that significant where you could say, yeah, that's the same thing. It was just not --- it was nothing like that.

Q. Getting back about how you were attempting to signal the miners, you talked about setting off explosives and listening. What other signals were made and how did --- were they all in conjunction with the drilling operation? Can you just run me through what was done in that?

A. Could you repeat that?

Q. Like the pounding, microphones, cameras, how did that --- what did you do and what other attempts were made to signal underground?

A. What other attempts that we tried to ---? Well, we tried the cameras. We tried the pounding. We would holler into certain bore holes, you know, to pound. We would monitor seismic as they would holler. You know, they had a microphone and they sent that down into the bore hole.

Q. Explain a little bit about that.

A. Okay. We used microphone ---

bore-hole microphones where we could send a communication probe down into the bore hole ---

Q. Okay.

A. --- and have someone on the surface speak into the --- at the bottom of the hole to pound.

Q. What did that consist of? Was there like a speaker on it or ---?

A. Yeah, there's a reel. And on the surface there's a microphone and then there's a speaker on the bottom of it.

Q. Okay.

A. A speaker and a microphone on the bottom so they could actually hear and talk if there was someone at the bottom.

Q. Okay. They put that down after the drill steel was pulled out or ---?

A. It differed, I think. Most of the time, yeah, after the drill steel was pulled out or at least, you know, pulled away to where you could send

something into the hole.
Q. You wouldn't put that down the drill steel?
A. Well, yeah, you could. I'm not sure exactly. At some intervals --- I wasn't always on those sites, so I'm not sure exactly. I may have been in the seismic truck, so I'm not sure exactly if they pulled out or exactly what they did. If they had an opening and they could put it in, they would just put it in. They might just step aside and put it down in the hole.
Q. So you were not at the bore holes while they were doing ---?
A. Not all of them. I was at a couple.
Q. What did they do in those cases?
A. I believe that they had pulled the drill steel out and --- the one that I can remember distinctly, we sent the probe down in. And as we were getting ready to do a test, we

had a bump. And I was sitting on the deck and I could feel it, and the whole truck shook. It was a bad bump, it must have been. And they said that was typical. I was surprised. I stepped aside, away from the deck, and then we actually did our testing. You know, we hollered into the mine to pound. And at that point we were recording with the seismic truck.

Q. Okay.

A. And we would go back and check it and make sure that there was no signals.

Q. So even though there was nobody at the truck, you were continuously recording?

A. Constantly, yes. Whether or not we were recording with paper or just constant recording.

Q. What would the other method be?

A. Well, we can put it to a hard drive, and then we'd have to ---.

Q. A digital?
A. Yeah. And then we would have to go back and look at that. And then after a certain amount of time, they would look through them and they would take samples and do a hard copy. And then we would go back and clean the hard drive and start over. That's kind of ---.
Q. Were you there for any of the camera surveys?
A. Yes. I was there for one of the very first ones because they had a problem with the truck, and Jeff had asked me to come up and troubleshoot it. And I was able to go out and help them out. They had a problem. They couldn't get it to work, and I was able to help fix that.
Q. And just like the microphone, they pulled the drill steel out and then loaded a camera in?
A. Yes. They pulled the drill steel out, lowered a camera down in.

There were some really good shots. You could see pretty good in some of the areas. You could also see bad stuff, too, if there was no --- just rubble.

Q. Did they use MSHA's camera or a contractor or ---?

A. It was a contractor. It was called Substrata --- there was another guy there, too. I'm not sure what his name is. This guy was out of Tennessee, I believe.

Q. Okay. Do you know any more about the cameras that you could tell us?

A. They worked pretty good. I don't believe they were intrinsically safe or anything, but I'm not sure how that went.

MR. GATES:

Was there any set protocol, John, that you would follow as each bore hole went in? The drillers would let us know when they would have been

exiting of the mine, we'll convene at the drill rig, the hole will go in, we'll bang or listen, then we'll do microphones, then we'll do camera? Was there any ---?

A. Pretty much that's how it went on almost every hole that was put through. We would get a ballpark on when they were going to break through and we would make sure that we were on site. Sometimes it would be --- you know, in certain intervals we were almost constantly on the run. But we wanted to make sure that if there was anything significant that we could see it. And so we were trying to --- either we would be in the seismic truck and someone else would be relaying to us ---. We had a satellite phone set up in there. And they would --- or we could also use hand-helds at certain areas. And we would pretty much keep in communications with the site and do

the monitoring, whether we were at the site or in the seismic truck. And sometimes we would split up and ---.

BY MR. MORLEY:

Q. Did you establish the quiet times each time a bore hole punched through?

A. Yes.

Q. And you went through the banging ---

A. Yes.

Q. --- and the ---?

A. We would go through the banging and the microphones. And pretty much that's how it was done almost the whole ---.

Q. Was there a formal procedure or just ---?

A. No. We'd get a call and that's what would be decided. Either John Urosek, Jeff Kravitz or somebody would call and let us know what we were --- when things were going to happen. Sometimes they'd call you at

the hotel and say they're quicker and get out here.

MR. GATES:

But there wasn't anything ever put on the paper then this is how we will react when a bore hole penetrates the mine?

A. Not that I know of. There may have been something set up in the command center in writing, but I --- very rarely did we go back to the command center. We would go in there and it --- every couple days we had like water. They had water there. We'd take some water out to the site.

BY MR. MORLEY:

Q. Nobody communicated a formal plan to you?

A. No.

MR. GATES:

I mean, you were the guys who were doing it, so you would expect if there was one you would have had it.

A. Yeah.

BY MR. MORLEY:

Q. Did you have a role in doing any of the planning for the drilling of the bore holes?

A. No.

MR. MORLEY:

Let's take a short break

SHORT BREAK TAKEN

BY MR. MORLEY:

Q. John, you had mentioned that while you were on the surface you felt a bump on the surface. Was the seismic equipment --- was your equipment able to detect that as bumps?

A. Yes. When we went back and looked at that recording I believe we did see noise.

Q. Okay. Is there a standard procedure for setting up and using seismic equipment in a mine emergency or is every one different?

A. Every one is different. Every

one has been different.

BY MR. GATES:

Q. Let's bring you back to the previous question where you said you were able to detect something. Something did show up when you felt that particular bounce. You went back and looked, I guess, to see if anything showed up.

A. Yeah. I'm trying to think back. I believe we saw like a spike in a couple different channels.

Q. Did you have any communication with the folks underground as to when any type of bounces may have been occurring ---

A. No.

Q. --- from the 6th through the 16th?

A. No.

Q. Did you know they were occurring?

A. Yes. We had looked at what we considered bumps. In the beginning on our recordings a bump would be

something that we would see in pretty much all of our arrays, and it would just be a spike and we would look at that. But we didn't have any correlation between the guys underground and us. I'm not sure if it was just because of the distance away from where they were compared to where we were thinking that --- we were searching.

Q. When you saw these bounces, I mean, is that what they --- did you pick up the one that occurred on the 16th, when the accident occurred underground?

A. I don't think we did. I don't think we --- I can't say for sure.

BY MR. MORLEY:

Q. Does your system pick up from the side or is it just the vertical?

A. It's pretty much vertical. So where we're set up, you're pretty much looking at a vertical area above the mine. From where we're at, we're looking down. The signal would be

pretty much above us, above the miners is what we're trying to do.

Q. Okay. I don't know if we had talked about the other seismic system, the one that Virgil brought.

A. Yeah.

Q. Can you describe that system?

A. It's a small, four-channel --- we call it our mini seismic --- or actually I think Westinghouse called it the Survivor Detection System. And it's pretty much similar. It has some filtering capabilities, and it has four channels. And we can detect a signal vertically --- pretty much vertically, that's because of the geophones are set up that way, at approximately a thousand feet in depth.

Q. Was that system used?

A. They took it underground. I believe Virgil said that it got tore apart in transit. And, I guess, --- what is it, TSA took it apart and they broke stuff, so I had to fix it.

Q. Okay. If it detects vertically, how would you use it underground?

A. Well, if you set it up in an area and they pound, you can still pick up a signal a ways from it. I'm not sure how far, you know, if they were on the same level, that they would pick up a signal, but you could still pick up something. It was just a shot in the dark. I think they took it in there and tried it. Say they went to a blocked area and they put them up and they were a hundred feet over here, you would have gotten a signal, maybe.

Q. Did you ever travel underground during the operation?

A. No.

Q. Do you know anything more about Virgil's attempt to use the mini seismic?

A. Not really. I think he did tell me that they had the headset on. They could actually hear different

signals, but that was as far as I know.
Q. Okay. I asked you about if you had a role in the planning of bore holes. Do you know who made the decisions on the bore holes?
A. No. No, I don't.
Q. Or when it was made to decide to drill the bore holes?
A. Any of them, no.
Q. Do you know what size bore holes were drilled?
A. I believe --- not for sure, no. I know there was a two-inch and I thought a six, but I'm not sure.
Q. Did anyone keep a log of all the drilling activities?
A. Not that I know of. There could have been something in the command center. I'm not sure.
Q. We talked about the signaling that was done after the bore hole had broke through into the mine. Do you know how they detected the amount of void in the drill hole?

A. No.
Q. What about air sampling at the bore holes, did you have any problem with that? Do you know what they did?
A. I knew they were sampling, but I didn't get involved in that, other than maybe helping with gas or something, you know, whenever something --- just supporting the effort, but I didn't get involved too much with it. I didn't take samples.
Q. Were you involved with the decision to introduce air into the bore holes?
A. No.
Q. Do you know how that was done?
A. No.
Q. Let's talk about the robot.
A. Okay.
Q. Were you involved in that decision or the planning for the robot?
A. I helped. I wasn't involved in the planning of it. I helped.

Q. Whose idea was it?
A. I don't know. I know Jeff was involved with it, but I don't know who actually had the idea to do it.
Q. And can you describe what kind of robot it was and where it came from? How was it used, as far as you know?
A. It was like a sewer robot. It was one of them ones that go underground in a sewer. It just had --- it was like a --- it was shaped kind of like that.
Q. Designed to fit in the pipe?
A. Yeah. It was what they could find at the time. And they rigged it up. They had to do some rigging to make it meet a reel, and so there was a pipe that they put all their connections in, and that was the biggest part of the connection inside this piece of pipe. And then they interconnected the robot to a reel with this type of wire. I'm going to say it was fiberoptic and some kind

of steel cable. I'm not a hundred percent sure on that. And then that's how they were able to connect them together. There was two different groups, two different companies.

Q. Okay. Do you know what they were?

A. Can't recall.

Q. Okay.

A. One was from Canada. I have to think real hard. I don't remember the name.

Q. So they had the robot, and coming off the robot was a cable?

A. Yes.

Q. And that went to what?

A. And then they tied it to a steel cable, and it was on a big reel. And they brought in like a rental truck with this reel set up on it.

Q. Okay.

A. And then we were able to get it to work together. After they

played around with the wiring and different types of problems that they ran into, they were able to get it to work. And it pretty much just had tracks on it and a camera, basically.

Q. Do you have any pictures of it?

A. I'll have to look through. I don't recall. I know I took some pictures, but I don't recall ---.

MR. GATES:

Was there anybody from your group or from MSHA that was, I guess, more involved with the robot than the logistics of getting it ready to go in the hole and ---?

A. Jeff Kravitz was involved with that.

MR. GATES:

Jeff?

A. Yeah, he pretty much worked the whole thing. He was involved with getting the logistics and working on trying to get the whole

thing put together.

BY MR. MORLEY:

Q. But the robot never did get into the mine?

A. Yes.

Q. It did?

A. Oh, yeah. It went into the bore hole and got stuck, and then they were able --- it was in a mud hole, and they were able to back it up and get it back out, but it didn't really travel. It went into a bore hole and went a couple feet. That's as far as it would go.

Q. Okay. Well, I'm confused. Which bore hole was that?

A. Four. Number four bore hole.

Q. So it actually made it down the four bore hole into the mine?

A. Yeah. They tried to go --- they were planning on going in, I think --- I'm not a hundred percent sure on this, but I think bore hole number seven, they were hoping that that was going to go into some kind

of like dinner hole, okay? And once they broke through that bore hole, they were planning on putting a robot in there to go in there. Well, there was no void. It was --- there wasn't much in that area, so they couldn't get the bore hole --- or the robot in that one.

Q. Okay.

A. So then they decided, well, we're going to try back over in bore hole number four. I think that was the number four bore hole. And that was the one where they got into the bottom of it. You could see there was a definite void in that area, but the robot got into an area and got stuck. And they backed it back out, and that was as far as it could go.

Q. So then first they tried the number three hole, and it was blocked at the bottom?

A. I believe so. I don't think it got to the bottom. I think that part, it went so far down and that

was the end of that.
Q. Okay. Then they went to the number four hole.
A. They went to number seven.
Q. Okay.
A. We knew number four was open because they put a camera down there, but we didn't put the robot down there at that point. Then I think they were going to try and go with the robot into seven, and it was blocked so they didn't try it. So then they went back to four and tried it in there. That was the only one I think we put the robot in, I believe.
Q. Was anything seen with the robot?
A. Yeah. They could see that it was mud and there was areas blocked off. And I think there was like --- they had like a mesh that was broken and it fell down, and I think that's kind of what --- it got hung up on that. And then they had to back it back out. And 50 feet from the top

of the bore hole is where that can --- the connector can --- got stuck. And that's where we tried to get the vacuum system in. We played with that for a long time, trying to get it out of there, because it was expensive. We wanted to try and get it out.

Q. How effective was it? Did you get any pictures that you did not get with the camera?

A. No. It was just the same as the camera. It might have even been better with the camera because they was able to do some different --- it was a good picture, but it wasn't any different.

Q. Do you know of any consideration that was given to using the escape capsule as an option for the rescue?

A. Could you say that again?

Q. Do you know if any consideration was given to using the escape capsule as a rescue option?

A. I know that we had it there. We had it FedExed to us.
Q. When did it arrive?
A. I have that. To the best of my recollection, it would have been August the 11th.
Q. Was that at the mine site?
A. Actually, it came in FedEx, and we picked it up at a FedEx drop point. And we had it in the back of a pickup truck, a ventilation pickup truck. And the decision was made to get it out of there because they didn't want to have it in the --- I don't know, maybe the press. I don't know. They wanted to put it somewhere secure.
Q. Okay.
A. So we met them --- I think it was Kim Diederich and Jeff Waggett, I believe. They had it in the pickup truck and they brought it out to the site. And we took them a back way to keep off the beaten path because we didn't want the media involved with

the capsule. And we put it into the supply trailer.
Q. Where was that?
A. That was where our seismic system was set up.
Q. Over by ---?
A. Indian Creek Campground.
Q. Okay. That's where the capsule was.
A. And we just set it in there and had it locked up. Out of sight, out of mind. And if we needed it, it was there. That was --- but as far as ever setting it up to use, we didn't hear anything --- any plans to do that.
Q. You said you communicated with the command center from the seismic truck and used a satellite phone?
A. Yes.
Q. How effective was that?
A. Great.
Q. Worked okay?
A. Yeah, it worked great. But it's the dumb one, the one we set up

in suitcases. We set them up and sent them out to the districts.

Q. Okay.

MR. MORLEY:

Let's go off the record just for a second.

SHORT BREAK TAKEN

BY MR. MORLEY:

Q. John, a question was raised. Underground they were experiencing a lot of bumps. And you had mentioned that the bump that you were aware of that you felt on the surface you saw a spike on the --- were you picking up a lot of events like that, similar to that, that you saw spikes or ---? Did you know there were bumps?

A. Not a hundred percent sure, no. We looked at spikes, and that's what we were saying was a bump. But we have no ---.

Q. Did you pick them up fairly regularly? I mean, were there a lot of them?

A. There were a lot of things

that looked like spikes, unexplained spikes.

Q. Okay. Do you have anything else that you'd like to add that may be relevant to the investigation?

A. Not that I can think of right now. We've covered quite a bit.

MR. MORLEY:

On behalf of MSHA, I want to thank you for appearing and answering questions today. Your cooperation is very important to the investigation as we work to determine the cause of the accident.

We ask that you not discuss your testimony with any person who may have already been interviewed or who may be interviewed in the future. This will ensure that we obtain everyone's independent recollection of events surrounding the

accident.

After questioning other witnesses, we may call you if we have any follow-up questions that we feel we need to ask you. If at any time you have any additional information regarding the accident that you would like to provide to us, please contact Richard Gates.

If you wish, you may now go back over any answer you have given during this interview and you may also make any statement that you would like to make at this time.

A. I really don't have none.

MR. MORLEY:

Okay. Again, I want to thank you for your cooperation.

* * * * * * * *

STATEMENT CONCLUDED AT 10:54 A.M.