

IN RE: CRANDALL CANYON
MINE INVESTIGATION INTERVIEWS

INTERVIEW
OF
JOE ZELANKO

INTERVIEWERS:
JOE PAVLOVICH, ERNEST TEASTER

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1 BY MR. PAVLOVICH:

2 Q. Go ahead you were talking about an outburst.

3 A. Outburst is something that you read about in literature and in Canada as well
4 where it's more driven by gas as opposed to straight energy. There's instances where
5 --- and we see it in salt mines down in Louisiana too, where there's pent up gas in a
6 localized area and it seems to spew out what ends up being pulverized coal or salt.
7 And once you mine close enough to it that the pressure inside will break out of that
8 shell, then the whole thing expels. And that's what we've tried to define as outbursts.
9 So there's a distinction between these things but they're all dynamic events.

10 Q. Okay. Can you tell us a little bit about your experience with bumps as far as
11 research, investigations, being in them?

12 A. Sure, yeah. I was principal investigator for a number of years on a project at
13 the Bureau of Mines. I worked in the ground and methane control group. We had a
14 project for quite a few years. I guess in the mid 80's there were several fatal accidents
15 that shined the spotlight on a need to do some work in this area, and at the time there
16 was work being done at Denver Research Center as well as Pittsburgh. The Denver
17 Research folks were concentrated more on seismicity and prediction along those lines.
18 We were more concentrating on engineering approaches.

19 We did some work with the folks at Island Creek. They suffered with some
20 bump problems at VP3 mine in particular. I didn't head up those projects. It was Al
21 Campoley (phonetic), who was the principal investigator at that time. Tony Onikeioni
22 (phonetic) was the supervisor of the group throughout. But I was involved peripherally
23 with that project, and we started to do some work --- while the work was ongoing, at
24 VP3 we started to do some work over in east Kentucky at the Arch 37 mine.

25 And that's really where I guess I had my first experience with bump prone

1 ground, was at Arch. It was a longwall operation that suffered through, I don't know,
2 half a dozen or so events that I can recall in its history. I suspect you're pretty familiar
3 with some of those. I was also aware of work that was done at C2 by George Caraben
4 (phonetic) and others because George was my supervisor.

5 But to stay on track, I guess, I had my first experience with bumps. We did
6 instrumentation of pillars at Arch 37 mine. We looked at the geology. There were
7 some good geologists there, like Mike Lincoln and others, and we tried to look at what
8 the causes, what factors were associated with it. In that case, it looked like it was
9 sandstone channels, a combination of sandstone channels and depth of cover. And
10 we tried to rectify the problem or mitigate the problem through pillar design and had
11 some success I believe.

12 They eventually through some assistance, I believe Vince Gavazo (phonetic)
13 came in from John T. Boyd. Well, at that time he wasn't with Boyd. But he came in
14 and assisted with some design and they successfully pulled that whole series of L
15 panels with few incidents. I guess there were a couple but not of the nature of the
16 ones they had back in '89 and '90. So that was the early experience was mostly there
17 in east Kentucky.

18 There was some involvement with the guys at the Denver Research Center.
19 Like I said, at that time those guys were handling everything in the west, but we
20 worked pretty closely with guys like Matt DeMarco and John Kahler (phonetic) and
21 others. So we were aware of what was going on in the west. A lot of that work
22 culminated in a workshop that we put on, on bumps. We did one in as I recall, we did
23 one in Price and one in Norton, Virginia. They were pretty well attended and ---.

24 Q. Do you remember what years those were?

25 A. I don't offhand but I have the proceedings downstairs. I can check at the

1 break.

2 Q. I'm just curious for my own information that was it anything recent within the
3 last ten years since you've been with tech support or was it while you were with the
4 Bureau?

5 A. It was definitely before.

6 Q. With the Bureau?

7 A. Yes.

8 Q. Okay.

9 A. So let's see, VP3, Arch 37, and like I say, I was aware of what was being done
10 in the west. I'd seen some bumped coal, not anything major, but at West Elk. I think
11 it was '92, I was out and saw some of that and more recently had no involvement with
12 bumps ---.

13 UNIDENTIFIED SPEAKER:

14 If you don't care, let's take a quick break and let me see if
15 these are working this morning because we got nothing yesterday.

16 A. That's good. I'll go get that proceedings and I'll tell you the date.

17 MR. PAVLOVICH:

18 Take a five-minute break.

19 BREAK TAKEN

20 BY MR.PAVLOVICH:

21 Q. Okay. You've explained your definitions for us and you also dealt a lot with
22 your experience in the east primarily, a lot of research and studies and evaluations,
23 recommendations on bumps in the eastern part of the states. How about in District 9?
24 Have you been out there much and worked much on bumps in the west?

25 A. Oh, let's see. We did a little bit of work a number of years ago at Floyd L.

1 Creek. They don't have a history of bad bumps but they've had some incidents,
2 mostly floor related. I think they refer to the smaller ones as floor poppers but a
3 couple years ago there was some concerns. They were getting under deeper cover,
4 and we went out and did some evaluations on that, looking at pillar designs. So that's
5 one instance. We've looked at just general ground conditions. We've done quite a bit
6 of work at western mines over the years but I'm having a hard time saying bump-
7 related things.

8 Q. Did you ever do any investigations of bumps in the west?

9 A. Yes, I did, at Tower Mine. There was a fatal several years ago. It was in
10 January I believe of maybe '05. Yes, that was Tower or Aberdeen Mine. Joe Cybulski
11 and I went out on the investigation. It was a young man that was killed near the head
12 gate, face bump.

13 Q. Okay. Is there a significant difference or any difference at all between the
14 types of bumps you have in the west as opposed to the east because of more sheer
15 cliffs or surface terrain or anything like that, that you're aware of, is that -- does that
16 make that area any more bump prone? Is it just the depth and the sandstone that
17 makes it more bump prone?

18 A. Well, the massive sandstones and things that they have that are escarpment
19 forming, those sheer faces that you see out there in Utah, are less likely to cave and
20 reconsolidate quickly over a single longwall panel.

21 Q. Less likely than they would, say, in the eastern mountains?

22 A. Well, we have some strong strata too and, in fact, that's what's associated
23 with bumps at the mines that we have --- the bumps out here too.

24 Q. Okay.

25 A. But I think there are probably some more notable units out there, for example

1 the Castle Gate sandstone is one that comes to mind in Utah. Those cliff forming type
2 strong sandstones are going to cantilever and generate more stress out over the gob
3 than the shale would and since there's a predominance of those types of rocks out
4 there I would say yes, that's maybe a bit different.

5 Q. Can you tell me a little bit about your training and your experience in using
6 ARMPS?

7 A. Yes. ARMPS was developed by Chris Mark while he worked at the Bureau of
8 Mines. I've looked at virtually every version that he ever put out. Beta tested some of
9 them. The algorithm that's in there is more or less an outgrowth of work that he did in
10 ALPS, which was an earlier program to look at longwall pillars stability. I've been
11 though training on it from Chris multiple times, and we've actually given that training a
12 number of times at the academy to our own people.

13 Q. Okay. How about LAMODEL?

14 A. LAMODEL was a program developed by Keith Heasley. Keith and I worked
15 together at the Bureau of Mines. We were actually office mates and Keith had an
16 opportunity to go get a doctorate degree at the Colorado School of Mines and that was
17 the subject of his doctorate. He worked with a guy named Miklos Salomon (phonetic)
18 and developed this laminated model.

19 One of the shortcomings of boundary element programs, predecessor
20 programs, like Mol Sim (phonetic) or B Saw (phonetic), were the inability of the rock
21 mass to deform the way we think rock masses deform in real life. It's bedded strata,
22 so it sort of makes sense that you wouldn't try to model a bedded strata with a model
23 that's a solid block. And so he did this formulation while he was at Colorado School of
24 Mines, and once again I've been through the training that he provided and probably
25 every version of it that he's come out with and again we've done that training for our

1 own people to limit ---- to a limited extent at specialist meetings back home.

2 Q. Would you feel that a lot of the districts, the coal districts, maybe don't have
3 the software, the computer availability, the whatever's needed to really do a lot of the
4 model work, is it more difficult?

5 A. Well, let me say it this way, the software's free. It's available on the internet.
6 You can download it. With our security systems on the computers, you needed an
7 administrators to install it. So I don't know how --- it's relatively available, I would say.
8 Having said that, it's a program that you need to have some familiarity with to use
9 efficiently. It takes time to build models.

10 Now years ago, we built the models in word processor where you typed it a
11 letter at a time. These preprocessors that are available today are much easier to use
12 than they were in the past. But it still takes a lot of time to code these things in and as
13 it is with any computer program, garbage in is garbage out. If you don't know what
14 you're putting in in the front end, you have to be concerned about interpreting the
15 results on the other end. That takes some familiarity to be able to do it and feel
16 confident in the result. And I don't know that there are many people in the field
17 offices, if any, that have had the opportunity to gain that familiarity. I think that's fair
18 to say.

19 Q. Okay. And mostly you would use these in kind of a specialized application. I
20 mean, you wouldn't do them in everyday roof control plan approvals or anything like
21 that?

22 A. No, I mean I think that's part of what our reason --- what we try to convey to
23 our roof control specialists in the training is, what kind of problems to look for where it
24 is appropriate and to recognize that hey, there's a program here that would address
25 this problem and that's what we're available to try to do, is to --- you know,

1 theoretically in tech support we have more time to look at those things than what I
2 perceive a person working in the field office would have to do.

3 Q. Have you used those programs to try to predict or, I guess, work with
4 eliminating or reducing the likelihood of bumps or bounces?

5 A. Yes, we have. I don't like to use the word prediction. We don't --- I don't think
6 prediction is something that we could ever do effectively and I'll elaborate on that later
7 on. I'm sure you're going to ask me some questions that I'll bring it up again. But
8 when we talk about prediction, I don't like to talk about temporal prediction. I don't
9 want to tell you when it's going to occur. But with a model, we can often predict where
10 something's likely to occur, whether it's a high stress condition due to multiple seam or
11 a high stress condition associated with overburden and retreat mining or something of
12 that nature. You can look at where the high stress is and where it's likely to occur. A
13 good example of that is we did some work again in District 7 with --- George Caraben
14 did quite a bit of work at C2. Well, subsequent to that, we had problems at Manalapan
15 and the property was sold from I forget to which Bennett to ---.

16 Q. Joe Bennett to Clyde Bennett maybe?

17 A. I think Joe has the property now. It's Cumberland 19 and that ---.

18 Q. Dwayne Bennett sold it to Joe?

19 A. That's exactly right. When Dwayne had it, it was Manalapan and they had
20 about three --- at least two bump incidences and perhaps three. And each time that
21 they had bumps, it was over isolated barriers in the Harlan scene. And there's a case
22 where you could do some modeling and see what the stress levels were and then try
23 to avoid situations where you would have that similar stress level.

24 In fact, we did very --- I can't say for sure how much modeling we actually did.
25 That was a situation where it was so complex and was going to take so much time

1 that we recommended that a company go to a consultant and have the modeling
2 done, which they did. They went to Dave Newman and he did some land model
3 modeling. You know, we're happy to do to the extent that we help the districts. We'll
4 try to do that modeling but this was a case where it was three or four seams involved
5 and the operator was changing plans, and it was just not something that we could get
6 involved in and stay on for months to see it through.

7 Q. Okay.

8 A. I rambled on that one, did that answer the question?

9 Q. Yes. When did you first become aware of the August 6th accident at Crandall
10 Canyon?

11 A. I guess I was notified about 8:30 on Monday August the 6th.

12 Q. Okay. And were you told then that it was a bump an outburst, some seismic
13 event or was it clear what it was that happened out there?

14 A. No, it wasn't clear and for that reason we didn't mobilize immediately. We
15 were told to sit tight because the initial word came in and said something about an
16 earthquake, and I said do you want us to prepare and the word came back and said
17 just sit tight for the time being and we'll see as we get more information. And it was
18 probably around noon, I'm guessing --- yeah, around noon I was told go ahead and
19 make some arrangements to travel out and by that time the earliest flight I could get
20 was 7:00 a.m. on August the 7th.

21 Q. Okay. So you flew out on August 7th at 7:00 a.m. and who did you fly with?

22 A. Mike Gauna.

23 Q. With Mike, okay. When did you arrive at the mine site?

24 A. We drove to the mine, and we got there around four o'clock. That's what I
25 recall.

1 Q. Okay. On the 7th?

2 A. Yes.

3 Q. Okay. So basically you flew out there to Salt Lake, I guess drove to Price,
4 went to the mine?

5 A. That's right.

6 Q. Okay. Who did you report to when you got there, Joe, do you remember?

7 A. Let's see. I think we stopped at the field office to get directions. We had
8 never been to this mine. In fact, I hadn't heard of Crandall Canyon prior to August the
9 6th. I had heard of Genwall from years ago, some Bureau of Mines guys that I knew
10 did work out there, but they didn't refer to it as Crandall Canyon. So it was new to me.
11 I didn't know how to get there. Mike and I stopped at the field office, got instructions
12 or directions, and we directly traveled out.

13 When we got there, we checked in at the command center, the Blue Goose,
14 and according to my notes we spoke with Bill Taylor. And as I recall, they indicated
15 that they'd been waiting for us and wanted us to go underground and take a look at the
16 situation. They gave us a quick overview. We asked for some maps, which took a
17 little bit of time to round up, and we asked for a quick overview of the escape ways
18 and you know the fundamental hazards training that we thought might be ---.

19 Q. Okay. So the overview they gave you was more of a hazard training for the
20 mine as opposed to here's what we know and here's the circumstances so far?

21 A. Well, initially it was a little bit of what you said the latter. It was ---.

22 Q. Can you kind of tell me what kind of briefing you --- I guess, were you briefed
23 on what happened and not the hazard training part, but briefed on what happened with
24 the accident? What kind of briefing did you get? Did you feel it was a clear, concise,
25 good briefing or was it like go in and tell us what you think, Joe?

1 A. You know, I honestly don't remember that part of it. I do know that I gained a
2 lot more later on. At some point in time, I got to sit down with Laine Adair, and Laine
3 laid out the entire ground control history and mining history of the property all the way
4 back to the original owners. And I didn't receive that information that first night. It was
5 more or less that --- as I recall, it was more or less we had this incident, you know, the
6 recovery started in these entries. But then we had another incident. We'd like you to
7 go in and look at the situation and see what you think. It was more like that.

8 Q. And who told you that, Bill Taylor --- Al Davis, Bill Taylor, Bob Cornett, do you
9 remember any of those people being there?

10 A. Well, according to my notes, we spoke with Bill Taylor and then we traveled
11 underground with Gary Jensen. I remember that part. I just don't remember the
12 meeting with Bill too much.

13 Q. Okay.

14 A. Traveled underground with Gary, I remember when we got up near the section
15 the first person we met was Pat Voyack (phonetic) and I think Dale Black was the first
16 miner that I spoke with there in the section. Then Gary and I and Mike made our way
17 up the # 1 entry looking at the conditions as we went. At that time, it was still pretty
18 active seismically. I mean it was popping and banging pretty good, and I know you've
19 heard a lot of descriptions of bumps and thumps and bounces and bangs and I'm like
20 everybody else. I know in my mind what I experienced, but it's hard to put words to it.
21 But it was pretty noisy about like you'd expect on an active pillar section in some
22 sandstone top. I mean, it was that kind of banging and popping but there was no
23 active mining going on.

24 Q. Right.

25 A. So we made our way up the # 1 entry. As I recall --- do you want me to go

1 into all this detail or no?

2 Q. Yeah. Why don't you tell us what you saw there, what your perceptions were?

3 A. Yeah. I mean, at that time you could see the damage on the ribs was an
4 indication to me ---.

5 Q. About where did you start to see that, Joe, do you remember?

6 A. It was 118.

7 Q. About 118?

8 A. Yeah, somewhere around 118 is where we started to see damage, between
9 118 and 119.

10 Q. Okay. Which would have been the crosscut where the shorter 80 foot center
11 pillars were as opposed to the 129 foot centers or something; right, there at that
12 crosscut, where the transition was made to the longer pillars?

13 A. If this map's right, then that's correct.

14 Q. We assume it's right.

15 A. Okay. Yeah. I don't have in my mind where it started and stopped.

16 Q. I'm just saying referencing on that map where you say, that's kind of a dividing
17 line there, I guess?

18 A. Uh-huh(yes). And that's about where the stress --- where the damage in the
19 ribs was set and I assumed that that was where a lot of the stress was sitting at the
20 time.

21 Q. Okay.

22 A. So we took our time. Like I say, it was making quite a bit of popping and
23 banging and we didn't explore up too far into # 1 initially. We might have gone to 119
24 or thereabouts. I'm not even sure about that.

25 Q. I tell you what, if you would, why don't you just take a marker and kind of from

1 where you started in that entry ---.

2 A. Mike took better notes.

3 Q. We wouldn't know that because don't have a taped interview of Mike.

4 MR. TEASTER:

5 I think he said you kept better notes.

6 A. Is that what he said?

7 BY MR. PAVLOVICH:

8 Q. No, Mike seemed to have pretty concise notes.

9 A. Yes, he did a good job. Yes. See Mike's notes say we walked out to 117 and
10 we must have been using this door here at 117 to make our way across and go in and
11 out.

12 Q. Okay. Well, just from the best of your recollection, why don't you just kind of
13 somewhere up in here retrace where you ---.

14 A. Sure. We parked back out here at --- I think it was right here at 109.

15 Q. Okay.

16 A. And that's --- I think there was a phone hanging either this crosscut or this one
17 and that's where we met Pat Voyack.

18 Q. That's not that important because we're not putting a map of travels in this
19 report anyway, but it just gives us some reference. And so did Pat Voyack go along
20 with you all?

21 A. No, he didn't. He was at the phone.

22 Q. Okay. And you and Gary Jensen and Mike ---?

23 A. Gary Jensen and Mike and I --- at the time, the only work that was being done
24 at the mine was they were fixing stoppings. Whenever they had the second event on
25 the 7th, it blew out some of the stoppings, and they were going back and putting those

1 back up.

2 Q. In # 4 entry you're referring to; right?

3 A. Yes, # 3 and # 4.

4 Q. Okay.

5 A. We made our way up here to eventually up to around 120 or thereabouts.

6 Q. Did Dale Black go with you by any chance or just the three of you?

7 A. No, Dale didn't.

8 Q. No company people at all?

9 A. No. It was just the three of us and according to Mike's notes we went back
10 and crossed at 117. And I know we walked up the belt a distance and looked, and
11 then we went back and went into # 3 and # 4 entries as well. And I'm assuming that
12 based on the pictures and things that we took that we explored this area up to about
13 119, 120, somewhere in that area.

14 Q. Okay.

15 A. The focus of as I recall what we were really asked to do was to determine
16 which was the best approach to attempt a recovery operation. And so our focus was
17 on just that, which entry would we recommend that this attempt be made. So we're
18 looking at ground conditions in all four entries. Obviously the # 2 entry was out
19 because it was full of belt structure and everything was bumped over tight to the belt
20 on either side. And as you went up towards the, you know, inby side it just got tighter
21 and tighter.

22 Because of that, I guess in my mind, I ruled out doing a # 2 entry. So the
23 question then was # 3 and # 4 versus # 1 and based on just the appearance # 1
24 looked to be bumped less. It was less material. In fact, I remember we went up to
25 about where that power center was sitting at the time and again I don't --- I can tell you

1 looking at photographs and things that we took the miner was in the crosscut and the
2 power center was sitting in the middle of the # 1 entry and Gary and I were looking
3 down the # 1 entry and I said something about the water down there.

4 I said it's funny that water's laying there. And he said what water and we
5 stared and looked and it was one of those things where it was more or less a hole that
6 we were looking through and I for whatever reason I thought it looked like a pool of
7 water but it wasn't. It was just a hole back through there. So he straightened me out
8 on that and I realized that yes, it looked like it was pretty open down through there
9 whereas # 3 and # 4 were bumped a lot tighter. So based on that we said gee, it looks
10 like that barrier's providing some additional support that you're not seeing on the right.
11 And looking at the maps we said the barrier on the right hand side over next to # 4
12 isn't really much more than pillar dimension.

13 And you know, to be honest with you, Mike and I both struggled with this
14 because we thought if we go with our gut, it looks better to go in # 1 entry. We
15 thought down the road we're going to be criticized by rock mechanics people by saying
16 why would you recommend the entry that's closest to this gob over here and the high
17 stress. So it was a bit of a struggle to say what we're seeing first hand doesn't agree
18 with what the stress situation, the layout would tell you.

19 Q. What it should have been if you evaluate the layout, the map?

20 A. Yes, if a rock mechanics person looked at this they would say the gobs here,
21 the stress is going to be distributed this way, the highest stress is going to be on the
22 one side of the section. Why would you go there with this recovery operation or
23 rescue operation? So it was a struggle, but we talked about it and said it looks like the
24 right thing to do. And you can tell I was worried about it because I wrote a lot in my
25 notes about that aspect of things and it was just a gut feeling and we went with it.

1 As the operation went on and we collected more information, I think we felt
2 like we were more convinced that we'd made the right decision and you're going to get
3 there with your questions. So I'll just stop there.

4 Q. Did you think it was unusual that the company didn't have somebody go with
5 you on this excursion?

6 A. I never thought about it. I did what I was asked to do.

7 Q. Okay. So I mean, they asked you to go in and just look the area over and
8 evaluate which entry you thought would be the best one to approach; is that true?

9 A. I'm sorry. Can we take a break? I'm sorry.

10 BREAK TAKEN

11 BY MR. PAVLOVICH:

12 Q. There was a question, I guess, that you said primarily when you got there Bill
13 Taylor or whoever you assumed was in charge asked you to go in and evaluate one
14 entry they should proceed in. Is that kind of the gist of it or was it just go in and see
15 what you can find out?

16 A. I don't remember what he said.

17 Q. Okay. You felt like one of the reasons you were going in there was to
18 determine an entry or ---?

19 A. Yeah. That's what I felt.

20 Q. Okay. Did you have any idea about what time that was that you went in or got
21 into the section?

22 A. Yeah. I did record that in my notes. It was 5:30, we went underground. We
23 looked at these areas that I described earlier. Gary told us what he'd experienced,
24 you know. He was in here whenever it was developed. He talked about what he saw.

25 Q. Okay.

1 A. He gave us, like I said, I thought more detailed information than we received
2 earlier. We went back outside and we met again with District and company people at
3 that time. I guess they were there or assembled after we got outside, and that was
4 Laine Adair and Allyn Davis were there at that time.

5 Q. Okay. When you got outside. Have you ever seen any of the plans that were
6 submitted to MSHA by the company for approval under the K order to proceed with
7 this rescue operation?

8 A. I saw one, and had some input to it the morning of the 8th, I believe it was.

9 Q. Okay. And we'll get into that. Here's one that was dated the 7th. And it
10 primarily starts out. It says the recovery will take place in the # 1 entry. So it's
11 already been determined. And you can see this was approved by Bob Cornett at 5:50
12 p.m. on the 7th, which probably was about the time you got underground.

13 A. I hadn't seen it.

14 Q. Okay. No one talked to you before you went underground, hey, we've got this
15 plan in hand we want you to evaluate? Nothing like --- nobody ever saw that. It
16 appears to me that they already made a decision to mine in one at that time?

17 A. I don't know.

18 Q. Okay. So when you got outside, you had a meeting with Al Davis, Laine
19 Adair, and kind of how did that go? Was that pretty much a debriefing of your travels
20 underground?

21 A. It was a debriefing. As I recall, I talked about bumps in general and just gave
22 some background information. I mean, I know that both Laine and Allyn had
23 knowledge of bumps, but I just reiterated some things that I thought were pertinent to
24 what we were faced with there. Made some comments about things that I thought
25 would be interesting or --- interesting's not the word. That would be useful to try to do.

1 For example, I believe it was in that meeting I mentioned to Laine that it might be a
2 good idea to try to get some more geophysical or seismic information. That was some
3 of what was being discussed at that time was the earthquake issue.

4 Q. Okay. Were they still --- was there still contention on the company side that
5 this was an earthquake?

6 A. Well, I don't know that it was, in this meeting, it was a contentious situation at
7 all. But there was some discussion by folks either in that meeting or around the
8 meeting afterwards about the event being located some distance away. And I was
9 trying to point out that you need to ask the seismologist about those locations because
10 especially early on, they just plot what they get. It's not a refined information.

11 Q. Okay.

12 A. It's not accurate to ---.

13 Q. So you've seen that before in other bumps that occurred ---

14 A. Absolutely.

15 Q. --- that wherever it shows the epicenter or whatever originally to them is
16 usually not where the bump occurred?

17 A. Right. Over the years we've had a relationship with some of these people like
18 Martin Chapman down at BPI. If we're aware of a bump that occurs in east Kentucky
19 or southwest Virginia, a lot of times if I hear about, it I'll call him right away because
20 their data overwrites itself. And they actually like to hear from someone when there's
21 a confirmed event because it allows them to see how accurate their system is in
22 refining these near surface source locations.

23 Q. Okay.

24 MR. TEASTER:

25 Did you know Laine Adair prior to Crandall Canyon?

1 A. I had met him at the tower investigation that we did earlier, the fatal accident
2 investigation, I think, like I said, January '05. I had met him there. I don't think I had
3 met him before that.

4 MR. TEASTER:

5 So that's how you learned that he had previous knowledge
6 about bumps?

7 A. Yeah.

8 BY MR. PAVLOVICH:

9 Q. Did you work with any engineers, ground control people with the company
10 while you were there, or mostly was it with Laine Adair?

11 A. Ground control people.

12 Q. Did they have any engineers that were assisting you guys?

13 A. They had engineers and the engineers assisted us. They had some people
14 doing some CAD work, and David Hibbs (phonetic) was sort of running the show from
15 an engineering point of view. But I wouldn't characterize what they were doing as
16 ground control.

17 Q. Okay. They were running maps and things like that for you?

18 A. Maps and surveys and ---

19 Q. Okay.

20 A. --- materials and a lot of things like that, but not ground control.

21 Q. Not in that, per se. Did they ever talk about bringing any of their consultants
22 in?

23 A. I don't recall hearing them talk about that though. At some point I learned that
24 I think they had been trying to get Hamid (phonetic) Melecki (phonetic) to come in, but
25 I'm not even sure about that.

1 Q. Okay. You remember hearing the name somewhere, but not real sure if they
2 said we're going to bring him in?

3 A. Yeah. Yeah, that's --- I'm not sure.

4 Q. Okay. In your notes on August 8th it says you and Mike reviewed the
5 proposed mining plan for the rescue effort. Do you remember what that was? And
6 would it help you if I show you the plan that was submitted on the 8th?

7 A. You're saying from my notes on the 8th?

8 Q. On Wednesday, August 8th.

9 A. Yeah, I recall this pretty well.

10 Q. Okay.

11 A. We were in the Blue Goose, and someone came in from the company. I
12 guess they were implementing a previously approved plan ---

13 Q. Okay.

14 A. --- that said ---.

15 Q. That first page there is the same one I showed you that was approved on the
16 2nd.

17 A. Okay.

18 Q. Basically these two pages are, best I can tell, pretty much identical.

19 A. Yeah.

20 Q. And then on this plan on the 8th there was these additional special
21 precautions appear to have been added to it.

22 A. Okay.

23 Q. It was that day.

24 A. Yeah.

25 Q. So is that kind of what ---?

1 A. Yeah.

2 Q. Is that your involvement in the plan was ---?

3 A. Right. What I recall was the morning I'm sitting there on the 8th, someone
4 came in from the company. I don't know if it was Bodee Allred or Gary Peacock or
5 Laine Adair, but one of those three came in. May have even been Bruce Hill. And
6 they were talking to Bill Taylor about the eight-by-eight square sets.

7 Q. Okay.

8 A. And the issue was, I guess one of the inspectors underground had measured
9 one of the posts that was being set. The plan said eight by eight, and they measured
10 and they were six by eights. And so the company was a little upset that they were
11 going to stop everything because of the two-inch difference in the dimension. And so I
12 was listening, and they said --- well, they said look, we don't have eight-by-eight inch
13 pine like we thought we did. We had these six-by-eights. And I guess I chimed in and
14 said, well, what are the six-by-eights? Are they pine? And they said no, they're
15 hardwood. We had them shipped in from the east or something. And I said, well, if
16 the plan was going to accept eight-by-eight pine, I would guess that a six-by-eight
17 hardwood is going to provide more support than the pine would, especially if you just
18 set it with the six-inch side parallel to the rib. It's still going to have eight inches to
19 resist any kind of lateral force that was put on it. So that's the way that played out that
20 they ended up changing the language, and I looked at it a couple times and I said,
21 yeah, I think that's --- you know, that's acceptable.

22 Q. Okay. Did they actually show you this or was it more of a just a discussion?

23 A. All I saw was --- I don't remember seeing ---. They were handwriting and I
24 was looking at it. And I think later on maybe they brought something down typed and
25 signed it. But honestly, I don't remember.

1 Q. Okay. All right.

2 A. The other thing about this is, in addition to what we said about the trying to put
3 some more seismographs in place to look at what activity was going on, we also
4 mentioned this lexan sheet. This is something that's been done in east Kentucky.

5 Q. Okay.

6 A. It just keeps in the smaller incident where something's blown off the rib, this
7 keeps the guy from getting cut up. We had mentioned it early on, but we weren't sure
8 of the thickness. And Mike got on the phone and made a bunch of calls to people that
9 we knew about this, and finally came up with a half-inch thickness of lexan. And it
10 turned out that Jim Vicini was there with the Arch Mine Rescue Team, and he brought
11 this up.

12 Q. At Crandall Canyon?

13 A. Yeah, he was onsite, too. And he had mentioned to them about the lexan
14 sheet working for them. And he was encouraging them to do that as well.

15 Q. Okay. So Jimbo was there? Was there any recommendations provided on
16 additional protection for the shuttle car operators, or did you feel that those canopies
17 were adequate at that time? Or was that even brought up as an issue?

18 A. I don't know when, but we did look at those things. And we went in specifically
19 and took pictures of the caps and canopies that were on the equipment that they were
20 using. You know, we tried to always look at bumps in a sort of a 3-step approach, and
21 one is prediction, which is not, again, timing prediction but where are you likely to
22 have these problems? Where's the geology right, where's the stress going to be high?
23 Those kind of things. So prediction.

24 And then prevention is the next step. If we know that the conditions are right,
25 we try to prevent it through --- we try to mitigate the problem through design. And

1 usually that means reducing the stress levels through designing the pillars
2 appropriately. It can also mean de-stressing, which I've never been a big fan of. It's
3 not well understood and not easily controlled. But there's prediction, prevention.

4 And then the last thing's personal protection. And so when we went into this
5 situation, we realized that at least at some respects the first two were already out the
6 window. This hand had been dealt. The situation wasn't good. It was high stress,
7 failed ground. And so we had to focus on protection. And so we did look at some
8 point at caps and canopies. We talked about the lexan shield. We talked about vests.

9 In fact, the one day that I went underground, I carried three of those Kevlar vests up
10 on the section for the guys. As it turned out, they didn't like wearing them, but we did
11 try to make them available.

12 Q. Did you guys wear them when you went in there?

13 A. No.

14 Q. No?

15 A. Well, I wasn't ---.

16 Q. Any reason why or ---?

17 A. Yeah. Well, I wasn't on the face. Every time I went underground, I went up to
18 the face to try to see what was going on and to gain some insight, but I didn't stay up
19 there, and there were a limited number of them. So I didn't --- you know, because I
20 was only up there a short time, I didn't get one.

21 Q. So there was never a requirement for everybody that was going in by crosscut
22 120 or going toward the face or anything like that, that they had to wear the protective
23 equipment?

24 A. No, not to my knowledge. You know, there were a lot of potential hazards in
25 this. Ground control was one of them. Ventilation was a second. And confined space

1 was another. I think at one time they tried to implement a policy of wearing reflective
2 vests in by certain areas. I noticed the guys were all wearing these vests. It was big
3 equipment, narrow working area. So I think somebody recognized the hazard there
4 and tried to enforce something, but I don't even know if that was written in policy.

5 Q. Okay. But to your knowledge, it was never required that you go in by a certain
6 point, you put on the protective equipment?

7 A. I wasn't aware of it.

8 Q. And you didn't wear it when you went in?

9 A. No.

10 Q. How about the other MSHA guys? Did you ever see them wearing them, the
11 inspectors or mine rescue guys that were in there?

12 A. Not that I can recall.

13 Q. Okay. So you're saying, you know, as far as your prediction, prevention, and
14 your personal protection, the prevention part, you said that's basically out the window
15 because you can't certainly mitigate much through design. The design was already
16 done. The bump's already occurred; right?

17 A. Yeah. The thing that we could do from a design standpoint to try to reduce
18 the likelihood of another occurrence was to remove as little material as possible.
19 Early on I got conflicting reports. I heard that they were cleaning up pretty much rib to
20 rib over there in the # 3 entry. And I said ---.

21 Q. # 3?

22 A. # 3 and # 4 is where they were originally moving material is what I was told.

23 Q. Okay.

24 A. And later on I found out, they said, no, we weren't doing rib to rib. We were
25 just trying to cut a swathe up the middle. So one of the things that we tried to do was

1 to encourage the guys not to clean up any more than they absolutely had to as they
2 were going up the # 1 entry. And of course, that was part of the plan too. I think that's
3 why the company proposed bringing those props in to the minimum that they could to
4 still, you know, get the equipment through.

5 Q. The six-by-eights that were put in were primarily designed to do what? What
6 was the intent of installing those? Is it for protection from an outburst of coal off the
7 ribs, or was it to support the roof?

8 A. Well, where they put in the six-by-eights, they started that --- we can look at
9 my notes and I can show you exactly where --- I mean, we went in and measured
10 where the posts, wood posts started and stopped and the steel posts started and
11 stopped.

12 Q. But they initially started with the wood posts?

13 A. They did.

14 Q. As they were cleaning up; right?

15 A. Yeah. They started pretty far outby. And my understanding was that they
16 were going to transition to the steel posts as soon as they could get them in there.
17 And they did.

18 Q. So that was already in the plan, that you know of, is they were going to ---
19 when they got the steel posts in, the rock props, we're going to change from the wood
20 to the rock props? Or was that just something that happened along the way?

21 A. I don't know if it was in the works. I seem to recall that that was ---.

22 Q. Okay. You think somebody talked about that early on?

23 A. I think so. I mean, it is what happened.

24 Q. Okay. As far as your prediction part, were you able to do anything with
25 prediction of where this or if there would be another outburst or bump or bounce?

1 A. Well, ---.

2 Q. Did you do any modeling to try to determine that?

3 A. Well, I'll answer that. Let me say this initially. We knew --- I think everyone
4 knew that the potential existed for another occurrence. I knew personally because
5 back in '92, I believe it was '92, we had done the work down at 37 mine. Glen Rile at
6 the time was a researcher with the Bureau of Mines, and he had a micro-seismic
7 system in the mine. They had a significant bump on the tailgate, and the crew
8 evacuated. And you know, everyone was under the impression that there was one
9 bump. But in fact, Glen's system showed that there were two bumps just several
10 minutes apart. And that was a revelation I think to a lot of people because the thought
11 was that once a bump occurred, the stress was relieved and redistributed and the
12 likelihood was small that it would occur again.

13 But I knew that had --- historically that had happened at least in one instance.
14 And I think the fact that, you know, they came in here and tried to clean up and
15 initiated another substantial bounce on the 7th was all the insight anybody needed to
16 know that the potential existed for another bounce.

17 Q. Okay. Did you think that that bounce was somewhat caused by cleaning up
18 the material or was it just something was going to happen? Did the cleaning up the
19 material prompt the bounce to occur in # 4, # 3 and # 4, or whatever?

20 A. Well, at the time?

21 Q. Yeah, what did you think at the time?

22 A. At the time I thought they were in there cleaning up and they were cleaning up
23 too much and probably got into the coal. And I think you can trigger those kind of
24 things by relieving the confinement on the coal.

25 Q. Okay.

1 A. That was my thinking at the time. You asked did we do any modeling, and the
2 answer is yeah, we did. I think it was on Thursday. No, it was on Wednesday. That's
3 what I was doing in the Blue Goose whenever the discussion occurred about the ---

4 Q. Okay.

5 A. --- the six-by-eight timbers.

6 Q. Was that on the 8th?

7 A. Yes.

8 Q. Okay.

9 A. We decided to build a model. I had the computer with me and had LAMODEL
10 on it. We went ahead and constructed a model as best we could. And the idea was to
11 see if we could determine the extent of this thing because here you are in the front
12 end of something, and all you see is coal piled up in front of you. And the obvious
13 question is where do we think it --- you know, are we talking about going two breaks or
14 20 breaks? So we developed a model and we ran it. And the first run using the
15 material properties like we would generate them, I thought it was something wrong
16 because it showed more or less a black screen with two lines on it. And it turned out
17 that the two lines were the barrier pillars north and south and the black was all the
18 pillars had failed in this model. So we started to look at it, and we went back --- we
19 didn't have initially --- I don't think we had the reports from Agapito.

20 Q. Okay.

21 A. So as I recall, Mike was trying to get the Agapito reports from Billy Owens. I
22 think he put them out on the web somewhere and we downloaded them. So
23 eventually I got their material properties and started to do some more modeling. And
24 pretty much what happened was we looked at this and said we're still seeing a lot of
25 failure in here. And it occurred to me that to really get a handle on what was going on,

1 we had to look at what the topography was doing too because in my model all I could
2 do --- I didn't have Auto CAD on my machine. I needed that to be able to implement
3 the topography. So I said we need some assistance. And as I recall, I don't think
4 Steve Sawyer was available in my office for some reason. So we went and asked Mr.
5 Stickler, would it be okay to bring in some outside help. He said no problem, bring in
6 whoever you need.

7 Q. Okay.

8 A. That's what I recall. So we called Keith Heasley. We had difficulty contacting
9 everybody we tried to contact in this whole deal. It was, I guess, the peak of the
10 vacation season. But we finally did get a hold of Keith, and we sent him some
11 information. He generated a grid and e-mailed it back to us. And then we had a
12 model where we had the topography and we could adjust the material properties. And
13 what we thought at the time was that indeed what we were seeing on this backend was
14 likely to exist all the way and mirror the other end, pretty much consistent with the
15 cover.

16 Q. So that's what Keith's modeling showed you, that probably if you saw the
17 extent of this to 118 on the outby end, you were going to see it just as far inby for the
18 maximum cover line as you did outby; is that what you're saying?

19 A. Well, that's maybe an over simplification, but he gave us some ---.

20 Q. Well, I'm not as --- that's the best I can do.

21 A. Well, I just --- no, no, no. I just don't want you to take a ruler and say, well, it
22 was here so I'm going to --- Keith's model was here.

23 Q. Okay.

24 A. That wasn't ---.

25 Q. What did Keith's model show you then? Did it predict a or give you an

1 example that material may extend to a certain crosscut inby?

2 A. That wasn't intended at all to be a slight, Joe.

3 Q. I didn't take it that way.

4 A. Okay.

5 Q. I didn't take it as one.

6 A. All right.

7 Q. I'm asking for my own knowledge because I --- you know, I gather ---.

8 A. To tell you the truth, I can't tell you what that model ---. What I gained from it
9 was that the model showed that there were two things that we were interested in. At
10 the time, I wanted to know, did this thing initiate here and propagate the whole way out
11 to here? The model indicated to me that that wouldn't be the case. It suggested that,
12 yeah, although there was some stress associated with this gob, it wasn't like a
13 continuum all the way across here. And so in my mind it raised hope that if these
14 guys were mining in here, that there would have been an area that was unaffected by
15 the bump. And that's --- to the extent that I looked at it, that was about it at the time.

16 Q. Okay.

17 A. But it also showed me another thing. It showed me that these pillars up here
18 were indeed really vulnerable to failure. And so at some point I might have been ---.

19 UNIDENTIFIED SPEAKER:

20 Pillars where, for the record?

21 A. For the record?

22 BY MR. PAVLOVICH:

23 Q. Oh, yeah.

24 A. For the old pillars in the ---.

25 Q. Go ahead, you just describe it.

1 A. Yeah, I'll just describe it.

2 UNIDENTIFIED SPEAKER:

3 As many times as I've said that, you'd think I'd remember it.

4 A. The pillars in the Main West, this was driven early on in the sequence, and
5 nobody knew at that time what the condition was behind the seals. In fact, that was
6 one of the things that we tried to do early on. Mike and I --- in fact, I think Mike sought
7 them out first, Brad Allen. Brad had been on the mine rescue team that breeched the
8 seal in the # 1 entry here in the old mains. And we really wanted to know what the
9 conditions were that they observed in here. Once we talked to Brad, we realized that
10 it sounded like there was failure going on in these old mains, that it wasn't isolated to
11 the South Barrier. And we decided to go in here and have a look outby the seals in
12 the Main West.

13 We went with Gary Peacock and Peter Saint. Mike took pictures. I sketched
14 on a map. We relied largely on Gary Peacock's view of what was normal and what
15 would be in his mind have been a more recent failure. We walked this whole area
16 back in here. And I got to tell you, Gary was really apprehensive about going in here
17 at all because he'd been in there days before whenever they breached that seal, and
18 that was working enough in there that it --- he was apprehensive about going back in.
19 But I got to tell you, by the time we went in on the 11th, everything had quieted down.
20 I mean, there wasn't a lot that --- occasionally there was something as I recall, but it
21 was fairly quiet. And we managed to explore this whole area up here and sketch out
22 what we believed is ---.

23 BY MR. PAVLOVICH:

24 Q. And you're showing the West Mains just outby the seals?

25 A. Right.

1 Q. Okay.

2 A. We sketched out what we thought was the extent of the pillar failure. And that
3 I thought was going to be significant because it demonstrated in my mind that there
4 was failure outside of this zone, that there were probably some things going on that
5 were propagating stress from the north towards the south, and it fit with what in my
6 mind had been unusual to see that this # 1 entry was better than # 4. Does that make
7 sense?

8 Q. Yeah. Now, tell me again what Keith's model showed you.

9 A. Well, what Keith's model showed was that these pillars up here were
10 vulnerable. The pillars in the old Main West, and that the propagation couldn't --- it
11 could have failed en masse under this deepest cover and that it might not have been
12 initiated necessarily by what they were doing right here, and there was hope that this
13 area would have been spared.

14 Shortly after that, the holes punched through and it showed voids in there
15 which made me feel like, oh, okay, then that part of the model is probably correct.
16 Though I have to tell you that the information that I got on the boreholes was a little bit
17 all over the place, too. You know, I never got an opportunity to sit down and look at
18 the videos myself. And what reports I got were never clear enough in my mind to
19 relate what the conditions were that they found.

20 Q. Did you ever ask for those reports?

21 A. Yeah, I did in one of the meetings that we were in, I think maybe on the 11th.
22 Could have been the 14th. There were two meetings that I attended, and it was in one
23 of those meetings that I asked specifically, what did the camera show? And I think
24 they said --- one person said five and a half feet. Somebody else said something
25 else, and I thought well, I'm just going to have to look for myself. But never had the

1 opportunity really.

2 Q. So you basically were showing up at the mine every day, and many days you
3 went underground, probably most days; right?

4 A. Most days. I think there was one day or two days that we didn't.

5 Q. Okay.

6 A. There was a Sunday.

7 Q. Okay. But my point is you agree that most days you went underground. And
8 yet you're telling me you weren't being briefed on the information that was being found
9 out at the boreholes. Were you being briefed on the activities that were happening
10 underground and the bounces and whatever was happening on other shifts when you
11 got there? I mean, do you feel you were getting a formal briefing of some kind or ---?

12 A. No. There was nothing formal. What I tried to do, not me. I mean, what we
13 tried to do was to talk to the people on the section every day to gain what their feelings
14 were because they were spending more time than we were. And we tried to spend
15 time there so we could get a sense of what the conditions were. But I can't say that
16 there was anything formal.

17 Q. Okay. How about when you came outside? Were you being debriefed by
18 someone in authority that said, okay, Joe, sit down and tell me everything you saw
19 and everything you know and you found out today?

20 A. No. I sought out --- usually I spoke with, you know, who was there, I mean,
21 right outside the command center. Usually there were some folks there. If Richard
22 Stickler and Kevin were there, I'd speak to them. If Allyn Davis was there, I'd speak to
23 him. If neither of them or none of the three of them were there, I'd stick my head in
24 the door and it was either Jerry Taylor, Bob Cornett, or ---.

25 Q. Bill Taylor?

1 A. Yeah, Bill Taylor, Bob Cornett, and who was the --- there was a third.

2 Q. Okay. Well, when you say you came out and if Stickler was there or Kevin
3 was there or Al there, you talked to them. What did they want to know? What kind of
4 questions did they ask you? Did they ever ask you, are you concerned about any of
5 this, are you concerned about the bump activity we've had, are you concerned about
6 the safety of people?

7 A. I can't recall what they asked. We had a discussion. I mean, what Mike and I
8 were looking at and Joe whenever he was there were roof control issues. I mean,
9 everyone knew we were roof control people from tech support, so it tended to be fairly
10 technical, you know. I just felt compelled to point out whatever it was that I saw that
11 was an issue of the day.

12 Q. Could you give us some examples of what some of those would have been?

13 A. Yeah, and I also --- I spoke with the mine people, too. You know, sometimes I
14 went directly to the operator if it was something that needed --- I felt or needed to be
15 passed along. It was most efficient to do it right then. Some examples. Those
16 timbers that they set in the # 1 entry initially, one of the down sides of using timbers is
17 it's hard to make them longer. And they only had whatever, nine-foot timbers. And
18 they got into some --- or maybe eight-foot timbers, I don't remember. But they got into
19 some higher areas. And so what they did was they took the butt ends that had been
20 cut off and put them underneath and lengthened them. Well, that was going to
21 provide no lateral resistance at all. So I mean, --- so we point that stuff out and they
22 came in and set steel posts down there.

23 They wanted to position a guy at the feeder because the feeder was getting
24 torn up. If a big lump or something got in there, it was shutting the feeder down. So
25 they wanted to position somebody there to watch the shuttle cars dump in there and

1 shut it off if it looked like it was going to jam up. Well, to put the man between the rib
2 and a machine right at 120 crosscut, which was in my view not a great place to be. So
3 initially they put in timbers and wrapped it with chain link. But eventually I didn't like
4 that either, so I asked them to put a switch where the guy can stand out --- eventually
5 what they did was they made it so that the operator had a switch right there. He could
6 cut it off himself from in the canopy. He could watch. So it was stuff like that.

7 Q. Okay. So it's more specific safety items?

8 A. Well, there were some more generic things, too, like early on it was a bit of a
9 --- you know, they had a plan, but there's more to the plan than just getting it done.
10 It's how you get it done.

11 Q. Okay.

12 A. I mean, they had so many people up there in by the props. And what they
13 were doing was they have two back here that they were pressurizing, and they'd have
14 people out in front shoveling for the next ones. And so you know, I went out and I said
15 you got to do something to reign in the number of folks that you got exposed. And I
16 think I had taken a picture or something and we talked about that. And over a short
17 period of time that got remedied pretty well. It was very chaotic initially, everybody
18 running up there when the miner stopped and grabbing things and trying to work as
19 quickly as possible. But there were too many people, and it was inefficient because
20 they didn't have the materials where they needed to be and that sort of thing. But that
21 got resolved and it got a lot more efficient.

22 Q. Had you ever been involved in a rescue recovery operation before in your
23 experience with the Bureau of Mines or tech support, or would you usually be there
24 after the fact on an investigation team?

25 A. Yeah, I can't say that I've ever been involved with the exception of Stillhouse

1 whenever they were trying to recover the second victim. It took four or five days. I
2 was on the accident investigation team so they said, you know, don't participate in the
3 recovery. Just stand by. But I was there off and on throughout.

4 Q. Okay. That was not more of a --- not a rescue operation so much as they
5 knew that individual had perished and they were just trying to retrieve the body from
6 under rock; right?

7 A. I don't know that that characterizes it. I mean, I think in our hearts a lot of
8 people thought, you know, it wasn't likely that he survived but, you know, people are
9 holding candlelight vigils at the gate.

10 Q. Okay. So what did you feel that your role was here at this operation?

11 A. Well, I felt my role was to provide technical assistance specifically on the roof
12 control issues as much as possible. That was my focus, was just on ground control
13 issues.

14 Q. Did you ever feel like anybody in MSHA was counting on you as a decision
15 maker as to whether to continue or discontinue the event?

16 A. No.

17 Q. You didn't ever feel that way?

18 A. No.

19 Q. Okay. You felt you were more of an advisor then in the capacity of roof
20 control strata expert?

21 A. Yeah. I mean, I was asked for input in a lot of different areas. And I took, you
22 know, not just me. I mean, ---

23 Q. Sure.

24 A. --- Mike and I and Joe took it upon ourselves to do things that we thought
25 would provide some insight. The ARMPS calculations, the modeling. We put in some

1 instrumentation, several different types at several different times. We did a lot of just
2 underground observations, you know, over a period of days like this. I think what we
3 tried to do was to develop a pattern that would allow us to keep track of what the
4 conditions were doing. And that included looking at things like --- some of it pretty
5 simplistic, but we thought it could be useful. Every day we'd go in and look at the
6 conditions walking up the # 1 entry, and there were some cracks in there. We started
7 spray painting the cracks so that from one day to the next I could tell if a new one
8 opened up or if one that existed extended. We looked at --- there was a stopping
9 behind the power center in 119. We'd stop and look at that to see if it was crushing at
10 all. We thought that would be a good indicator of whether or not the pillars right there
11 --- because there was such a concentration of people there around the power center at
12 119 I was concerned about that. And over days, they did put in a lot more props and
13 mesh and stuff.

14 We'd look and that. And then there were some timbers that we had set up
15 there at 120. That whole intersection was a bit wide because it had been hogged out
16 several times. In fact, I measured the dimension in there. It was at least 28 feet wide,
17 the crosscut. And then the intersection, you can imagine what it looked like. So I
18 would go in there every day and look on the number --- on the north side there were
19 three timbers that we had. So I'd look at those wedges. And then on the opposite
20 corner was another post that had been set there previously, and it was --- it showed a
21 lot of weight. But the new ones never seemed to increase much.

22 And we'd go into the # 3 entry and # 4, and there were some posts in there
23 that we looked at, the wedges. And over time a couple of them did load up a little bit.

24 And of course, the other thing was once they rock dusted in there you could tell when
25 something new bumped off, kind of keep track in your mind of, okay, they had some

1 activity here overnight. That's what we were looking at.

2 Q. So you were doing those kind of things, and you never really did feel like ---
3 well, as individual events occurred or you saw a specific problem or something else,
4 you would take it upon yourself to tell someone about it. But as far as the overall
5 picture of the rescue operation, you never felt like I'm the decision maker here based
6 on my evaluation to say pull the plug on this or continue?

7 A. No.

8 Q. Who did you think was in that capacity? Who was making those evaluations
9 onsite?

10 A. Well, I don't know that --- in my view?

11 Q. Yeah.

12 A. I thought it was a group of people that were there.

13 Q. And who would that have been?

14 A. Well, the three top people were Richard Stickler, Kevin Stricklin and Allyn
15 Davis.

16 Q. Okay. So you think Stickler and Al Davis and Kevin Stricklin were focusing
17 their efforts on evaluating the safety of the rescuers here and whether to continue or
18 whether to not continue? Did you ever get that impression?

19 A. Well, ---.

20 Q. I'm just saying from your perspective. I mean, you know, you don't need to
21 evaluate the whole thing. Based on what was asked of you and what your instructions
22 and what your guidance were, did you feel there was a team of people that were
23 strictly focused on making that evaluation based on what they knew?

24 A. Let me put it this way.

25 Q. Okay.

1 A. I know some of the issues are being handled by Allyn Davis. Because I can
2 tell you anecdotes where, you know, I'll give you one example. One of the things that
3 I tried to do was to keep track of how things were progressing. What was it cutting like
4 in the face? Did it get hard to cut? Was it soft to cut? And we can get into why I
5 thought those things were important. But one of the ways to do that, since I couldn't
6 be there the whole time, was to communicate with people on the section. So I've
7 gotten in the habit of working dayshift and communicating with Donnie Durrant. But
8 there came a time when --- and I don't remember. This is all a blur at some point.

9 Q. Sure.

10 A. The days fold together, but there was an instance where I showed up, wasn't
11 on dayshift, to go underground, and the guys that were going underground were all
12 mine rescue people. And they weren't familiar with bumps. And I think it was Ron
13 Poletta's shift, so that would have been second shift maybe.

14 Q. I don't know.

15 A. But anyway, Ron wasn't there. The group was going underground, and I didn't
16 think that was a good idea for a bunch of reasons. One reason being that, you know,
17 the guys from the east that weren't familiar with bumps, they didn't know what to look
18 for, they didn't know --- they were uncomfortable. And I wasn't getting consistent
19 feedback from people that were familiar with the ground conditions in Utah.

20 The other thing was I don't think they had --- they weren't equipped otherwise
21 to do the job either. But anyway, the next day whenever I saw Kevin Stricklin out in
22 front of the Blue Goose, I said to Kevin, you know, they got all mine rescue on some
23 of these shifts, and I just don't think it's a good idea. I think it would be better to have
24 somebody local that's familiar with this mine and these ground conditions and this
25 area, at least one person on every shift. And he said, you need to tell Al that. And he

1 called Al over, and I told him that. And it's caused me quite a bit of heartburn.

2 Q. Why is that?

3 A. Well, I didn't want to have to feel responsible for any individual being there.
4 We knew it was hazardous. I didn't want to feel like I was the guy that was responsible
5 that so and so was there on that shift. But having said that, I talked to some of the
6 guys later and they seemed to be truly grateful to be involved. They felt like they
7 could contribute and they did want to contribute. So it is what it is.

8 Q. Okay.

9 A. But in that case, ---

10 Q. So again, you were ---.

11 A. --- I used that anecdote to tell you that here was an instance where Kevin
12 turned to Al and said you need to hear this. It was obvious to me that Allyn was
13 making the decisions about who was working on what shift and that Kevin wanted that
14 input to go to him. So for those kinds of things, it was clear to me that Al was the
15 decision maker. But on the other hand, when we had two meetings to talk about
16 things in a broader sense, then it seemed to me that the upper management people
17 from UEI were there and our upper management people were there, too. They
18 brought me in, asked me a few questions, and I expounded on what I knew. And I
19 thought that that was so that everyone could be there to participate in some of the
20 broader decisions. And I don't think I was privy to every meeting that went on that
21 way.

22 Q. Well, obviously if you only went to two of them you certainly weren't.

23 A. Yeah. And that's my point. I think there were more of those, but I don't know
24 for sure.

25 Q. Okay. But basically you and Mike, and I don't want you to gloat here or

1 anything, but the two most knowledgeable people on strata control onsite. Would you
2 agree to that? Then from the technical standpoint.

3 A. Well, there's a lot that's not known about bumps, but ---

4 Q. Well, ---.

5 A. --- yeah, we know --- Mike had experience.

6 Q. I realize that. I didn't ask that question. If you take all the people that were
7 onsite, you and Mike probably had the most technical knowledge concerning ground
8 control than anybody there?

9 A. Yeah, I guess that's right.

10 Q. Okay. And yet you were involved in two meetings on the plan, and you said
11 you never really had seen any of these plans except the one you talked about where
12 you guys added some things on the lexan and that sort of thing, and then you weren't
13 sure if you'd ever seen the whole plan, but it was discussed with you; is that true? I
14 mean, I ---.

15 A. I don't recall seeing the plans. There were ---.

16 Q. I just wanted to clarify that, that you didn't recall seeing the plans.

17 A. That's accurate.

18 Q. I want you to go back and explain to me again this when you had Keith
19 Heasley do this model for you, and you started to say what the model showed you in
20 relation to the extent of this.

21 A. Yeah. What the model showed us was that we refined it to include the
22 topography, and we were able to adjust the material properties. And what it showed
23 us basically was that if I made the material properties of coal strength high enough
24 that it didn't fail, then virtually nothing failed. And when I dropped it down to where
25 something failed, it failed over a broader area than just what we were looking at here

1 in the South Barrier section on the outby end. But what it also showed was that it
2 didn't fail all the way back to the actual pillar that the guys were working on.

3 Q. Okay. So it didn't appear that it initiated at the work area or at the mining
4 area, it initiated somewhere else?

5 A. That's correct. And that's ---.

6 Q. And propagated maybe in both directions, or was it instantaneous?

7 A. Well, at the time ---.

8 Q. Okay. At the time, what did you think?

9 A. At the time, I thought it could have initiated anywhere.

10 Q. Okay. Anywhere.

11 A. It didn't have to have initiated at the work site where the guys were. At the
12 time that we were there, there was a lot of discussion and a lot of focus it seemed to
13 me on this portion, this portion being the barrier to the south of the active pillaring
14 section.

15 Q. It's numbered July '07 on it?

16 A. Right.

17 Q. The active gob there.

18 A. There was a lot of focus on this barrier back here and they were saying ---
19 they being people in general talking outside the Blue Goose. Why did they slab this
20 barrier back here? And I think the focus was on, you know, gee, they slabbed too
21 much and this barrier failed and initiated this failure. And I looked at that and just in
22 general said our --- the way we think about a lot of these things is you just use rules of
23 thumb. And my rule of thumb for abutment stress transfer from this gob area here
24 said that there should have been very little influence of that gob outby where they
25 were working. And so it didn't fit with me that what they were doing back here had

1 great consequence on this event. It was a more --- a broader issue. And there were
2 some other things that came out as we were talking to people onsite. We spent some
3 time around the power center in 119 talking to the miners, too. They had questions
4 about things. And we tried to answer them as best we could. And they provided
5 information which we found to be useful, too. Can we take a break?

6 Q. Sure we can.

7 BREAK TAKEN

8 BY MR. PAVLOVICH:

9 Q. I would like you to reiterate ---?

10 UNIDENTIFIED SPEAKER:

11 That entire discussion that we had, that due to technical
12 difficulties we've lost. I just wanted to capture that you're here, you recognize that
13 Derek is not your personal representative, and we assume that you are a bargaining
14 unit employee, and you've declined to have a representative here; is that correct?

15 A. Are we on the record?

16 UNIDENTIFIED SPEAKER:

17 Yeah.

18 A. Yes.

19 UNIDENTIFIED SPEAKER:

20 Okay.

21 UNIDENTIFIED SPEAKER:

22 I'll say it again, too. Gee, I guess it wasn't recorded the first
23 time. So I'm here from the Solicitor's Office. I'm a member of the accident
24 investigation team with Joe, and I'm here on the team's behalf.

25 MR. PAVLOVICH:

1 Okay. Thanks.

2 UNIDENTIFIED SPEAKER:

3 Yes, that's Derek Baxter.

4 BY MR. PAVLOVICH:

5 Q. All right. You were discussing this area when we took a break?

6 A. Uh-huh (yes).

7 Q. And you forgot what you were talking about now.

8 MR. TEASTER:

9 Don't know what initiated the bump, you first thought people
10 thought it may have been up in here.

11 BY MR. PAVLOVICH:

12 Q. Oh, no, you said you were actually sitting in the dinner hole talking to the
13 miners. And you got some very useful information from those miners who had been
14 mining on the other shift from the crew that was trapped and you started to elaborate
15 on what that useful information was before we broke.

16 A. Correct. Yeah. We talked to the miners in the dinner hole. They asked a lot
17 of questions. We tried to provide answers as best we could, just about the nature of
18 bumps because some of the guys were familiar, some of them weren't.

19 Q. Okay.

20 A. And in essence what we're doing is cautioning them about positioning
21 themselves between equipment and the rib and trying to stay behind the props as
22 opposed to what we'd seen early on where they were getting out in front digging the
23 holes for the props and things. But in those conversations one of the things that came
24 out was the miners started to describe floor heave that they'd seen in the area outby
25 crosscut 139, which is where they had eight leave blocks that they weren't going to

1 retreat mine due to a sump in the old West Mains. Outby that area, the miners
2 described in the belt entry and also in the # 3 and # 4 entry to some extent some floor
3 heave. And that seemed unusual to me. I hadn't heard anyone describe floor heave
4 issues prior. And typically when you see floor heave, if the floor's weak enough to
5 heave, it usually means that you're not going to have bump problems. Floor heave's a
6 sign of stress relief and stress redistribution in a general sense.

7 And so that was something that stuck in my mind that it seemed to me the fact
8 that they were seeing this kind of activity on development suggested that maybe there
9 was stress transfer even back during the development of this panel from failure that
10 might have occurred in the old West Mains. And so that's what I was going to allude
11 to there. We did get some good information. The other thing we learned was at least
12 one individual we talked to said that they'd done some mining in this barrier adjacent
13 to the leave blocks. And he described it as taking a cut every other miner-head width
14 down through there.

15 Q. Taking a cut every other miner down the barrier?

16 A. Yeah. I said, well, what do you think he probably got of that? He said maybe
17 50 percent.

18 Q. Okay. Did you feel that this bounce may have originated over the maximum
19 cover line or somewhere in the area of the maximum cover since you didn't feel that it
20 originated where the miners were?

21 A. At the time I did.

22 Q. At the time you did?

23 A. I thought it was possible that it did. It would make sense. It was the highest
24 stress, especially when the model showed that the influence of this was not as
25 extreme as what some folks thought it might be.

1 Q. Do you no longer think that?

2 A. We're going to have a report out. When was that?

3 Q. Five years from now? Now, I won't be able to read by then. It will be too late.

4 A. No. All I can say is that we're in the midst of doing that right now.

5 Q. Okay. But you thought that originally? You thought it could very well be from
6 the maximum cover line, that's where it originated? And if that's true and the material
7 basically bumped out to 117, 118, what was your thoughts of how far inby that may
8 have gone? You think it stopped right after the maximum cover line? Did it extend
9 further?

10 A. No, I think most people looked at it and said the worst of the conditions ---
11 around this 2,000-foot cover line, the entry was started --- we started to see some
12 different behavior there. We saw this barrier pillar was shoved over into the middle of
13 the entry as much as eight to ten feet. The entries were a lot more full inby that area.
14 And so you look at that and say it's probably similar --- if you're saying that this is a
15 massive collapse and that it was centered on the maximum cover, then you would
16 anticipate that you'd see similar conditions at the 2,000-foot line at the other end. So
17 yeah. I mean, that's essentially what we were ---.

18 Q. And for several crosscuts outby, similar conditions to what you saw out here?

19 A. That's right.

20 Q. And could very well see that in there?

21 A. That's right.

22 Q. Okay. Have you ---?

23 A. Can I back up and tell you one thing?

24 Q. Yeah, go ahead. Go ahead.

25 A. One of the issues that we had early on was we somewhere got a map that

1 showed cover lines that we later found were confused. And Mike spent a great deal of
2 time trying to figure out what was real and what --- you know, what was right and what
3 was not right. That was a little bit misleading to us at first. We thought that the peak
4 cover was closer to 127 rather than 129 and a half. It was discouraging when we saw
5 otherwise, that we realized, oh, gee, we were still approaching the, you know, ---.

6 Q. So you thought you were almost at peak cover when you were mining
7 between 126 and 127, and you realized it's actually---

8 A. At one point, not necessarily when we were there. Earlier on ---.

9 Q. Yeah, early on, not when you were there.

10 A. Yeah.

11 Q. When did you find out? When did you actually get that relocated? Do you
12 remember?

13 A. I don't recall.

14 Q. Several days into the operation, though, I'm guessing.

15 A. Oh, yeah.

16 Q. But prior to the 16th accident; right?

17 A. Yeah.

18 Q. Okay.

19 A. Yeah, the best I can recall was a few days before the 16th when I had a
20 comfort level that this map is the one that we should rely on.

21 Q. Okay. Earlier you said you had talked to Al Davis about changing his
22 scheduling of inspectors in that he had put primarily a bunch of guys from the east on
23 one particular shift who really didn't know the --- have the background experience of
24 western coal mines. And you said some of those guys were ill equipped. What did
25 you mean by that?

1 A. Well, I think some of the guys --- the impression I got was that they didn't all
2 have their own equipment, their own spotters and vein anemometers and things. And
3 because they didn't have their own equipment there and they're not working out of a
4 field office, I got the sense that they were scavenging for equipment to use.

5 Q. Okay.

6 A. That was my impression. That might not have been accurate.

7 Q. Okay. That's fine. When you got there --- I mean, you've investigated bumps
8 before. You might have even been at C2 when the bounce occurred that injured
9 several miners and killed two miners. I don't know.

10 A. I wasn't at C2, but I've investigated bumps where we saw firsthand what the
11 conditions looked like. For example, most recently at Harland Cumberland 19.

12 Q. Okay. Did you ever see one where the entries were essentially packed full of
13 coal for any distance at all?

14 A. Not packed completely full. I've seen it where you could look over top of
15 pillars.

16 Q. Yeah, okay. Look over pillars. But I mean, at the entries.

17 A. Seen where you could see a cable going into a shuttle car and you couldn't
18 see the shuttle car.

19 Q. Okay, okay.

20 A. But never when it was totally roofed out.

21 Q. Okay. Did you ever see --- what's the largest number of pillars you'd ever
22 seen bumped, that you can recall? And I mean, that's general.

23 A. Me personally was about six.

24 Q. Six is the most, okay. Then that's a pretty severe bump. I mean, most of
25 them wouldn't you say are two or three pillars?

1 A. That's correct.

2 Q. I mean, that's usually what I've seen.

3 A. Yeah.

4 Q. Even the one at Harland Cumberland and C2 that killed two men, I think was
5 three pillars or something, but the entries were nowhere near full of coal. There was
6 some coal in the entries?

7 A. Right.

8 Q. With what you saw here with the extent of this damage and the entries pretty
9 much packed full, can you imagine the magnitude of that outburst? I mean, the forces
10 that must have been expelled when that occurred?

11 A. All I can say is that this was --- in my mind it was unprecedented, the scale
12 that we were looking at the failure.

13 Q. Okay. So you have to --- or would you agree that there had to be some pretty
14 massive forces at work expelled here when this happened?

15 A. Yeah.

16 Q. Okay. Knowing that, and I don't know. You said you didn't really get
17 information on the boreholes, but did anybody ever tell you that the --- when the one
18 borehole went through, they got seven percent oxygen, and that would have been on
19 the 9th?

20 A. I talked to --- I learned about that from Terry Hoke (phonetic).

21 Q. Terry Hoke? Was he out there?

22 A. No. I called not every day, but I tried to call back to the office in Pittsburgh to
23 either talk to one of our guys in roof control ---.

24 Q. So someone from Pittsburgh when you were talking to them on the phone told
25 you the reading in the one borehole was seven percent oxygen? You didn't find that

1 out onsite?

2 A. Well, I think they found that out overnight, and Terry had knowledge of it
3 because the two-hour time difference. And I was driving to work at six o'clock in the
4 morning. It's eight o'clock in Pittsburgh, so he had knowledge of it before I got to the
5 mine site.

6 Q. Before you got to the mine. So that's when you found out? You talked to him
7 before?

8 A. Right.

9 Q. With your knowledge of the extent of this outburst, plus the fact that there was
10 seven percent, what did that lead you to believe about the chance of survivability of
11 those six miners? And I'm just asking for your opinion, Joe.

12 A. Well, I mean, I'd have to honestly say my heart sank whenever I heard that
13 because I figured it didn't bode well for them. But you know, I held out hope first of all,
14 because of the confusion I guess early on I'd heard --- there was some confusion that
15 the number was a good number. And then I heard the number was a bad number, so
16 in my mind there was, well, I'm not going to prejudge. We'll let that sort out until
17 they're definitive about it.

18 And secondly, I guess in the back of my mind I was thinking about the young
19 man down in Sago. You know, who would have thought there was a great deal of
20 hope for him. And then you wonder, you know, there's always a possibility of
21 barricading or a pocket of air. So it wasn't good news, but I was willing to --- I mean, I
22 had a job to do and didn't focus too much on that.

23 Q. Okay. So in your own opinion the risk of what was continuing with the rescue
24 operation was worth the value of possibly the success of the operation?

25 A. Yeah.

1 Q. Or had they ever thought about it in that regard? I mean, have you ever
2 received any of that kind of training before about risk versus value or anything in
3 emergency training, MERDs, or anything like that?

4 A. I never participate in a MERD. I never really --- in my mind the prospects of
5 recovering these individuals out of here alive was like a rollercoaster. This was bad
6 news. Later on they drilled another hole. The oxygen was better I heard. So hopes
7 went back up. You know, as time went on, you wondered the fact that they weren't
8 hearing anything and so forth. They hadn't seen anything with the camera. You
9 thought, well, maybe --- your hope's going down a little bit. Then there was some
10 tapping or something they heard on the drill string. That brought everybody's spirits
11 back up. So it was a rollercoaster ride. And you know, there was so much going on
12 that we felt compelled to keep after. It wasn't like I sat around pondering that aspect
13 of the thing very much. Didn't feel like risk assessment was ---

14 Q. Did anybody ever ---?

15 A. --- something I was being to ask to do.

16 Q. Okay. So you weren't being asked to do a risk assessment?

17 A. No.

18 Q. Okay. Was there ever any discussions when you were underground with
19 these people concerning that about could these guys have survived? We don't think
20 they survived. We know they're --- I mean, was it just something no one wanted to
21 talk about? What was your feeling on that?

22 A. There was only one time that I can recall. Of course, early on there was a
23 great deal of enthusiasm. As time wore on, everyone got tired. Hours were long. We
24 knew the work was hazardous. But I don't recall any conversation about that other
25 than two instances. One was one of the guys said --- and this is only marginally

1 related, I guess. He said I wonder if we're not on a recovery mission rather than a
2 rescue mission at this --- you know, after this much time. And of course, it's not
3 something that I wanted to talk about, so I didn't talk about it. But obviously he was
4 thinking out loud that ---.

5 Q. Was there any other discussion about that, or was he just talking to you? Did
6 he just pose ---?

7 A. We were in the front of the truck driving in.

8 Q. Okay.

9 A. And there was another case where I guess I was underground and I heard
10 somebody comment that there were a group of guys that had opted to work --- they
11 asked to not work on the section.

12 Q. Right.

13 A. But I didn't pursue that. Didn't know what the reasons were, anything else.

14 Q. Okay. So you heard rumor to the fact that there were some miners that asked
15 to be withdrawn from the face area or the section to some other work. Did you ever
16 ask why?

17 A. No.

18 Q. Didn't know why. Did you ever approach or talk to any of those miners, or just
19 have occasion to talk to any of them?

20 A. No.

21 Q. Or you didn't. Do you know if anybody from MSHA ---?

22 A. Not while I was there.

23 Q. Okay.

24 A. I mean, ---.

25 Q. Okay. Yeah, I mean, this is during the rescue. I realize now later you ---. Do

1 you know if anybody from MSHA went to those miners and asked them what are your
2 concerns, what are your fears, why did you --- no?

3 A. I wouldn't know that.

4 Q. You wouldn't know that. People have told us, and I think you've even alluded
5 to it in the fact that, you know, Donnie Durrant being down there, was an experienced
6 man, that you probably felt more comfortable that the guys from Price at least one
7 every shift would be in there that you could talk to about his experience, his
8 knowledge, and the fact that these guys know more about the history and the terrain.
9 So they were more comforting to you to be able to talk to than say we would have --- I
10 would have been because I wouldn't have that experience.

11 A. Well, you're District 7. You probably had more experience than a lot of the
12 guys, but yeah.

13 Q. Okay. Having said that or acknowledged that, would it not be just as
14 important to talk to those experienced miners that withdrew themselves to find out
15 why, or do you think --- I'm not saying you should have necessarily, but don't you think
16 somebody should have? Would that have been an important information-gathering
17 tool to, in your opinion, --- and maybe you didn't think of it at the time, but what would
18 you think about it today?

19 A. Well, I don't know that I have a --- I'd have to think about that. All I can tell
20 you is that I did speak to some of the guys. On the 16th, in fact, one of the last miners
21 I spoke with was Dale Black. And I asked Dale how things were --- you know, what I
22 was trying to get from the miner operators was, you know, how it was cutting. The
23 thought being that if the face was really stiff and they had to run the bits that it wasn't
24 just loose coal they were loading but it was actually supporting load, and if by
25 removing that we were going to be redistributing stress which could be a problem.

1 And I remember Dale telling me, no, it's --- I'm not running the bits much at
2 all. It's just, you know, to clean up the bottom to keep the bottom level. But at the
3 same time or just after that I talked to Donnie and he said, no, it's cutting a little
4 tougher today. We had a pretty good thump this morning. And I think on the map
5 somewhere I wrote down he said 10:30 or 10:33 or something like that. So yeah, I did
6 try to talk to some of those guys. Particularly the foremen. Brandon Kimber was there
7 a lot. Josh Fielder was one of the guys that was there a lot. And I did talk to them and
8 ask them what ---. A lot of the other guys, I didn't ask them that kind of day-to-day
9 thing. I don't think they were so focused on --- they were more focused on the task at
10 hand making sure props were up or whatever. But the miner operator, June Rich was
11 one. They were mostly the guys that were on the dayshift whenever I was there.

12 Q. At that time, did you ever hear about June being one of the guys ask to
13 withdraw?

14 A. No, I didn't. I noticed that he wasn't there. In fact, that's when I think Dale
15 Black started running the miner.

16 Q. So Dale Black was actually a foreman, but ---

17 A. Yeah.

18 Q. --- he was now running the miner because --- well, you didn't know why at the
19 time?

20 A. I didn't know, yeah.

21 Q. You just knew Dale Black's now running the miner. You didn't ask him why
22 are you running the miner, Dale?

23 A. No. He was ---.

24 Q. He did it all anyway?

25 A. Yeah. He was a go-getter guy. I mean, if you met him, you realized --- it just

1 didn't surprise me to see him on the miner.

2 Q. Have you ever seen anybody attempt to clean up bounce material like this in
3 your past history?

4 A. Well, like I said earlier, I think this is unprecedented. We knew it was going to
5 be a difficult task. We knew it was a hazardous condition.

6 Q. So whatever we were doing here was totally treading on new ground? I mean,
7 the experience.

8 A. As far as I know it was. I mean, ---.

9 Q. Nobody else ever said anything to the contrary like we do this all the time out
10 here or anything like that, did they?

11 A. No.

12 Q. Okay. Were you ever asked to go underground to evaluate safety concerns of
13 inspectors?

14 A. Well, yes and no. I mean, I had a real good relationship with some of the
15 guys. And I know at least on one occasion Donnie Durrant and maybe somebody else
16 had asked me about the conditions outby. I think as we went up this single heading as
17 you might imagine, you got one way in, one way out. You're trying to rescue trapped
18 miners in the other end. The thought crosses somebody's mind that we could be
19 trapped too. There was activity, they noticed, Donnie and Peter, I believe, noticed
20 that there was some noise that was occurring outby 119 where the power center was.
21 And of course, we'd been keeping track of some of that all along. There was a scabby
22 place back out there around 115, and that continued to get a little bit worse. So it was
23 at some point we talked to --- and again, I don't know that I talked to --- I probably
24 talked to our people and told them, but I went directly to --- a lot of times to one of the
25 mine foremen or the superintendent or general manager and said this area back here

1 needs to be addressed. I think at 115 it was actually Gale Anderson that I spoke with
2 about setting some timbers back there.

3 Q. Okay. Were they pretty agreeable if you asked them to do anything, Joe?

4 A. Yeah. I mean, a lot of times they couldn't do it immediately because, you
5 know, you needed to get material for whatever. But yeah, they addressed it. If I
6 pointed something out, they generally would talk about whether they agreed or
7 disagreed, and address it.

8 Q. Okay.

9 A. So they started putting --- initially they fixed that area there that was scabby
10 looking. But then we started to see cracks open up all the way up through here about
11 every 20, 25 feet.

12 Q. The # 1 entry?

13 A. # 1 entry between 115 and 118. So I talked to folks. I'm sorry. I'm going to
14 have to --- this is the second time she called.

15 Q. Go ahead.

16 A. I'll be right back.

17 BREAK TAKEN

18 BY MR. PAVLOVICH :

19 Q. If you had ever been called to evaluate concerns of inspectors, and you went
20 into ---.

21 A. Too much detail?

22 Q. Well, the description of cracking that you observed in one and you were doing
23 some evaluations. Let me ask you a question. What we did was take the log book
24 that was out in the command center that was the MSHA log and went through it. Of
25 course there's a lot of material in there and a lot of it has to do with measurements

1 and everything, but we sorted through and just did a survey of every time a bump or
2 bounce was reported by somebody. And we documented the extent of what the
3 discussion was. It was written in the book so we basically copied what they said and
4 we'll go through this in a minute.

5 But the question that I wanted to ask you was that on the 15th, there was a
6 seismic event recorded of 1.2 magnitude at 2:26, and there is some notations in there.

7 It says bounce occurred in cleaning area, lots of dust, everyone accounted for. The
8 bounce was significant as reported by --- and it's Barry Grosely. It blew out a couple
9 of Kennedy panels and rib sloughage across miner. And then Grosely says
10 atmosphere black with dust, appears rock props have moved out tops and bottom,
11 question the rock props ability to support. It also says that both cutter motor shafts on
12 miner sheared as a result of the bounce.

13 Going on through the day, at 9:15 there is some noise in 117, at 9:35 it says
14 bumps coming more regularly over 15 minutes from 117 to 118, roof control Zelanko
15 is suiting up to go check. Do you remember anything specific that came out that
16 somebody said Joe, we want you to go check on this? And then there is another
17 notation that says small bump at 1:18 and then at 9:55 it says MSHA going
18 underground to travel out mine from 120 and one and two entries to review current
19 roof conditions between 118, 119, and three. Zelanko is on his way to check the roof
20 conditions. Is this something that somebody specifically said Joe, we need you to go
21 check, we have some bad concerns or were you just going in anyway?

22 A. Well ---.

23 Q. Do you remember anything about that?

24 A. The 15th, I was underground twice on the 15th.

25 Q. Were you measuring your stations on the 15th?

1 A. I think, yeah, we were --- Joe was there on the 15th. We were, was that his
2 first day?

3 UNIDENTIFIED SPEAKER:

4 Yes, first day in.

5 MR. PAVLOVICH:

6 First day.

7 A. Yeah. So in all likelihood, if they said that I was going in to look at it,
8 someone probably told me that they had a bounce on day shift and I do remember
9 going up and talking to Donnie about that and he said yeah that they had a pretty good
10 one and it bounced out on the sides of the miners.

11 BY MR. PAVLOVICH:

12 Q. Was that on the 16th? Because on the 16th at 10:04, there was a 1.5
13 magnitude bump and miner, # 1 entry. The right rib covered the body of miner,
14 backed out, were cleaning up, and Donnie Durrant was in there then and he makes
15 some notations about that same time when this happened. So that was that bump.

16 A. This is yeah, the day of the 16th, I remember speaking specifically with him
17 and Dale Black. That's what I recall from earlier. The day before---

18 Q. I mean, I'm just wondering because this bounce here that Grosely reports talks
19 about breaking the shear motors and that he's concerned about the rock props ability
20 to support. That's at 2:26 a.m.

21 A. Well, I never about ---.

22 Q. You never heard about that?

23 A. Well, I don't know if I'd say that I never heard about that. I did hear about
24 them having an incident that broke the shaft on the cutter head. I don't recall at this
25 time when it was, but I do know that they had an incident where it broke the shaft. If

1 rock props had moved out tops and bottoms, I don't ever recall anybody saying
2 anything like that other than there was some concern, some folks expressed that they
3 said it looks like these things are moving out of the bottoms. They were trying to set
4 up perpendicular, but the bottoms looked like they were moving in, and I believe
5 Donnie did it originally, measured across one of them and told me about it. We
6 continued to monitor that location. We had intended to do more, but didn't get it done
7 before the 16th event. That was the only concern that anyone said about the things
8 moving. This almost sounds like it was a dynamic event. That was never reported to
9 my knowledge.

10 Q. Was you ever told about that, when you showed up that morning of the 15th,
11 nobody said hey we had something at 2:26 last night that concerns us? I mean, you
12 didn't get briefed on that?

13 A. No.

14 Q. Okay. And you really don't remember anything specific of being say bumps
15 coming more regularly over 15 minutes, roof controls, Zelanko suiting up to go check?
16 I mean, it's not like someone said hey Joe, we got bumps really happening. You
17 need to go check.

18 A. No. This surprises me. Between 1:18 and 1:19 and a # 3 entry new material
19 was on the mine floor. I don't remember anybody ever telling me that. In the # 3
20 entry, I mean we went over there as a matter of course and looked at those things and
21 like I said before, we had a number of things that we were looking at specifically to see
22 if there was any change. So this is new to me. I don't recall ever being told that. And
23 again, what I recall now and maybe I misunderstood, who knows, but I thought that
24 Donnie and Peter were most concerned about what was going on outby, not up in the
25 face area. Maybe I misinterpreted, I don't know. But the rock props moving definitely,

1 the first instance I heard of a rock prop being knocked out was on the 16th when it
2 knocked them out and injured the people.

3 Q. You never heard of one being knocked out with the ram car or ---?

4 A. Well yeah, there was one with the ram car right there at the bottom of 120 that
5 I saw had been knocked out, but given the size of the equipment and everything and
6 the location, it was almost inevitable somebody was going to put one in there.

7 Q. Okay. Well, we just wondered because when --- if you read these two notes,
8 and you can put anybody's name in here whether it be Joe Pavlovich or Gauna
9 whatever, you almost get the impression that someone specifically asked for you to go
10 do this. In fact---

11 A. Well, let me back up. The very first time that I can recall, and I don't
12 remember what night it was. No, I do remember. It was Friday or Saturday night, Al
13 Davis called me. I was at the motel room, and he called and said hey they had a
14 bounce on the recovery entry, like I'd like you to go out and take a look at it. So Mike
15 and I went out, and by the time we got there, they had already had the miner pulled
16 and they were in there roof bolting. So there wasn't much to see. What had
17 happened was it bumped on each side of the miner and filled in the space up to the
18 top of the mine.

19 Q. Okay.

20 A. We were running around and they were installing roof bolts, and Mike went up
21 to take some pictures or measurement or something and I was doing something. We
22 did a lot when we were there together, but we didn't focus on, it wasn't like we were
23 joined at the hip. You know Mike did some measurements and took some notes and
24 did things and I might have been talking to the foreman or who knows what. Mike
25 noticed --- he ran a tape measure up a borehole, I believe, and saw that there was

1 some separations. And they were, as I recall, low separations, but there were some
2 that were higher as well. And they were right above the height of the bolt, and so he
3 was concerned that, hey, they're putting up six foot bolts and there's cracks above six
4 feet. I believe he had to drill a test hole and figured out that above that level, there
5 was solid ground and he wanted them to put in some longer supports.

6 So I don't remember who the foreman was, it might have been Gale Anderson
7 that night, but whoever, they ended up getting him to look around the yard and find
8 what was available in terms of longer support. We stuck around until we were
9 relatively comfortable that they knew what were doing, these guys on the bolting
10 machine, and that the supplies were coming and then we left. By that time it's was
11 kind of early morning.

12 And the issue with the bump that we had gone up to see, we couldn't actually
13 see because they had already pulled the miner out and cleaned up quite a bit of it, but
14 what I remember is that they said that they got into a soft spot in the floor and the
15 miner sunk right down in it. So they ended up bogging out the floor and it ended up ---
16 it was like 11 feet high in there or something. What I concluded from that was that
17 you can reduce confinement by cleaning up the sides. You can also weaken the pillar
18 by making it taller. You know the width to height ratio decreases the strength, so I
19 kind of concluded that one of the things that we needed to try to make clear to the
20 guys was to let's keep the height down as well as the width down and it may have
21 been --- well, that's going into too much detail.

22 Q. Okay. As I said, we went through the log book and I don't know if --- again,
23 not that this is your knowledge before the 16th. Did anybody ever put together a list or
24 some kind of chart or something showing the bumps and the seismic activity that had
25 been occurring where if I showed up on the mine, they could say here's what we've

1 had happen or was that not done to your knowledge? Did anybody ever show you
2 anything like that?

3 A. No, I never saw anything like that. We didn't do it ourselves. I understood, I
4 didn't really understand at the time what the company was doing. I knew they were
5 collecting some data up there, but I wasn't sure what it was or how they were doing it.

6 Q. Were they ever sharing that data with you?

7 A. They weren't hiding it, but they weren't ---.

8 Q. Were they sharing it with you?

9 A. They weren't discussing it. But to be honest, I didn't ask either.

10 Q. Okay. You just knew that they were putting data together, but you didn't know
11 what it was. They didn't say Joe, we want you to look at this or here's a copy for you,
12 nor did you ask?

13 A. Yeah, that's correct.

14 Q. What kind of data was it? Did you ---?

15 A. They were wave forms and I guess one of the reasons ---.

16 Q. Wave?

17 A. Wave forms from a seismograph. They had shown us the original wave forms
18 from the event that they got off of the Utah Seismograph System. And at the time, I
19 didn't know how to do that. They have --- it's a web quarter system that you can log
20 into and download data. Apparently the company knew how to do that. They
21 downloaded it, and what it showed was an event that was four and a half minutes.
22 You know, it saturated the amplifier so it looked like this squiggly that went on for four
23 and a half minutes. Of course all of us looked at that and said --- you know, at the
24 time I thought, well, that supports the broad event that lasted that long. It turns out
25 later on that wasn't the case, but at the time that's what we thought.

1 Q. Later on, what did you find out on how long it lasted? Just for our information.

2 UNIDENTIFIED SPEAKER:

3 I think Dr. Arabasz's impressions --- probably that transcript
4 clarifies that.

5 MR. PAVLOVICH:

6 Okay. We've got an interview of that?

7 UNIDENTIFIED SPEAKER:

8 Who is it? I missed the name.

9 UNIDENTIFIED SPEAKER:

10 Dr. Arabasz and Dr. Peshman (phonetic) at the University of
11 Utah.

12 UNIDENTIFIED SPEAKER:

13 And you guys interviewed them?

14 UNIDENTIFIED SPEAKER:

15 Yes.

16 MR. PAVLOVICH:

17 Okay. So we have the transcript of that. Very good.

18 BY MR. PAVLOVICH:

19 Q. Well, let me kind of follow along with ---.

20 A. It's easier for you to read what they said than for me to try to interpret it.

21 Q. That's fine and we'll do that. I appreciate that, that's no problem at all. As I
22 said, we went through this log at the University of Utah somewhere along the line and
23 maybe we even got this from you guys, I don't really even know, but anyway, it shows
24 that on the 3rd there was a 1.5 magnitude, on the 5th there was a 1.6 to 1.8. Of
25 course on the 6th the 2:48 was the 3.9 that caused the initial accident. The mine

1 rescue teams went into the seal that same evening and there was a 1.9 magnitude
2 bounce that occurred just as they came out of the seal that actually blew low oxygen
3 out into the fresh air base. I guess, did someone ever tell you about that?

4 A. Yes, we spoke with Brad Allen.

5 Q. You spoke with Brad, okay. But someone just said, hey, you need to talk to
6 Brad? No one briefed you when you got there that day about that occurrence?

7 A. No, I think someone --- yeah, originally, that was part of that original briefing.
8 They said, yeah, we sent a rescue team in to explore this. I think it was described to
9 us as though the roof fell right behind them, literally on their heels as they were
10 coming back out.

11 Q. Okay. On the 7th at 1:13, you had a magnitude of 2.2. It said bounce occurs,
12 men moving back until it clears out. We'll take a head count. And Ron Poletta's notes
13 say that he was standing in front of the feeder breaker when the bounce hit and took
14 out ventilation, suspended dust in the air, could not see the lifeline. Bounce knocked
15 out ventilation, two people were knocked down and # 4 entry filled back up with coal.

16 A. I think that's probably when they suspended the initial rescue.

17 Q. Did you know or ever talk to Poletta about him being knocked down there?

18 A. Yeah, but I'm not sure when. That wasn't until later.

19 Q. Okay. Sometime later you heard about it. Did he describe to you when he
20 was knocked down and the amount of dust, as he says I could not see the lifeline, he's
21 disoriented and had a hard time finding his way. He told you about that?

22 A. Uh-huh (yes).

23 Q. Did you ever equate that to the fact as to what kind of dust and disorientation
24 would those miners have maybe experienced up on the section when the bounce
25 occurred on the 6th?

1 A. I didn't think. I didn't spend a lot of time thinking about that.

2 Q. Okay. You see at 2:43 there was a 1.6 magnitude reported, several bounces
3 reported that same day. At 15:42 there was a 1.7. Donnie Durrant makes a notation
4 sometime there that day, appears that bumping of pillars has been ongoing. On the
5 8th and 9th, there was nothing reported as far as bump wise. Then again on the 10th
6 there is bumps reported and some of them, and what we tried to do, I mean somebody
7 said bumps occurred, cracking sounds, small bump, small bump. Everybody's calling
8 that something different and I think you alluded to that. But usually if somebody said
9 there was a big bump, there was some damage, panels knocked out, it dusted up, we
10 had to take a head count, we counted that as something fairly significant.

11 Here at 2106, just had a big bounce. Everyone is okay. It's real dusty.
12 Everyone is accounted for. Miner helper and Gary Jensen were the only ones in the
13 area. At 2254 there was a bounce, killed power in the miner, accounted for everyone
14 and dusted up the entries.

15 Were you aware of these going on continuously, these type magnitude
16 events? Did anyone ever say look here's what we had, here's the briefing for you
17 today Joe, is we got five bumps last night reported?

18 A. Well, let me answer the question a bunch of different ways.

19 Q. How about one?

20 A. Try to cover it all.

21 Q. How about one way?

22 A. You asked about three questions there. First of all, did anyone brief me?

23 Q. Yes.

24 A. Not formally. There wasn't a time of the day where I showed up and they said
25 here's what happened overnight.

1 Q. Okay.

2 A. Did somebody say to me, hey, we had this or that in passing? Yeah, they
3 probably did because I was asking for that kind of information. But I think what
4 you've done here with this log is --- I mean, you create a picture where it's active and
5 then it's quiet and then it's active again. That fits with reality. I mean, that's what I
6 observed, too. Early on we went in, it was quite noisy. I told you that I would have a
7 hard time describing it, but it's like a pillar section and a sandstone top. It was popping
8 and banging good.

9 As we built up to actually start the rescue operations, it did quiet down
10 dramatically, and I thought things went along smoothly. The difficulty in reporting,
11 taking people's notes and putting them together is --- you know, I see Ron Hickson's
12 notes in there. He's reporting in the bounce. It may be the first bounce Ron Hickson
13 ever experienced.

14 Q. Could be.

15 A. The significance of that in Ron's mind is different than the significance of it in
16 Ron Poletta's mind. And I'm not picking on Ron Hickson or Ron Poletta. I'm just
17 saying that this is what you're dealing with is having different scales in people's minds
18 of what constitutes the need to write something down and what's not. I dealt with that
19 the whole way through. In fact, that was a motivation for trying to keep some of the
20 locals in there because it was a more level reporting field.

21 So there is some real inconsistency when you try to take individuals' notes. If
22 you had one individual's notes and looked at it throughout, I think it's a better
23 measure. The second thing is that when you take a look at the University of Utah data,
24 you have to know that in looking at these seismic events, that they put in additional
25 seismographs on the surface after about the 10th or 11th. So the ability for them to

1 locate and detect events changed in this interim. So it's quite possible ---.

2 Q. Did it improve?

3 A. Yeah, that was their intention. When we showed up the very first night, I think
4 I mentioned it earlier. We suggested that someone look into putting in some
5 seismographs so we could develop a baseline and see if indeed there was increased
6 activity as we went in there. I mean, there was no doubt once you take a look at it, we
7 recognize that this is an unprecedented thing. You're going in there, we're past
8 prediction and prevention. I mean you're going to make a rescue effort in highly
9 stressed ground that's damaged. The hazard was obvious. We said we know that
10 we're going to be redistributing stress. We're trying to do as little of that as we can,
11 but gee, it would be good if we had some measure.

12 I know that if you look at the literature, you're going to find that some people
13 have reported that you can look at seismic data and say, gee, when you see a build
14 up, you know that a bump is eminent. You can read other literature that says, well, as
15 long as the data is pretty consistent, if you see an absence of data, it's not stress
16 relieving itself, it's building up that strain energy to have a bump. I know that there's a
17 lot of --- what's the right word? We're not sure how to interpret that data, but I thought
18 nevertheless, in this case, if we saw something building up, it might be useful to us. I
19 didn't know it at the time. The company didn't --- well, that's after the fact.

20 UNIDENTIFIED SPEAKER:

21 That's something that came out with our investigation.

22 MR. PAVLOVICH:

23 Okay.

24 A. But I will say this. I also asked our own people to do that to. I asked Bob
25 Gibson --- not Bob. John Gibson, Bob Gibson used to work ---. John Gibson I said,

1 is there any chance you could put a geo-phone or whatever type seismic device they
2 have on the surface and just do what I --- I studied this stuff years and years ago. And
3 there's a technique that you can use where you just run everything that comes in a
4 wave form through a counter, and every time it has a millivolt level above that
5 threshold, it counts it as a count. I said if you can do something as simple as that,
6 we'll just measure threshold crossings, develop a baseline now.

7 Because at that time, we were just getting set up to really start in # 1 entry. I
8 said then we'll be able to keep track of that as that goes on. And he said well, you'd
9 have to talk to Jeff Kravitz about that, but he would relay the information. And
10 eventually I did talk to Jeff about it. In fact, Richard Stickler was there and advocated
11 the idea too. But the difficulty was --- this is what I learned after the fact, the system
12 was set up in a way that you had the ridge top and they were doing the drill holes and
13 everything on what would be I guess the, I don't know, northwest side of the ridge let's
14 say. And they had direct line of sight down to the truck in Joe's Valley. Where we
15 wanted them to monitor was over the top of the ridge. And apparently the system that
16 MSHA has is very precise in only listening to directly below.

17 So Jeff felt that to get the information that we needed, he would have had to
18 have an array over the top of the hill. He wouldn't have had a line of sight and
19 couldn't collect the data.

20 BY MR. PAVLOVICH:

21 Q. We couldn't do it with our equipment.

22 A. We couldn't do it with our equipment. I mean, I suggested it for the University
23 of Utah at that time. I knew of those guys. I didn't know them personally to where I
24 had contact to call and try to make that happen on my own, but I recognized that
25 would have been an interesting measure. But to try to do it with people's feedback

1 from the logbook after the fact is going to be real hard to do. My sense was that,
2 yeah, there were a few more incidents, but what I was seeing whenever I went
3 underground was that these incidents were contained at the miner unit. I mean, from
4 the very first one that Al called me out on, it had covered up the sides of the miner.
5 The one that Donnie alluded to on the 16th had covered up the side of the miners. I
6 mean, you go in there you know that you are moving material on highly stressed
7 ground. It was obvious that those kind of stress relief events were happening, and it
8 had happened like I say, from early on. My feeling was that they were being --- it was
9 occurring to the machine, we were keeping people outby. I thought we were good was
10 my perception of the situation.

11 Q. Would you have ---?

12 A. To my knowledge, the first one that occurred that impacted further back in the
13 area that we had protected with the props was on the 16th.

14 Q. Would you have --- to follow up on this seismic wave thing you were
15 requesting, what ever happened? Did somebody just --- Kravitz said I can't do it with
16 my equipment. Did anybody pursue it any further?

17 A. I don't know.

18 Q. Or did it just drop right there?

19 A. I don't know.

20 Q. You never saw any results of anything like that, did you?

21 A. No.

22 Q. Okay. So Stickler didn't come to you and say, hey, I found this seismic thing
23 that you want and we're going to start recording that for you? You never got that?

24 A. Well, I don't think Mr. Stickler was necessarily out there searching for it. You
25 know he was there whenever ---.

1 Q. He was in charge; right?

2 A. He was there when we discussed it with Jeff Kravitz. I presume that he
3 probably figured it was being taken care of.

4 Q. Would you assume that Stickler was in charge of the operation?

5 A. Well, he was the highest level official, but like I said earlier, when I was in the
6 meetings it looked to me like everyone was there, Al, Richard, and Kevin. They were
7 all there to hear what was being said. I assumed they were making decisions jointly.
8 And as I said earlier, some of the other issues, it was obvious to me that Al was
9 handling it.

10 Q. But the bottom line is you didn't get what you asked for at no time during ---?

11 A. Well, I mean this isn't a slam dunk. It's not like you asked for a screwdriver.

12 Q. I know, Joe. Did you get one or not?

13 A. No, I didn't have the measure that I'd hoped to get.

14 Q. They never did any --- they never brought any equipment in that would be
15 able to give you that capability of ---?

16 A. To my knowledge, they didn't. I learned afterwards that there might have
17 been some additional work done, but that's not ---.

18 Q. But you didn't get any of that information?

19 A. No.

20 Q. Okay. Had you gotten such information, do you think that would have helped
21 you in evaluating the circumstances?

22 A. I said earlier on that the whole interpretation of the seismic activity as a
23 predictive tool is very --- I couldn't find the term for it and I can't find it now. It's
24 uncertain as to how valuable it is. I just was looking for some way to validate. Let me
25 spend just one minute on that. When you look at the seismic events that the

1 University of Utah picked up, you got to keep this in mind, too, not only is it person to
2 person variability but between the University of Utah and people underground, what
3 they experience is different. There are events that historically I think you will see that
4 show up as pretty big events and yet the people underground don't think much of it.

5 You can pull up that University of Utah Website today and look at Deer Creek
6 for example. They're having relatively large events all the time, and yet there's no
7 reports of any concerns for miner safety. So the fact that the University of Utah picks
8 up a big event may have more to do with where that event occurs and how it's coupled
9 into the ground to transmit that energy than it is to what somebody might notice
10 underground. Conversely, we can have an event underground that somebody says,
11 gee, that was substantial, and you go look at the University of Utah Website and it
12 doesn't register because they have certain thresholds that they're looking at.

13 Q. We found that in this. There are a lot of readings where nothing is recorded.
14 Well, we probably didn't put anything in. We also have a lot of notations where
15 something was fairly significant reported but there is no reading from the University of
16 Utah. So we understand that. What we tried to do was correlate if there was a report
17 of one in the log book and also one that correlated at the same time from the
18 University of Utah, we just put them in together. They may not be the same instance.

19 I understand that. But that's the best measuring tool that we have at this time.

20 A. Right.

21 Q. Did you assist Keith Heasley in the modeling, Joe?

22 A. It was more like Keith Heasley assisted me. You know, we asked him --- as I
23 said earlier, we build a model and we couldn't do the topography and the model was
24 somewhat crude because we had to do it all manually. It took all day to sit there and
25 put this in and get it to run. And with what Keith was able to do for us was to take a

1 auto CAD file and generate a more accurate depiction or a more accurate model of
2 the mine, and he also took the overburden and put it in there so it represented. He
3 took an additional stab at putting some material properties in, e-mailed it back to me
4 and said here's what I've done, you can work on it from here. That was the extent of
5 his involvement, and I can't say enough about how appreciative I was to have that
6 help because we could not have done it otherwise.

7 Q. Okay.

8 UNIDENTIFIED SPEAKER:

9 I'm just curious at this time, Joe, as far as what Keith did, was
10 it simply a matter of you not having auto CAD on your laptop? If you had had that,
11 would you have still went to Keith or were there other factors involved?

12 A. Well, to be really precise, you need to have auto CAD, an older version, 2006.
13 You need to have what are called ARX files which are little subroutines that run in auto
14 CAD to generate the output that you need for LAMODEL, so we had that capability in
15 Pittsburgh, but as I --- I can't recall now. If Steve Sawyer was available, Steve could
16 have done it. I don't remember now why, but I don't think Steve was available. We
17 had the capability in the group. I didn't have it on my laptop there. And you know,
18 throughout it hasn't been clear at this point, but there's a difficulty with time difference
19 between the east and west.

20 There's a difficulty with --- the phone system got progressively better and so
21 did the internet connections, but it was painful initially to try to communicate large
22 amounts of data. We even went --- at one point started to get Google accounts for e-
23 mail because I could get on Google and accept e-mail of a certain size that I couldn't
24 do in house. These sound like trivial things, but when you're sitting in that Blue Goose
25 out there and everything is going on around you, it was another stumbling block that

1 we had to overcome to get from point A to point B in the model and in exchanging
2 information.

3 UNIDENTIFIED SPEAKER:

4 Just to follow up one minute. Timewise, you had the
5 capability with auto CAD version that you needed and all that, would you have had the
6 time to do it? Was that also a factor with Keith or somebody else doing it?

7 A. Well, in fact it took a lot longer to do what I did manually than it would have if I
8 would have had the auto CAD and ARX files. That's what it does. It speeds up the
9 whole process dramatically.

10 BY MR. PAVLOVICH:

11 Q. Okay. So Keith basically ran the program with you, and you say that if Steve
12 Sawyer --- if you'd have been able to reach him here or at tech support or wherever
13 Steve is, that he could have run the same thing. But in addition to Keith just running
14 the information for you, did he also give you some expert opinions or some kind of
15 evaluations that maybe Steve wouldn't have given you?

16 A. Well, I'm sure he did. I mean, we discussed the model inputs and some of the
17 results in general returns, but I can't recall any specifics.

18 Q. Okay. But you think he did provide more than just running the program?

19 A. He set it up and like I said he ran a few iterations and said --- as best I can
20 recall, what he said was he noted that if he used a coal strength this high, it seems to
21 be stable. And if you drop it down --- but he hadn't had a chance to do the parametric
22 study to really hone in on what the coal strength would be right where, beyond the
23 tipping, where it would tip one way or the other.

24 Q. Did the results of his feedback, whether it be written, verbal, whatever, in the
25 model sense but also in what he first conveyed to you, did that alter your thinking

1 about this operation at all or what was going on or give you any additional concerns or
2 less concerns? I mean what did his results --- how did that affect your approach?

3 A. I thought I alluded to it earlier that when I saw the results of that model, we did
4 run a few more to try to hone in on the coal strength. But in essence what it told me
5 was that we had reason now to believe that # 1 entry was the right entry to be in
6 because we've seen a more of a wide spread failure. So the concern that I had that
7 the people would come in and say obviously you shouldn't have been in # 1 because
8 it was closer to this gob. We had now a reasonable understanding of why the
9 conditions that we saw made sense now.

10 The second thing is it told me that my original thoughts using rule of thumbs
11 about this were that the influence of that mining that they were doing in the South
12 Barrier section probably had less to do with this than the global mine design issue. So
13 it confirmed those two things, and finally it gave me more hope again that it probably
14 didn't initiate back here where the guys were and they may have been able to survive.
15 It provided more substance to what I felt initially.

16 Q. Okay. In your notes on August 8th, you and Mike provided an opinion of the
17 standing supports. Do you remember what that consisted of?

18 A. On August the 8th, that was at --- I think I'm referring to the six by eight versus
19 the eight by eight.

20 Q. Okay. You think that's what it was. If you remember Joe, when were the rock
21 props first considered? Was that pretty much something they were going to do right
22 off as soon as they could get them there or was that something that came about later?

23 A. Well, I would just be guessing.

24 Q. Okay.

25 A. I mean, it's something that ---.

1 Q. Nobody asked you originally or told you we're going to use rock props?
2 Instead of making a guess, if that didn't happen, if you didn't know, you didn't know. I
3 mean, that's okay.

4 A. The first plan I saw was the one that had the timbers, and I told you that I got
5 involved with the six by eight versus the eight by eight and stuff. Somewhere in
6 there, I thought the presumption was to switch to the rock props. That's what the
7 operator was proposing to use for the recovery operation, when and who and that sort
8 of thing.

9 Q. But somewhere along the line they did switch to the rock props?

10 A. Yeah. That was their plan.

11 Q. Okay. What experience have you had with rock props?

12 A. Well, I mean we were exposed to all different types of standing supports at the
13 roof control specialists meetings that we have, and typically we bring in someone like
14 Tom Barzak (phonetic) to speak about the whole range. Occasionally we have the
15 manufacturers themselves come in and talk about their products. So I don't know
16 whether it was the manufacturer or Tom Barzak, but I do recall talking about rock
17 props at the meeting. How long ago that was, I don't know. But the only time that I
18 really seen them used was at Aberdeen. When we were out on a fatal accident
19 investigation, we saw them used there. They had a two entry head gate system and
20 they implemented a system similar to this around the yield pillar, right adjacent to the
21 stage line.

22 They said that, you know, they do that because that pillar sometimes bumps
23 even though it's designed as a yield pillar. They still have some issues with it
24 bumping occasionally. So they put the props on there and wrap a cable around it.
25 When we were there in the investigation, we saw it firsthand and took measurements

1 of how far up the bump goal was behind the mesh and that sort of thing. So I'd seen it
2 there.

3 Q. How was the cable installed on those props?

4 A. As I recall, and that's been awhile, I'd have to go back and look at the notes,
5 but I think there was just a single cable about mid height and I don't remember ---.

6 Q. Was it wrapped around the pillar?

7 A. I don't remember if it was wrapped the whole way around or whether it was
8 snubbed off in a series of cables. I don't remember.

9 Q. It wasn't just tied off to the last prop though, was it?

10 A. I don't remember.

11 Q. You don't remember. Okay. Do you remember what size ton rock props
12 these were being used at Crandall?

13 A. I'm thinking they call that a 40 ton.

14 Q. Were they later increased to 50 tons, do you know?

15 A. That I should know, but I don't.

16 Q. Did you talk to Tom Barzak about this plan to use these rock props?

17 A. Yeah. There was some point where, and I don't remember the conversation,
18 who asked me or what they asked specifically, but I think somebody said, is there
19 something else out there that we should or could be using? And I don't even
20 remember being asked, but I must've been asked because I did call Barzak and had a
21 conversation with him and said --- you know, described the situation and asked him,
22 you know, of the standing supports that you're aware of, which one would you
23 recommend? And of course you know, he recognized like I did that there's no good ---
24 they're all designed for holding the roof up, not the rib in. But of those, it seemed like
25 the rock prop was the better option. I don't know if he said that or confirmed what I

1 said, but my sense was that he thought, yeah, it was probably the best of what was
2 available.

3 Q. Okay. Did you talk to any of the local people, either inspectors or company,
4 about what they've seen rock props used for before or how successful they were?
5 Had they ever seen them blown out, any of that kind of stuff?

6 A. I don't recall. No, I don't recall speaking to anyone directly about that. Did I
7 go and ask anybody about that?

8 Q. Yeah.

9 A. I didn't go and ask and I don't recall anybody coming ---.

10 Q. Nobody told you. Was this pretty much the something that the company
11 said? Was Laine Adair the initiator of this rock prop issue, or was it kind of a joint
12 team suggestion?

13 A. Well, I would say --- all I can say is that the company made a proposal. This
14 was their proposal. Who initiated it, I don't know. I suspect it was Laine Adair. When
15 you talk to those guys about it, he's a pretty authoritative guy when it comes to
16 describing what they're doing at the different mines. He is a general manager. He's
17 been there a long time. I would suspect that he would have been a key player in
18 coming up with a plan, but I don't know.

19 Q. I think you said earlier you'd seen these rock props dislodged by a shuttle car.

20 A. Yeah. There was one right at the bottom of the crosscut there at 120.

21 Q. Did that concern you at all knowing the shuttle car could knock one out, that
22 possibly a bump could knock one out?

23 A. At the time, I can't say that that ran through my mind. Let me say, when I did
24 the research on different standing supports, I called Tom Barzak. Subsequent to that,
25 there was a meeting and it was in Mr. Murray's building over there, and it was one of

1 these all hands present kind of meetings. And I don't remember how we got around to
2 it, but they asked something about ground conditions. I stood up and basically went
3 over what we thought had occurred and what we were dealing with. At that time, I said
4 I believe what we're seeing is the influence of failure on a wider scale. I didn't believe
5 that necessarily what they were doing back here had a great deal to do with the
6 initiation of the whole incident. I indicated that I thought that did bode well for the
7 miners in here. I talked about the floor heave in here, and I was asked to comment on
8 the support that was proposed by the company. Basically, what I said was I don't
9 know how much these props will withstand in terms of force from a bump. But even
10 more importantly, I don't know what the force of a bump is that we would have to
11 design to. So what I said was, given those uncertainties, all we can rely on is the
12 experience that they've had with this system over at Aberdeen. I said it's my
13 understanding that it has worked with some success over there and it's consistent with
14 what we've seen the South Africans use.

15 If you go to the literature --- I had occasion to meet one of these guys that's
16 done a lot of work with rock bursts. And I've been searching in my mind where I met
17 him and I can't remember now. But there's a technique that they used called pillar
18 lacing where they recognize that they can't reinforce this rock rib and these deep gold
19 and diamond mines to prevent a rock burst. So what they do instead is lace it with
20 cables and mesh so that it bumps and contains it. It doesn't prevent the failure, it just
21 holds it from hurting somebody. And I basically said that, that this technique is
22 consistent with lacing where you're not trying to prevent it, but rather catch it. I said
23 based on all of those things, I think it is the most reasonable approach we have at the
24 moment to try.

25 Subsequent to that, I mean, we got input from a lot of people. A lot's a

1 relative term, but we communicated with the guys back at Brewston (phonetic). Bill
2 Grey sent some stuff from 37 Mine. At one time that they used a cage to house the
3 continuous miner operator in. We talked about that with the operator but, in fact,
4 when you look at what we were doing, putting that kind of a thing in the context of it,
5 wasn't really workable, so we opted to stay with the lexan sheet. Joe Cybulski asked
6 about protective gear for the miners. In my mind, we already provided --- the
7 company was making it available to the guys so we had addressed that.

8 I tried to find the e-mail but I think ~~Ex. (b)(6) and~~ sent something about ---. Did you
9 send me something on steel sets or ---? ~~ATX(C)~~, it got to me eventually and I looked
10 at it. In fact, I think it was Kevin Stricklin asked me to call Mark Skyles (phonetic). I
11 think it was Mark Skyles that wanted to suggest arches. And I remember calling him.
12 I don't honestly remember if I got through to him or not. I tried several times. I think I
13 did talk to him about it once, but I'm not certain.

14 The difficulty with arches is that there were a number of them. One's the
15 company had never used --- I asked them about arches. They didn't have the
16 familiarity with them. As I recall, they said whenever they did the arch structures in
17 the past that they used tri sets and I think they fabricated their own. I just assumed
18 that was for a portal or something. So they didn't have the workforce that was
19 familiar with them, but they did have familiarity with the rock props.

20 The second thing was the exposure when you're setting them. You have a
21 workforce that's not familiar with them and now they're starting to assemble these
22 things up there in the face. Even when you are familiar with them, it's a bit of a
23 cumbersome process to put those things together. There are those structures, like
24 ~~Ex. (b)(6) and~~ had e-mailed to Eric Shearer, but as I recall looking at that, I didn't recognize
25 ~~(b)(6)~~ company. And I think it was dated 15 years ago and I had never seen it used

1 personally, so I didn't think that was going to be something that we was going to get
2 shipped out there to start using tomorrow.

3 I knew that District 5 had done some work with a company developing
4 something like that where they had a shell over top of where you were erecting them,
5 and the thought occurred to me that that might be a system that would be available.
6 But the thought of trying to do that, you needed to have a 14 foot wide structure to
7 begin with because that's what you needed to run the equipment in. Then you had to
8 have something bigger than that to put over top of it, and so you're clearing more out
9 on the ribs to accommodate that. And the thought of trying to manipulate everything
10 when I realized just how difficult it was to get a bolter in and out of there, it just didn't
11 seem to me to be a feasible system.

12 Now on top of that you've got the problem with the legs. You know, on the
13 one hand you say you got rock props and you pressurize these things and crush it
14 against the roof and floor, now a force comes and hits it laterally. It's not made to
15 resist that lateral force, but neither is an arch. Arches, again, are made for vertical
16 loading and they're actually designed for static loads where they're blocked in place.
17 Now you're hitting with a dynamic load from a direction that they were never intended
18 to be used. I kind of thought about that and said okay we've got a 14 foot wide arch
19 with a minimum --- or say a seven or eight foot leg on it. I know that if I'm going to lift
20 something or break something, I need a long lever. Give me a long enough lever, and
21 I can lift the world. Well here you go. All you've got at the top of those things is two
22 bolts, and you've got an eight foot leg, so it's just a force multiplier. So in my mind,
23 I'm looking at the arches as not being any grand idea, plus it's a nightmare to try to put
24 it in there. I mean I could go on, there were other things.

25 Q. Well, I think you made your point.

1 A. My point is that I didn't see that as an easy out.

2 Q. Okay. You mentioned earlier that you saw some rock props or somebody said
3 that they were tilted or whatever. Did it appear to you that they had been pushed out
4 at the bottom or bulged out at the bottom? Or did it appear to you that had they had
5 been hit by something or that they were incorrectly set?

6 A. Yeah.

7 Q. Could you tell?

8 A. Well, I tried to figure that out because it was brought to my attention. You
9 know it's --- everything's --- it's easy to stand back at a distance and analyze some of
10 these things, but here's what I looked at. There was one time that I went up there and
11 all of the props were in a perfect row. I thought boy that looks good until I figured out
12 what they were doing was taking a string and putting it out ahead and then putting the
13 props up. I said we've got to find a better way of doing that. We don't need
14 somebody inby holding string. And it's the same thing with how accurate do you want
15 this thing to be? Do you want someone to be up there with a bubble level making sure
16 it's right? I think they did have a bubble level at one time and they tried to set them
17 vertically. What I think I started to see was that in some places, and I think it was
18 probably when the coal was thicker in the bottom, they would start them vertically and
19 as they pressurized the bottom would kick in. I think it was happening during setting.

20 It was on the 16th, I think, that I saw Virgil Brown underground, and Virgil
21 pointed it out to me. He was concerned about it. We had been kind of watching that
22 early on. As I said, I don't know what date it was, but Donnie Durrant had noticed
23 some of them so we measured across that one point and we found that it just didn't
24 move. So it wasn't something that was a continuation. It just appeared to be that
25 whenever they tried to set them vertically, for whatever reason, the coal crushed out.

1 And it kind of makes sense that the coal would be more solid closer to the rib than it
2 would be out. That seemed to me to be what happened.

3 Q. So they were setting the base of them on coal?

4 A. Yes.

5 Q. They weren't digging down to hard rock to set them?

6 A. No. And then you know --- yeah, the procedure was to dig away the loose
7 coal and try to get down to something solid and then put a wooden header block on
8 top. They pressurized them to 1,000 to 1,100 PSI as I recall. It might have been a
9 little higher than that, and they'd pressurize it, the block would crush out a little bit,
10 then they'd pound a set of wedges down in with a tool that was specially made for that.
11 They'd bleed it off, disconnect it and the water would run out.

12 They did have some failures. When I was up there, I was instructing the guys.
13 They had quite a few failures in a row there. So I went to check out what was going on
14 and I still don't know. It wasn't anything that they were doing because I watched them
15 put them up and pressurize it. So what I would have them do is when that seal burst,
16 it would pop water up out of there, and I'd them spray paint bad on the side and tie it
17 off so nobody would fool around dragging it up there. Waste of time and exposure to -
18 --.

19 Q. So they were actually blowing the seal out at the top?

20 A. Yeah and it wasn't because they were over extended or over pressurized or
21 anything else. It was just they'd get a couple out of a batch that would do that.

22 MR. TEASTER:

23 Is there a maximum pressure that you can put on those rock
24 props?

25 A. I suppose there is. I don't know what it is offhand, but I know that the pressure

1 that they were using worked on the majority of them just fine. But every once in
2 awhile they'd get into two or three of them that would fail.

3 BY MR. PAVLOVICH:

4 Q. So you don't think that 1,100 PSI was exceeding the maximum pressure?

5 A. I don't know what the maximum pressure was, but like I said, it worked for
6 most of them. I don't know what the maximum pressure is.

7 Q. Did Peter Saint or anyone else ever talk to you about an installation of rock
8 props that was used at the San Juan Mine specifically for trying to prevent material
9 from blowing off the rib that used --- I guess a base plate like this?

10 A. Peter showed me the picture whenever he came out to Price to be
11 interviewed. Q. Okay. When he came to Price. Not before the 16th?

12 A. I didn't see the picture before hand, and I don't recall him saying that. It
13 doesn't mean he didn't. I just don't recall it.

14 Q. Do you remember if anybody other than Peter may have said or talked about
15 the San Juan Mine? That San Juan was interested in assisting in this operation and
16 they had this stuff available ready to ship? You never heard anything about that, did
17 you?

18 A. No.

19 MR. PAVLOVICH:

20 Okay. Tell you what, lunch time. It's noon. Let's try and get
21 back as quick as we can.

22 BREAK TAKEN

23 BY MR. PAVLOVICH:

24 Q. Joe, when did you first become aware of the Agapito reports that were done to
25 evaluate the potential mining in this North and South Barrier?

1 A. I think it was within the first couple days. Either the 8th or the 9th. I think I
2 mentioned earlier Mike tried to get that information. I think Billy Owens ended up
3 putting it out on a common drive that we could get to.

4 Q. How did it come about that it was introduced to your knowledge? Was it
5 something Laine Adair talked about to you that ---?

6 A. I don't remember.

7 Q. Don't remember? Okay. Do you remember which reports those were?

8 A. I think we received these three reports.

9 Q. You think there was three of them that you received?

10 A. There may have been four. I was thinking three, but it could have been the
11 four.

12 Q. So if you guys, I guess, were able to get those from where put Billy Owens put
13 them on one of the drives for you that you could access; right? You were able to see
14 them?

15 A. Yeah.

16 Q. Did you use them in any way or were you able to do any kind of evaluations
17 with some of the information that was in those toward helping you to facilitate the
18 progress of this rescue operation?

19 A. I used some of the material properties that they put in the report. I looked at
20 those material properties and tried to build them into the model and duplicate what
21 they had done. I guess in that sense, yeah, I used some of the information to help get
22 a handle on what was going on.

23 Q. Did you actually sit down and evaluate these reports, or did you primarily take
24 some information out for use in your own modeling?

25 A. Yeah. I read the reports, tried to think it through a little bit what they did. We

1 didn't really sit down and spend a lot of time saying, are we in agreement with
2 everything in here or whatever. We did a lot of our own analysis. For example, the
3 ARMPS analysis and that sort of thing.

4 Q. So some of the numbers in here, did you use like coal strength or elastic
5 modulus or mine geometry, and then were you able to use any of that stuff?

6 A. Once again, we looked at it, but we also looked at it like more of a parametric
7 study. We didn't just accept their 1,640 coal strength, for example. We did look at
8 things the way we ordinarily would.

9 Q. What did you think of that coal strength? Did you think that was over
10 evaluated or did you think that was ---?

11 A. Well, it's higher than we would typically use. Yeah, I mean, I looked at it and
12 said well that's a little higher than what we normally use, and I'd look for some
13 justification for why that would be the number we should use.

14 Q. Were you made aware of the bump that occurred while mining was being
15 done in the north barrier on March 11th of 2007?

16 A. The first I heard about that was --- I believe we sat down --- I mentioned
17 earlier that Laine Adair --- we got to sit down with Laine, and he went over the history
18 of the mine and he did mention that they had had a bump up there as they retreated
19 that North Barrier section.

20 Q. Was that a meeting with a lot of people on the 11th maybe?

21 A. No, this was ---.

22 Q. Was it earlier than that?

23 A. He had been, as you might imagine as general manager, I think he was pretty
24 busy getting equipment coming and arranging people to be there and so forth. He
25 finally came and said if you got some time, we can sit down and I'll tell you what I

1 know about the situation, the ground control situation. We sat down. As I recall, it
2 was me and Mike. He reviewed the whole situation.

3 Q. Do you remember what day that was?

4 A. I don't and I don't recall seeing it in my notes. I reviewed them yesterday.

5 Q. Would it have been after you were there a few days?

6 A. I'm pretty sure it was not --- well, it wasn't the first day which was the 7th. We
7 did our debriefing and we went back to the motel. It as a long, long day. I don't think
8 it was the next day because we spent most of that day in the Blue Goose. They were
9 working on plans and getting initial plans approved, and I was doing the modeling with
10 Mike. I don't think it was that day, so it was probably the next day.

11 Q. Did Laine kind of go through that scenario twice? Once with you and Mike
12 and again when you contacted ---

13 UNIDENTIFIED SPEAKER:

14 Keith Heasley.

15 BY MR. PAVLOVICH:

16 Q. --- Keith Heasley?

17 A. I think he may have gone through it three times actually with me present,
18 yeah. Total more after the fact, but the first time I think he went through it with me and
19 Mike. He did it once --- I felt like it was important for Keith as he developed this model
20 for us to hear as well what Laine had told us. So he went over it with Keith. We met
21 there in the engineering office in the back of the building, got him on the
22 speakerphone. Then I think he also might have gone over it one time --- Kevin
23 Stricklin came up and was in on part of it. Again, the timing I don't know.

24 Q. So it wasn't like a big sit down meeting somewhere?

25 A. No.

1 Q. It was more or less just you and Mike and Laine talking about it?

2 A. Right.

3 Q. Did you determine any significance to that bump? I mean as far as leading
4 into this particular bounce that occurred in the South Barrier?

5 A. From my point of view, when you do numerical modeling or when you do any
6 kind of analysis, whether it's with ARMPs or however you approach things, it's always
7 good to have a point where you can go to and say, I know that the condition that we
8 had here was a failure. So if I calculate what that was, that gives me a threshold to
9 stay away from in the future. So from that standpoint when I heard that this had
10 bumped, that was big news to me. That to me was now we've got a point that we can
11 try to calibrate to. That's why whenever I was --- I got Keith on the phone because
12 he's building the model for us. I mean, not that I couldn't have tweaked it when we got
13 it here, but I thought he might as well do it first time through as well as possible. So
14 it's not shown on here, but up there in the north where those pillars were left, the maps
15 weren't particularly accurate. The way the draftsman had chosen to represent some of
16 those pillars as being mined or not mined wasn't right. So we got Keith on the phone
17 with Laine and he proceeded to lay it out. So that was significant.

18 Q. So this map which shows retreat mining to a certain point and then two rows
19 of pillars left and then like three more pillars taken, you've learned that that wasn't
20 correct or is this now the correct configuration?

21 A. We knew then that there were some differences between reality and that map.

22 Q. In this map? Why don't you come over, and look at it and let me know? Is
23 this now an accurate map or is this still a map that is erroneous?

24 A. Yeah, I don't think that represents what really happened in there.

25 Q. Can you kind of tell me what doesn't --- again, this is what you found out

1 between the 6th and the 16th; right? You found out that this was not accurate?

2 A. Well, we got it more accurate during our investigation, but, at the time, it was
3 my understanding that there was a row in here ahead of the --- it would have been
4 inby the two rows that were left, that they didn't mine fully, that there was only a few
5 cuts out of those two blocks.

6 Q. So it'd be similar to this and this is in the March 11th bump photos where it
7 actually shows two cuts taken out of a pillar between the # 2 and # 3 entry inby
8 crosscut 137?

9 A. Right.

10 Q. But that map kind of shows the whole pillar being mined?

11 A. Right. It also shows this block being mined in its entirety; right?

12 Q. It appears as that, yeah.

13 A. All there is is one cut.

14 Q. I see.

15 A. The draftsman was taking some liberties. If there was a single cut taken
16 out, ---

17 Q. He showed the whole block.

18 A. --- he showed the whole block being gone.

19 Q. So you were able to find out more from talking to Laine that this was similar to
20 reality?

21 A. Yeah.

22 Q. Did you feel that there was any significance in the fact that this bump occurred
23 after skipping some pillars and then starting mining again and the fact that the bump
24 on August 6th occurred after some pillars were skipped and then mining was started
25 again or did that not seem significant to you?

1 A. I thought it was a coincidence.

2 Q. You just thought it was more of a coincidence than anything that was a trigger
3 mechanism then?

4 A. Right.

5 Q. Why did you think that?

6 A. Well, again, if I use a rule of thumb here, if you leave these three blocks, you
7 would expect the influence of this gob that you created here to have diminished after a
8 distance that's equal to about nine times the square root of the depth. Okay? So if
9 the depth's 1,600, that's 360 feet. Well, it was less than 1,600 and these blocks are
10 100 foot centers. So they're pretty much outside the range where you would see any
11 influence of this, using that rule of thumb.

12 This incident in the north barrier, the way I looked at that --- when Laine
13 described it to me, he said the pillar up near the solid burst or bumped or bounced or
14 whatever term he used. To me, the implication was that for a pillar up here against
15 the solid to bounce, I thought why would the one up here bounce if this gob was
16 influenced and everything. No doubt it did influence it, but it led me to think that the
17 other influence was this big gob to the north, that there was abutment stress transfer
18 from up there that was sitting hard on this top row of blocks and what little bit they did
19 down here triggered a bump in that pillar a whole lot less than leaving these couple
20 rows of blocks the influence of that. That's what I was thinking at the time.

21 Q. Was that similar to what you thought you were seeing in the South Barrier
22 then as far as really the mining up there didn't trigger anything?

23 A. That was my feeling and I said as much in the meeting in front of everybody.
24 I think it was received well by some and probably less so by others. I mean, I think
25 probably --- well, I'm not going to speculate.

1 Q. Did you read in one of the Agapito reports, the one that recommended that
2 mining could be done safely in the South Barrier, that there was a statement that said
3 based on what happened in the north barrier no erosive pillars should be skipped? Do
4 you remember seeing that?

5 A. I know now. I mean, I don't know that it stuck out to me then.

6 Q. Maybe it didn't stick out to you then?

7 A. I'm aware of it, yeah.

8 Q. Did you think with what you were seeing here and what you were thinking that
9 that was even a valid statement?

10 A. I thought it was a coincidence that these two things --- what I saw in Agapito's
11 report, they attributed high stress to have caused this bump and they attributed it to
12 leaving pillars in the gob and not getting a good cave. So they said in the future you
13 should try to mine everything clean to get a good cave. This is the way I interpreted
14 what they said. I wouldn't necessary disagree with the fact that if you mine it clean
15 you're going to affect a tighter cave and maybe reduce stresses, but, as I said earlier,
16 whenever I looked at the distance we're talking about here, that, to me, said that
17 leaving those blocks --- I just don't see the correlation. I didn't.

18 Q. How about in the recommended length of the pillars? Do you think that had
19 anything to do with assisting or was that detrimental?

20 A. Well, I read their reports and the report said that their analysis had shown that
21 lengthening the blocks would have a limited effect on the overall stability of the
22 system early on. Yet after the incident in the north barrier section, that was a
23 recommendation to lengthen the blocks. I didn't think much more about it at the time.
24 We were focused on a rescue effort, not an analysis of what Agapito said or did. I
25 guess the one way that I did think about it was I was a little bit annoyed --- I didn't get

1 to hear the media too much, but I did hear some things where they were reporting
2 people saying they did the same thing in the south that they did in the north. Anybody
3 should have known it was going to happen again. I was annoyed by that because
4 obviously somebody didn't have the facts. Even though I hadn't evaluated what the
5 influence was, clearly the pillars were different sizes. So I thought that was an unfair
6 judgment by somebody in the media to be making those kind of statements. It's
7 misleading to people, but, beyond that, I didn't even ---.

8 Q. You're saying the difference was different sized pillars, but as far as I guess
9 pillaring in the north and pillaring in the south, they were still doing both?

10 A. That's correct. The situation was explained to me during the rescue. They
11 said we made three changes. We lengthened the blocks, we didn't leave any head
12 coal, we increased the width of the gob in an attempt to get it to cave tighter and they
13 tried to make an attempt not to leave any stumps in the gob. Those were the changes
14 that they had said that they made. Right, wrong, whatever it is, that's what was
15 portrayed to me as their response to the previous incident. I'm just saying that it
16 annoyed me that the press was saying nothing had been differently. That clearly
17 wasn't the case.

18 Q. When you first looked at this map --- I guess did you see a copy of the map or
19 did anybody fax anything to you while you were still in Pittsburgh or did you first see a
20 copy when you got onsite?

21 A. You know, I think something was faxed to me, but, as I recall, it was a fairly
22 small area that they had and it didn't really capture the whole situation. It wasn't until
23 we walked up there and saw the big mine map that we got the first idea of what we
24 were dealing with.

25 Q. When you saw this big mine map, what did you --- did you have any

1 perceptions? Any ideas? Any thoughts? Concerns? Anything in that map?

2 A. Well, I've looked at it and thought about it so much that I'm not sure I can
3 recall what my first thought was. I can tell you what I said in the meeting ---.

4 Q. Were you shocked that they --- let me ask you this. Were you surprised or
5 shocked that they were mining these barriers in this manner with two fairly massive
6 longwall gob areas on each side?

7 A. I don't know that I would --- I can't remember what I thought initially honestly.

8 Q. Had you ever seen barrier pillars mined in that manner?

9 A. No, not that I can recall.

10 Q. Do you ever remember any barriers being mined at arch 37?

11 A. Now, yeah, I do remember. There was a --- actually there was a ---.

12 Q. I didn't know anything about it. I just happened to pull that out.

13 A. Yeah. Actually, there was a fatal down there. That's where the boss Bill
14 Grady sent me the picture of with the remote control mine. As I recall, that what's they
15 were doing. Yeah. That was between the --- yeah, that's pretty similar actually.
16 Yeah. I hadn't thought about that until just now.

17 Q. You don't remember seeing that in other places? I mean, I'm talking mines
18 with some cover. If you had 200 feet of cover, that might be typical to mine barriers,
19 but I'm talking over 1,000 feet.

20 A. Well, they're trying to pull a big block of coal between workings down in
21 Harlan Cumberland 19. That's where they've had trouble with bumps. It's a multiple
22 seam factor as much as it is the solid between two sets of workings there. No, nothing
23 jumps to mind. I had forgotten all about Harlan doing that.

24 Q. When you talked to the miners or anybody on the property, was there an
25 indication that they were in some way mining bottom coal on this section?

1 A. You know, I didn't hear anything about bottom mining initially until --- the first
2 inkling I got was I guess it came out in a meeting Mr. Stickler and Kevin Stricklin were
3 in. The question about bottom mining came up. Someone answered that yeah they
4 mined bottom coal. Someone asked me would it have any significance? I said
5 obviously. They were confirming what I think they already knew. Yeah, it would make
6 a difference if they mine bottom coal everywhere. That was probably the first that I
7 had heard it.

8 It was also an issue about mining this barrier. I think I talked about that
9 earlier. We learned from some of the guys as we were talking underground that they
10 had slabbed this barrier around the leave blocks. I don't recall if they said they took
11 bottom in the cuts or not. That was the limit of what I heard about bottom work.

12 Q. Would that have any significance in regard to what your feelings were about
13 what triggered this bounce?

14 A. Well, it changed my --- what I thought was it could have an impact on whether
15 or not something that they were doing here initiated it. If they were bottom mining and
16 they bottom mined all around these leave blocks, for example, it would have reduced
17 the strength. Depending on --- we knew the coal got thicker back in this area. It could
18 have substantially reduced it, but I didn't know. All it did was pose another question in
19 my mind to say maybe what we're thinking right now isn't as accurate as we thought it
20 was just moments ago.

21 Q. So the map isn't exactly as it looks then?

22 A. Yeah, I don't think that this is correct, either.

23 Q. This is prior to the 16th. Were you ever able to verify with any of the miners
24 or crews or foremen or anybody if those bottom coal in those entries was actually
25 mined or was that just some speculation that was heard?

1 A. Yeah. I just heard it that one time and I was never able to confirm.

2 Q. So those models were basically run with an average height of eight feet?

3 A. That's right.

4 Q. Removal of a few feet of bottom coal could have changed the parameters or
5 results that would have resulted. You said you went to Aberdeen Mine on a visit?

6 A. A fatal investigation.

7 Q. A fatal investigation. That was in 2005 I think you said wasn't it?

8 A. I think that's right.

9 Q. Some time around then. Had you ever been back to Aberdeen since then?

10 A. Just during this accident investigation. We met up there at the office.

11 Q. Did you ever go with Billy Owens on another subsequent visit?

12 A. No, I don't think so. We sent some folks out there. I think it was Jim Vadnall
13 and John Cook.

14 Q. Would that have been May of 2007 maybe? Do you remember?

15 A. Yeah. Actually, I think Jim Vadnall went back. After the accident
16 investigation, Joe and I came home. I think Jim Vadnall either stayed on or went out
17 again. They were looking at reducing the size of the yield pillar, but we weren't asked
18 to investigate. I think Jim went back out and went with Billy. Jim wasn't working for
19 tech support then. He was working for the coal safety division. The next involvement
20 as far as I know that our group had was when Jim and John went out and they did go
21 with Billy to Aberdeen.

22 Q. Do you remember what that was --- I mean, was that as a request from Billy to
23 come out and provide some assistance or was ---?

24 A. I only vaguely remember, but, yeah. The request was for assistance at
25 Aberdeen. If I think hard enough, I might be able to remember what the issue was

1 about, but just off hand I don't remember.

2 Q. Would that ---

3 A. Yeah, that's our control sheet?

4 Q. --- have been your control sheet maybe from that visit?

5 A. Yep.

6 Q. When I handed it to you there, I didn't get a chance to look at that, but what
7 does it say, there was the purpose of the visit?

8 A. Investigation of --- it says in response to continuing bounce and outbursts and
9 floor heave in the head gate and on the longwall face. It looks like probably Terry took
10 the call and relayed it to Joe on the 10th of May and we sent people out 23rd and
11 24th.

12 Q. Would this be a typical control sheet that you would use in the roof control
13 group here if a district called and asked you for assistance?

14 A. Yeah, that's what we try to do.

15 Q. So I was a District manager in 7 again and I called you and said I need some
16 help ---

17 A. Yeah. Your name's on a few of them.

18 Q. --- at one of my mines, or if I sent you an e-mail or if sent you a written
19 request, you would pretty much do this same thing; right?

20 A. That's right.

21 Q. So you would have a full file of all of these requests that were made from any
22 district and then pretty much the results of --- I mean, this would tell you briefly what it
23 was about, but then you would have probably a report generated that would go with
24 each of these; right?

25 A. Yeah.

1 Q. Or some kind of a response?

2 A. Yeah. Sometimes there's just a brief thing written here. If it didn't merit --- if
3 the District --- we'll ask, do you want a written report or do you just want a
4 recommendation? If they said no, you don't need to write a report, you answered the
5 question, then we would just come in here and write a few sentences describing what
6 was done and what was said and close it out. If there's a memo involved, it'll say, like
7 this one does, see memo. This is a tracking system that we use --- there was a time
8 when I thought I could remember everything we did. That's certainly long past now.

9 Q. Would you remember, while you were the supervisor --- I don't know. Is the
10 country broken up into regions? How many roof control supervisors would have they
11 had in your group? Two?

12 A. Just Joe and I. We didn't have a division chief at this time.

13 Q. So would the areas say be divided up like Districts 1, 2, 3, 4, 5 would be Joe's
14 and District 6, 7, 8, 9, 10 would be yours or how would that go?

15 A. No, it's not divided up. I'll tell you our group is small and we've got a lot of
16 talented people that do a pretty broad range of things. We do have areas of specialty.
17 So a lot of times we'll go to the same people for certain kinds of things. Mike and I
18 probably tend to do more of the mine design type work. That doesn't mean that Bill
19 and Joe and others don't, but we probably do a little bit more. Bill and Joe far more of
20 the ATRS caves and canopies and that sort of thing in lieu of. We've got a couple
21 geologists. So we're split up that way.

22 On the management end of it, it's pretty much we try to have somebody cover
23 the phones all the time. Whoever answers the phone is going to take the
24 responsibility for if we need to make an immediate response they're going to call
25 around and find out how we're going to respond to it. Eventually, most of the time, the

1 sheet gets filled out fairly quickly. A lot of times it's just a control number, who called
2 and the mine name just to hold the place in the book.

3 Q. So if District 9 called, it could be taken by either one of you and both of you
4 would have responded and then there would just be a file for District 9 or something
5 that these would go in to?

6 A. Well, it's one book. They're put in there sequentially so that if I need to know
7 what the status is --- if you call from --- you're back in District 7. You call and say hey,
8 your guys were at Manalapan. What's the status of that? I can go and pull out the
9 book and look and see who went and whether it's been mailed out or it's in process or
10 whatever. That's the intent.

11 Q. Do you remember off hand, did you get many requests from District 9 for
12 assistance on bumps or evaluation of plans of mining in deep cover or that sort of
13 thing?

14 A. Did we get many?

15 Q. Yeah.

16 A. Well, a lot of the stuff that's in District 9 is deep cover. So by default, a lot of
17 the requests that came ---

18 Q. Would be deep cover.

19 A. --- would be deep cover. The only ones that I can remember specifically
20 related to bumps is Aberdeen, Foidel Creek. I think we did a little bit of work a few
21 years ago at West Elk. The rest of the ones that I can think of just offhand have been
22 roof control issues where we're looking at preventing roof falls. Those would have
23 been like the south centrals, the Bridger investigation we did. Some of them, frankly, I
24 don't know. There was a time period there where I was off on a training exercise and
25 there were some western trips in there that I wasn't aware of.

1 Q. Would you feel that you're able to provide timely responses and as good as an
2 effort to District 9 that you can to the districts here in the east?

3 A. Well, the travel time is an issue. Though if I'm stationed in Denver, it's not
4 like I can --- it' not like driving from Pittsburgh to Morgantown if you're driving from
5 Denver to Price either. So I mean the distance is what it is. It takes a whole day to
6 get out west. So we usually try to double up to save on the travel expenses and the
7 man hours. If you're flying two people out there, why not do two things while you're
8 there. We've tried to do that as much as possible. Yeah, the travel's a little bit more
9 difficult, but I don't know that being in Denver makes it --- the last time I was in District
10 9, other than this incident at Crandall Canyon, was the Bridger, which is up near Rock
11 Springs, Wyoming. That's a hike from wherever you are.

12 Q. But you feel like if I made a request, you provided support in a timely manner
13 as you could have? You didn't wait two or three weeks until you had two events to go
14 cover. You just get somebody out there.

15 A. Oh, no. Yeah.

16 Q. I realize if it takes a day to travel, it takes a day to travel. If you have to drive
17 to Birmingham, it takes you a day to drive to Birmingham too.

18 A. Let me qualify that trying to double things up. I mean, that's a nice, efficient
19 way to do it, but it depends on how urgent something is. If it's a non urgent situation,
20 then we will try to do that. If somebody says no we have a situation right now --- you
21 know a lot of these things that we've gone out on had some lead time on them. A
22 good example is Emery. We've been out there a number of times to look at proposals
23 from the company to continue to mine with no roof bolts or extended cuts over 60 feet
24 and stuff like that. Well, there's no urgency. The company is saying we're going to
25 propose this. We need to evaluate those conditions, but the plan's months and

1 months from being approved.

2 Q. When you --- back at another question about that seismic data. Did you
3 contact the University of Utah to try and get some of that?

4 A. You know, I tried to contact the University of Utah and I was trying to think of
5 when I did that. I didn't know those people firsthand at that time. I don't think I had
6 ever met --- well, I knew people at the University of Utah. Bill Paraso (phonetic) and I
7 knew Mike Nelson from MSE meetings and things. I didn't know the seismological
8 people, but I did, at some point, either through the internet or through the phone
9 service try to get Walter Arabaz's number and called a number of times and never got
10 him, but I was trying his home number. I didn't --- in retrospect, there were probably
11 other ways, but that's what I tried.

12 Q. I guess that was --- you were trying to get the information from those people,
13 which is kind of what you were asking Kravitz's ability to do with his system or was it
14 something different that you were looking for?

15 A. I can't recall now. I mean, there's a bunch of reasons why I might have been
16 calling and I don't remember at that time what it was. You remember I said there were
17 questions about the accuracy of the source location? I mean, I could have been
18 calling for that reason too, just asking to put a confidence limit on the location. I don't
19 remember why I was trying to call. We did call the University after the fact. We
20 convened that panel and ---.

21 Q. Did you ever see some kind of a seismic log posted in the mine or shown to
22 you by anybody there at the mine, the engineering group or anyone, while you were
23 there on the ---?

24 A. No.

25 Q. Never did see one?

1 A. Not that I can recall.

2 Q. Was there ever any discussion, to your knowledge, among the inspectors
3 either with you or to you about maybe stopping this operation because of their fears
4 for safety or the dangerous conditions they thought they were in? Do you remember
5 anything like that, Joe?

6 A. No. I mean, I remember someone said to me one time we're going to end up
7 with one of these things up our ass, but it was an aside and it was in a moment of --- I
8 didn't take it to be a serious statement to me, Joe, do you think it's time that we ---? It
9 was a comment, but that was ---.

10 Q. Nobody ever asked you that and to your remembrance, Al Davis or Kevin
11 Stricklin or Mr. Stickler, neither one asked you that?

12 A. No, I don't think so.

13 Q. You don't remember anybody coming up and saying Joe give me your
14 opinion, do you think we should stop it's too dangerous, do you think we should
15 continue?

16 A. No, I don't remember. I thought you meant somebody --- one of the guys I
17 was working with underground.

18 Q. Well, yeah, I did mean that to begin with, but then I'm also meaning some of
19 what we would call MSHA decision makers asking for an opinion on that. Nobody
20 ever asked you?

21 A. No. I guess it was the 14th there was a meeting in Mr. Murray's trailer. The
22 emphasis was on how were we going to go faster. I didn't --- that was what appeared
23 to be ---.

24 Q. Who asked you that question?

25 A. Well, it wasn't me. It was addressed to everybody.

1 Q. Who asked it?

2 A. Oh, Bob Murray was kind of leading that aspect of the meeting. I can't recall
3 even --- I was up on the mountain. Mike and I went up there to try to confirm what
4 was going on underground with this big failure. We put that together, at least in our
5 minds, we felt pretty confident that this was a broad failure. We thought, well, if it's a
6 failure on that scale, maybe we can see subsidence cracks on the surface. The
7 company suggested that we take the governor's helicopter and fly up there, which
8 neither Mike or I were too crazy about. We managed to not do it that first night
9 because the weather was bad, but the next day we thought we probably should
10 because it was the most efficient way to see. So we flew up there and the guy circled
11 around and we thought we saw a few things on the surface so he landed and left us
12 out. We went down and checked it out and came back up. A while later, I don't
13 remember if somebody told me or I noticed my phone had a message on it, but there
14 was a message from Al Davis saying there was a meeting down below and they --- I
15 think he said Mr. Stickler would like me to try to be there.

16 They weren't sure even where I was. I thought well there's no way we're going
17 to get back down there in time for this meeting. Just about then here came the
18 helicopter guy back. He was --- no, I take that back. We may --- anyway, the
19 helicopter comes back and he was delivering food up there so he flew us back down
20 and we managed to get up to the meeting. I came in late, Mike and I, and the late
21 part of it was the emphasis on we needed to move faster, that we've made
22 improvements in --- we've done more to organize things and he was speaking more to
23 Laine Adair and Gary Peacock and those guys. The emphasis was on we needed to
24 go faster.

25 Q. Were you asked to respond to that in any or your opinion of it?

1 A. I can't remember what I was asked about.

2 Q. What did you think when they thought we need to push on faster? Did you
3 think that was viable with what you were seeing down there that faster was better or
4 slower was better?

5 A. Well, I understood the need --- again, this is on the heel's of hearing
6 something and so forth and we realized that we're this many days into it. We needed
7 to get there. I guess in the back of my mind I knew too that what I had seen, for
8 example with longwalls and bumps, is usually when you get into the high stress ground
9 you slow down and allow time for things to relieve. I'm not sure if I thought that at the
10 time or later, but --- the discussion wasn't --- my point was that the discussion wasn't
11 about whether we should go or not go. Clearly it ---.

12 Q. It was how fast we should go.

13 A. Right.

14 Q. Did Stickler or anybody ask your opinions during that meeting?

15 A. Well, I tried to think back to that. If they wanted me there, they must have
16 asked me something. For the life of me I can't tell you what. Maybe Mike can
17 remember.

18 Q. They didn't ask you do you think it's viable to speed up here or anything like
19 that?

20 A. I don't think so.

21 Q. Did you ever talk to anybody in BLM while you were out there between the 6th
22 and the 16th?

23 A. Someone at the Price field office passed along a note saying this fellow called
24 and he said he has some information that might be useful to you. I can't remember
25 the name. I tried to call him back, didn't get him and I kept the name. I believe he

1 was a guy that showed up later on that worked for --- you know, there's three or four
2 different agencies. BLM, the Forest Service, Dogam (phonetic) and something else.
3 One of the fellows, I can look up his name, was there pretty often. He was a former
4 geologist who worked for one of those agencies and he wanted to be involved.
5 Whenever I spoke with him and tried to quiz him on what he knew that could help us,
6 it didn't seem that he had a great deal. It was more to the general geology of the
7 region. Mike had already made contact with someone at BLM and had made
8 arrangements to meet with them and get some better information. So I didn't really
9 pursue anything with the guy that was there locally. It's probably worth me pointing
10 out that throughout this process, we got information from a lot of people. Some of it
11 solicited. Some of it unsolicited. It was difficult at times to deal with some of the
12 unsolicited advice.

13 We had a guy call one day. He called the governor. The governor forwarded
14 the call to us and somebody said you need to talk to this person. I got on the phone
15 and spoke with them for a half hour. Essentially he had all the answers, but he didn't
16 want to tell me because if he told me, the government would steal his idea and he
17 wouldn't get paid. So that was like the one end of the spectrum. After I quizzed him
18 enough on what he wanted to do and it seemed to me that none of it made sense, I
19 tried to be polite and just get off the phone and get to something productive. There
20 was a lot of that. Sometimes in the downtime you share stories with the engineers in
21 the other side because they were getting calls too, people with the government had a
22 secret laser gun that will belt its way through there and create a sealed tunnel for you.
23 You think this isn't real, but it is. So there was some of that we had to get to. We
24 also tried to solicit advice from guys that I knew had real legitimate experience with
25 ground control and bumps. We weren't always successful.

1 Chris Mark is a noted engineer for Pillar Design. I thought he'd be a good
2 person to speak with. I made a number of attempts to get in touch with him. It turned
3 out he was vacationing in the Canadian wilderness and the only way to get a hold of
4 him was through the Mounted Police. So I left word with his daughter. She got word
5 to him. The minute he came out of the wilderness he called. I think that wasn't until
6 the 14th. I tried to call Tony Yonikeoni (phonetic). Tony was also wilderness
7 backpacking in West Virginia and was out of touch. So I left a message with his
8 daughter. Once again, as soon as he ---.

9 Q. Do you need a minute?

10 A. No, I'm okay.

11 Q. You never did meet Steven Falk until after the 16th did you? With BLM.

12 A. Gee, I didn't meet him until we did interviews.

13 Q. So you never heard his name or anything about him visiting the mine or
14 anything like that?

15 A. That wasn't the fellow I was alluding to earlier.

16 Q. That was a different guy. Okay.

17 A. Tom --- I could look up the name.

18 Q. That's okay. When the accident occurred on the 16th ---.

19 MR. PAVLOVICH:

20 Hello, ^{Ex. (b)(6) and} Maybe we should all say that in unison.

21 A. For the record.

22 MR. PAVLOVICH:

23 For the record, it's 1:47.

24 BY MR. PAVLOVICH:

25 Q. After the accident on the 16th --- where were you on the 16th? Were you at

1 the mine?

2 A. Joe Cybulski and I had worked at the mine during the day. As I recall, we
3 went underground twice that day. After we came out, we drove back to the motel. I
4 got a shower and had just laid down on the bed and flipped on the news and I saw the
5 ambulances and the bar across the bottom. So I called up to the command center
6 and they said yeah there's been an accident. I don't know who I talked to. I tried to
7 call Joe a couple times. His line was busy, so I just jumped into my clothes and went
8 up to his room. We drove up there as quickly as we could. We passed probably the
9 last of the ambulances while we were going. So by the time we got there, I think all
10 the injured were out, but the rest of the people weren't out of the mine. The rest of our
11 people.

12 Q. Did you go back in that evening at all to look at anything?

13 A. I think once they did the headcount, the decision was made that nobody was
14 going back in that night.

15 Q. So primarily no one went in after that. It was just waiting for everybody to
16 come outside. After the accident occurred on the 16th, there was a panel of ground
17 control experts convened. Were you involved in that process at all as far as
18 suggesting that this panel be convened and recommending names?

19 A. Mr. Stickler came to me, as I recall, and said he'd like me to put together a list
20 of names of folks that we might invite to come out and actually come to the mine site
21 and sit down and discuss where we might go from here as far as another attempt to
22 get to the miners from an underground location. The way it was explained to me is
23 we'll put together a list and the company's agreed to put together a list and we'll sit
24 down and compare notes. That's exactly what we did. I put together a list with names
25 and dug up phone numbers. They did as well. We met in front of the Blue Goose,

1 David Hibs and myself and I don't know else. I mean, Joe Cybulski was there, but I
2 don't know who else from MSHA might have been involved. Not surprisingly, we got a
3 lot of the names the same. So we agreed on --- I forget how many initially. I made
4 the calls and invited them. It took a while to get a hold of some of them. Again,
5 vacation season was there. The local guys, Morgan Moon and --- Morgan Moon was a
6 guy that I knew had bump experience from years before. When I was at the Bureau, I
7 spoke with him periodically. He probably doesn't even remember it.

8 So I thought he might be a good person with local experience and local
9 knowledge. The idea was to put together some folks that weren't just all theoreticians
10 but rather some practical people, some people with bump experience, some folks with
11 just general mine design experience, western and eastern and all around. So we
12 ended up with Hamid Maleki who was a consulting engineer with western experience.
13 He did his doctorate work in mines in that area. He does a lot of work out there still.
14 We originally invited Vince Scovazzo from John T. Boyd. Vince personally agreed,
15 but he needed to get clearance from the company. Apparently, the company attorney
16 said no it's probably better not to participate. The liability thing did end up being --- I
17 think once folks got there and they took a broad view of what they were doing, they
18 realized that there could well be some liability issues and so it was a concern. We
19 ended up with the folks that were on the list and we tried to set it up as soon as
20 possible. They all agreed that they would expedite things and come out within a day I
21 believe.

22 Pete Swanson wasn't --- he was a person that --- what I did was I --- we
23 agreed on this list of names. Those folks were going to come out. In the meantime, I
24 got a bunch of other people lined up that I thought could be of use to the panel and
25 had them ready and waiting for a phone call. So when the panel did convene, we

1 kicked things off in the morning over there in Murray's building, the trailer he had
2 pulled in, and I guess I kicked things off with an overview of the whole thing using
3 underground photos and mine maps and some of the data that we collected and so
4 forth. I gave the overview and then it was kind of an open discussion. The group then
5 went in to another smaller trailer that we had rented and parked beside the Blue --- we
6 being MSHA, beside the Blue Goose. They had an opportunity then to talk amongst
7 themselves. What they did then was to call some of these folks that were on the list.
8 Guys like Dr. McCarter at University of Utah. That's whenever they had an
9 opportunity to hear from him about the seismic events and the data and how it was
10 collected and all that stuff.

11 Then there were support manufacturers and others that we had available.
12 They heard what I had to say. They heard what the --- I mean, I had arranged for Ron
13 Paletta to talk about his experience, Donnie Durrant to appear and speak and tell this
14 panel what he had experienced working dayshifts. Laine Adair spoke, gave the
15 background of the mine. There may have been a couple others in there that I'm not
16 remembering. After all that information, the panel basically said thanks Joe for your
17 assistance and we'll let you know when we're done and I exited. They worked into the
18 evening and the next morning. Then we met in Mr. Murray's trailer again and they
19 read their statement and entertained a few questions and departed.

20 Q. So they never did go underground?

21 A. No.

22 Q. Do you know why?

23 A. No.

24 Q. Do you think that --- you mentioned liability earlier. Concerns about liability.

25 Do you think these people all had concerns about liability and it was just a lot easier to

1 say stop as opposed to what they really thought or did they really think you should
2 stop?

3 A. Well, I mean, I ---.

4 Q. Did anybody ever say anything?

5 A. No. I think they were saying --- after the fact, they came to me and said look -
6 -- I think they came to me because I was the guy that invited them there. They said
7 some of us are here to do our best as citizens. We're trying to do the right thing, but
8 we recognize that we could be potentially liable. So the agency looked into providing
9 some kind of insurance for the panel, but, as I recall, that seem prohibitive. So what
10 we ended up doing ---.

11 UNIDENTIFIED SPEAKER:

12 Joe, I'm not sure we should get into the --- you're talking about
13 what --- the solicitor's office ultimately got involved in that issue.

14 A. Yeah.

15 UNIDENTIFIED SPEAKER:

16 Right. I don't know if we should get into that. There's some
17 attorney-client issues there.

18 A. Okay.

19 BY MR. TEASTER:

20 Q. What would have been your recommendation as far as continuing or
21 discontinuing the operation?

22 A. Well, I was a little shell shocked, as you might imagine. All of us were having
23 lost Gary Jensen in the process. On the one hand you hate to not continue. I mean,
24 we made such an effort to try to reach those guys. We know what's stopping that.
25 You know what --- you read the statement that those guys issued, you knew what it

1 meant. The chances of recovering those men were virtually non existent at that point.
2 So for me personally, that was a difficult decision to make, not that I was making it.
3 You're saying if I had, that would have been difficult to say. On the other hand, just
4 having lost Gary, we knew that what we thought at the time was a reasonable support
5 system to make this attempt had failed. So we wanted to go back with something that
6 we believed was better. We convened a group and they can't seem to find anything
7 better. I couldn't trump that.

8 Q. Would you characterize their findings as we can't recommend anything any
9 better or it's just too unstable, too dangerous an environment to even continue under
10 any circumstances?

11 A. Well, all I can do is read it the same way you do. I mean, I think they tried to
12 pick their words carefully and state exactly what they thought. So I mean, I just not
13 venture an opinion. I can read it and you can read it. You're asking me what they
14 thought, and I don't know what they thought.

15 Q. No, I asked you to characterize what they said. Did they say --- were they
16 saying that it was unsafe to work or that they didn't have another alternate support
17 system that would have provided support?

18 A. I don't know. I do know that there were --- they considered quite a few
19 different options. I think there's getting there and then there's doing something once
20 you're there. If I can sit on the surface and drill a borehole down and drop somebody
21 down in a capsule, then what would be the difference of some of the techniques that
22 you might consider to use in underground approach?

23 For example, I bring in a tunnel boring machine and go in there. I don't know
24 if it's cost effective, but it's a possibility to get in one of those sandstone layers and
25 drive a tunnel. Once you pop up back there, it's no different than dropping somebody

1 in a capsule really. What do you do? I concurred with Mr. Stickler's point of view at
2 the time, which I think he stated pretty well, that if we dropped a camera down there
3 and there was a person standing there waiting to be rescued, that would warrant some
4 of those actions. If you've got to explore, you've got to think about what you do once
5 you get back there, whether it's underground or from the surface. So I'll tell you I've
6 thought and thought about what could of, would of, should of and I don't have an
7 answer.

8 Q. Did they develop a formal report or was it just that statement?

9 A. Just that statement as far as I know.

10 Q. Do you know what data they looked at, other than the briefing that you
11 provided and Ron Paletta and the others? Was there any data that they had? Did
12 they review the logs of the seismic events?

13 A. I don't know what they might have requested. I don't know.

14 Q. Do you know who provided the data that they looked at?

15 A. I provided most of the maps. Before they even got in the room, we had
16 printed out some of the maps that we knew they would be asking for. I mean, we're all
17 ground control people. You can anticipate what some of their needs are going to be.
18 So Joe and I had already prepared a lot of that. I honestly don't remember what they
19 might have asked for that I gave them after that beyond that. I don't remember, but I
20 don't think there was a lot.

21 BY MR. PAVLOVICH:

22 Q. Joe, when this happened, these people were actually asked to come onsite.

23 Prior to the accident on the 16th, was there any discussion or contemplation
24 whatsoever about bringing some of these experts onsite to help?

25 A. I hate to ask you, but you can ---?

1 Q. I know you made some calls, but ---?

2 A. Can you say the question again?

3 Q. After the 16th, you brought this panel of experts. They literally came onsite to
4 make an evaluation. Okay? Prior to the accident on the 16th, from the 6th to the
5 16th, was there any consideration then to bring any of these experts onsite to assist
6 with the rescue operation or to advise?

7 A. Well, I know --- I think it was available to us. Like I said, I had asked Mr.
8 Stickler about Keith Heasley and having him do some work. He indicated you can
9 bring whoever you want. So I think the door was open. Like I said, the couple of
10 people that I called I couldn't even get in touch with. The panel that we convened
11 after the fact, two of them were local folks with mining background that we had a lot of
12 local mining background there. The thought was on the panel, you couldn't have
13 somebody that didn't have a real knowledge of the mining process and the needs for
14 the equipment and that sort of thing otherwise --- you needed somebody on that panel.

15
16 I felt like when we were we had that with the operator. They knew what
17 equipment they had and they had a good knowledge of the local geology and that sort
18 of thing. So I guess at the end of the day, I don't know who we would have brought
19 on. I mean, Hamid Maleki came out as a consult. Was there another consultant? No.
20 Vince Scovazzo volunteered and then didn't make it. I mean, aside from those
21 couple guys ---.

22 Q. They provided you this Agapito information. Did they ever say we'll bring
23 these Agapito guys out to help?

24 A. It was never discussed.

25 Q. They never brought that up? You didn't ask them, hey, if you got these guys

1 that are knowledgeable, bring them out here?

2 A. No.

3 Q. Do you know Billy Owens?

4 A. I know Billy.

5 Q. Do you think Billy's got a pretty good background in western ground control
6 and bumps?

7 A. Yes, I do.

8 Q. Did you ever ask why Billy wasn't there?

9 A. I know Billy was on the phone quite a bit. He was in communication with --- I
10 know on several occasions he spoke with Al Davis from Denver. I never asked.

11 Q. Nobody ever said we're not bringing Billy or we should have brought Billy or
12 anything like that?

13 A. No.

14 Q. You never heard anything about it other than you heard that he was on the
15 phone sometime?

16 A. Yeah. Gary Jensen was there too, which Gary --- he wasn't at the time, but
17 prior to that he had been a roof control specialist.

18 Q. Did you revisit the site of the accident with the accident investigation team?

19 A. Yes.

20 Q. How far were you able to get on that day? Right up to the accident site?

21 A. Yeah.

22 MR. PAVLOVICH:

23 Okay. I know you got some.

24 BY MR. TEASTER:

25 Q. One thing just to follow up on some of the discussion you just had. When you

1 got a fire or you got an explosion or something, you look at gases to determine
2 whether it's safe to continue. You look at your oxygen, your methane, CO. If it's a
3 roof fall, you can look at the structures, look at the falls. You can pretty much
4 determine when you're going to have a pending fall. We don't have anything
5 apparently on these bumps because we have a lot of bump activity going on
6 throughout the rescue effort. When these experts came in, they looked at the data
7 and said it's just too unsafe to continue this operation. In essence, that's what they
8 said.

9 Is there something that we can gather from what information they looked at
10 and come to a determination where we could make that determination fairly early on
11 in the process if it's actually too unstable to continue?

12 A. Well, I don't know that --- that's one of the things that we hope to address in
13 our accident investigation to say, you know, what we can we learn from this and what
14 can we do differently. I don't know that I have a good solid answer formulated. I think
15 part of the response that we took --- when you look at what we did, we patterned ---
16 the operator proposed a support system pattern after what they do at Aberdeen. It had
17 been successful there. We implemented that. The only time that I was aware that a
18 bump actually tested the system was right at the corner of the 120 crosscut. I
19 happened to be right there when it happened. That pillar between 119 and 120
20 bumped a little bit and it filled in the # 1 entry side, the screen. It filled that in. I was
21 in the crosscut. It rolled some stuff out at my feet, but nothing. Just nothing to --- it
22 didn't expel a lot of material.

23 MR. PAVLOVICH:

24 It wasn't propelled off the rib then?

25 A. To my knowledge, that was the only incident where the thing got tested. You

1 looked at it and it withstood there. So you say as long as it's withstanding what we're
2 seeing, we have no reason to doubt that it's not sufficient. The bumps that I was
3 asked to go look at, occurred where the mining machine was operating and it was
4 filling in on either side. As long as the activity occurred there, that's kind of what you'd
5 anticipate. As you're disturbing something, that if it was going to occur it would trigger
6 then. Then we had no reason to doubt that what we were doing wasn't an effective
7 deterrent as we're mining up through there.

8 Once that failed, I think the group that came in said okay this failed. What do
9 we have that's a better approach. I think they had a different thing that they were
10 considering than we were at the time. As I said, this was kind of an unprecedented
11 thing. Once you had a failure, now this group was asked a different question. I don't
12 know if that answers your question.

13 BY MR. TEASTER:

14 Q. So you was using the best system that you had and you was depending on
15 that to protect you from any type of bump. Then when that failed, it was a much
16 easier decision as to whether to continue that ---?

17 A. That's right.

18 Q. You didn't have anything else you could provide?

19 A. Right. That's my perception.

20 Q. I hope that you folks through your investigation and all this analysis and stuff
21 that you're doing can come up with something to get some predictability as to
22 determine these things. I'm not really familiar with bumps. I've heard about them, but
23 --- I mean, I hear about them now about these mining these longwalls and they got all
24 these shields and all this protective equipment and there's like grenades going off here
25 and there. Every now and then it goes off and we have some fatalities as a result of

1 it. So I just hope we can come up with something that's going to provide some better
2 protection for our miners.

3 I'm going to back up just a little bit to get some clarification on some things
4 that Joe had discussed earlier. You had went underground on the 7th. As I
5 understand it, you went under there, primarily you and Mike, to determine which was
6 the best entry to advance in. You went in the mine at 5:30. As Joe pointed out, that
7 plan was approved at 5:50. So 20 minutes after you went underground, the plan to
8 advance in one was approved by MSHA. Did you make any calls outside or was there
9 any --- it doesn't sound to me like you had enough time to get there and make an
10 evaluation and call out.

11 A. I mean, I don't recall Gary Jensen calling out and I certainly didn't call out on
12 the phone.

13 Q. Did Gary share with you an opinion as which was the best entry to advance
14 in?

15 A. Well, you know, it was one of those situations where we're walking around,
16 we're talking out loud, just thinking out loud, but I think we all reached the same
17 conclusion that it was the least affected entry of the four.

18 Q. You mentioned earlier when you came out of the mines on a routine basis that
19 you would provide the information that you had learned from your visit underground,
20 you would share that with whoever was in charge there at the command center. You
21 said sometimes it would be Bill Taylor. Sometimes it would be Al and Mr. Stickler and
22 Kevin. Who was the most prevalent person there when you came out of your mine
23 visits and provided that information?

24 A. It really was not the same person all the time. There were --- it seemed to me
25 that Mr. Stickler was more involved in the family meetings and those types of things.

1 So often times he would be at the family briefings and the media type events.
2 Depending on when those were, and the times varied I think over the course of the
3 time that I was there --- so there were times when he would be there and there's time
4 when he wouldn't be there. It was the same with Kevin and AI, too. I think AI got
5 involved in some of the family meetings at one point. So there were times whenever
6 those guys would be there. There were times when they weren't. There was always
7 somebody in the command center. I don't want to portray this as though I was terribly
8 diligent in looking for the same person every time, too. I mean, I tried to relay --- if I
9 knew something that I thought was important, I would seek somebody out and tell
10 them. There were probably times whenever I came out from underground and there
11 was nothing that I thought was really notable and I went off and did my own thing.
12 There was a time whenever we did tell everybody at the command center that we
13 were out because there was --- the log in and log out system changed periodically
14 several times.

15 Q. How?

16 A. Well, as I remember it, first we were telling them at the command center when
17 we came out. Then there was a time when they said no go up to the Conspec room
18 when we come out. Then there was another time when we had a sign in book in the
19 bathhouse. Then there was another time when they had somebody standing out at the
20 portal with a notebook in their hand and the book inside and the Conspec. So it was --
21 - it changed over the period of time. I kind of just decided that it must have been they
22 were having some difficulty keeping track of people because there were a lot of
23 people and they were just trying to ratchet up how tight they made the system.

24 Q. Joe, there was a discrepancy in the initial map that you and Mike had received
25 on the area where the maximum cover of that ridge went through. Can you explain

1 how that came about and how it was correct?

2 A. We originally asked for a map showing the topography. I believe somebody
3 either made the map or it was already made and they handed it to us. It looked like
4 they took a mine map and either superimposed it on a topographic map or vice versa.

5 When the two were overlaid, it wasn't right. We didn't know it initially, but Mike
6 somehow figured it how. Frankly, there was so much going on, especially early on
7 trying to get in touch with people and get information and do the calculations, that I
8 told Mike just focus on that. Try to get a good map put together. He stayed outside
9 and I went underground and spent just a shift listening to things. Well, that wasn't all,
10 but that was one of the purposes.

11 Q. Could you tell us how the wire ropes were anchored from the ends?

12 A. Yeah. Initially they used one cable. It was my understanding that that's what
13 they did at Aberdeen. They would have --- back in the crosscut, they would set one
14 prop sort of back in the crosscut and they would use it as an anchor point. They would
15 go around and they would wait. Initially, they waited until they got all of them in and
16 then they would put one on the other side in the crosscut. We had a meeting on the
17 11th I think and I said that that's a great idea to put the cable around there, but it's
18 really not providing the protection until they're all in and we've got people working in
19 there all that time. I said is there any way we can try to carry it along. So I think they
20 modified things so that they would nip that off more periodically. It was a pain to do
21 that, but I think it was worth it because you didn't wait until the whole thing was done
22 until you had the cable around it.

23 In the same meeting, I think Mr. Stickler raised the question is one cable
24 enough? They said well, we can put two on there. Somebody said well should we put
25 it at the top and the bottom or the middle and the top. One of the company people

1 said well, we can put three. We'll put one at the top, one at the bottom and one in the
2 middle. So that's what they ended up with. So then what they did was they put ---
3 they didn't anchor them all to the same post in the crosscut. They would anchor it
4 one, two or three different posts.

5 They used --- is it a Crosby clamp? On some of them. Then on others, they
6 braided them. I questioned about the braiding the first time I saw it. I mean, I've done
7 some of that, too, but it wasn't in a critical situation. So I questioned it. I said is that
8 going to be acceptable? One of the inspectors that I don't remember he indicated that
9 that was a pretty reliable way of ending the cable. So that's what they were doing.
10 There were some concerns. I mean, I had concerns too about relying on the cable to
11 have this thing lace everything together so it would resist. One post wouldn't be able
12 to go without some of the others without breaking the cable. I was concerned about
13 how they were anchored.

14 I went out and surveyed in the parking lot their roof control materials and I
15 found that they had had a bunch of trusses. The trusses had one of those big shoes
16 with you put the shoe up with the ankle bolt and then you put the cross member on the
17 shoe. I went and talked to the company about maybe using some of those to anchor if
18 we could get it. The difficulty was putting them in, where to put them and how to hold
19 them. I could not think of another way to improve on this. So it wasn't like we didn't
20 think about it.

21 Q. Do you know how far back in the crosscuts you were setting your anchor
22 jacks?

23 A. They didn't set them very far back. I mean, it was just off the corner.

24 Q. You set those at ever intersection?

25 A. Yeah. To my knowledge that's what they were doing. Of course, on the left

1 side you couldn't do that. It wasn't back in at all because that was straight.

2 Q. You said that was your understanding the way they done it at Aberdeen?

3 A. I'm not sure about Aberdeen if they went all the way around or whether they
4 nip it off and do it in pieces. I just don't know.

5 Q. I mean, I read somewhere where they was going all the way around the block.

6 A. Yeah. I know they go all the way around the block, but I don't know if they do
7 it with one cable or whether they nip it and do it in several pieces. Something I
8 wanted to say earlier about those brackets. I'm not sure how something like that, had
9 we tried to implement it, would have been doable in some instances. As it turned out -
10 -- this didn't come up, but I don't mind offering it. As we were mining up through there,
11 the left hand side, the barrier side, was standing up straight like they were cutting solid
12 face coal. That barrier had shoved out there eight to ten feet. I certainly had never
13 seen anything like it. Because the rib was standing so straight up, we went in to look
14 specifically at it. When the report came out, they had described what they were
15 seeing. I was concerned --- usually when you see a face standing straight up like that,
16 it's an indication that it's really seeing a lot of stress. I've heard people say that on a
17 longwall face, for example, as long as it's sloughing off and you're less concerned
18 about it bumping. It's when it's standing up real straight it's got the strain energy to
19 bump. So we went in to look at it. I was pretty concerned. I think Al Davis and some
20 others were too.

21 In fact, Al brought up the possibility of shot firing as a distressing technique.
22 My impression was that the company wasn't too receptive about it. I don't know if
23 anybody asked me or not. I can tell you what I was thinking at the time, whether I said
24 it or not, was I was concerned about doing distressing techniques as shot firing
25 because it's also a pretty unpredictable business. You're asking somebody to go in

1 there and drill holes to load. When you do shoot the shots, where is it going to bump
2 and all that kind of thing? So I've always been apprehensive about distressing
3 techniques. But it was raised and far be it from me to say that it might not have been
4 a good idea, but it wasn't implemented.

5 As it turned out, that straight up and down face was not problematic. When
6 the bump occurred on the 16th, it wasn't the panel side or the barrier side that
7 bumped. It was the pillar. Having said all that, that left hand side being straight up
8 and down like that, the only way we could have implemented a system like that would
9 have been if you could have offset that from the left hand rib far enough to allow that
10 angle to fit in there. You know what I'm saying? It was so straight up and down over
11 there that the steel props were set pretty close on that side. You would have had to
12 offset them if that angle prop were in there. So you would have had to make up for
13 that on the right hand side by removing more coal. That might have been a little bit of
14 a problem. I don't know if it would have been insurmountable, but it would have had
15 to been addressed.

16 MR. PAVLOVICH:

17 That's on the left side of the entry?

18 A. Yeah. The right side was pretty much, as they moved the angle of the post ---
19 .

20 MR. PAVLOVICH:

21 On the right side you were trying to leave a gap between the
22 standing rib, the loose material that was rubblized and the props?

23 A. Right.

24 Q. On the left side, since you're basically cutting fresh coal, you didn't have
25 rubblized material ---

1 A. Just a little bit sloughed off.

2 MR. PAVLOVICH:

3 --- or a gap either?

4 A. Right.

5 MR. PAVLOVICH:

6 So were you putting those jacks right against the new rib?

7 A. Not tight against, but they weren't far off.

8 MR. PAVLOVICH:

9 Not as far off?

10 A. Yeah.

11 MR. PAVLOVICH:

12 So you weren't really cutting the entry out any wider on that
13 side because the material was straight up and down and tight?

14 A. That was an interesting day whenever they ran into that because people
15 thought they were off sights or something. You're cutting solid face coal and you look
16 up and there's bolts. It was just a strange thing.

17 BY MR. TEASTER:

18 Q. Joe, going back to that Agapito report. Del Duca, who works in the roof --- do
19 you know Del Duca?

20 A. I met him as part of the investigation.

21 Q. Did you review his analysis of that Agapito report?

22 A. Yeah, I did.

23 Q. What did you think of those analyses?

24 A. Let me think about when I did that, though. I don't know that I did that until
25 after the 16th.

1 Q. Can you answer that for after the 16th?

2 UNIDENTIFIED SPEAKER:

3 Did you do that as part of the accident investigation?

4 A. I really don't --- I think so. I'm not sure that we got in to that when we were out
5 there. We did our own ARMPS analysis. What I can tell you is we didn't do it the
6 same way that Agapito did. Agapito's analysis, we looked at it and said they're
7 assuming that the bleeder pillar is part of that barrier and that's going to overestimate
8 the strength of that barrier. Even doing that, you look at the numbers. The numbers
9 are very low.

10 BY MR. TEASTER:

11 Q. Joe, what I'm looking at is Agapito submitted that report. Del Duca identified
12 five issues with their analysis. Then of course after the accident, Senator Kennedy I
13 believe had NIOSH to review that Agapito report and they basically said it was flawed.
14 Then Billy Owens, he does an analysis or something and says that that analysis was
15 not right. I'm just trying to get, for our information, what is the right analysis? Was
16 Del Duca right? Was NIOSH right?

17 A. Rather than me try to reiterate that now, I wrote a response to that to some
18 comments.

19 MR. PAVLOVICH:

20 Could you tell us where that is? Where we can get a copy of
21 it? Did you write it for the accident investigation, too?

22 A. I was asked --- this was definitely post August 16th.

23 MR. PAVLOVICH:

24 This would have to be after the 16th.

25 A. Let's keep this --- let's finish the August 6th to the 16th stuff and we can talk

1 about this another time.

2 MR. TEASTER:

3 That's all I have. Bill?

4 UNIDENTIFIED SPEAKER:

5 Joe, just a couple. I guess to follow up a little more on the
6 briefing/debriefing aspect. You at one point mentioned because I ask, I mean, were
7 your words, I think, giving me the impression you were the one who was kind of
8 seeking out someone to go tell you saw all that. I guess my question is, do you have a
9 sense that if you weren't doing that, if you weren't checking in and asking questions
10 before and you weren't going in after to relay what you say, would anybody in charge
11 with the structure such that they would have sought you out and found out what you
12 were doing?

13 A. Well, you characterized something I said. Tell me a little bit more what you
14 think I said.

15 UNIDENTIFIED SPEAKER:

16 Well, it was in regard to the briefing aspect. You've said --- I
17 just put down in quote it was because I asked. I got the impression that was you
18 soliciting information from the command center. You went in to the command center
19 and said what was going on. So you were getting a little bit of a briefing about what
20 might have taken place. Then likewise with the debriefing, it seems like you were
21 taking it upon yourself to go in and say here's what was significant from what I saw
22 underground. You were going in in both cases. My question is we've had a lot of
23 questions about the organizational structure there with the briefing and debriefing.
24 Was there anybody or any mechanism in place that would have done that if you hadn't
25 taken it upon yourself to do?

1 A. Well, there was no formal thing where somebody said, when you come out, I
2 want you to report to so and so and tell them what you saw and we're going to write it
3 down or whatever. There was no meeting where at no time did somebody say at eight
4 o'clock every day we're going to get together and talk with you and tell you and you're
5 going to tell us. Whether that was because I run on so much any way that people got
6 tired of hearing me every time they saw me I was saying something --- that could be.

7 UNIDENTIFIED SPEAKER:

8 That's kind of what I'm asking you for your opinion. If you
9 hadn't done that, do you have a sense of, with the people there and the structure
10 there, would they have said we need to find out what's going on?

11 A. Well, Ex. (b)(6) and Ex. (b)(7)(C) that's a hypothetical. All I know is ---.

12 UNIDENTIFIED SPEAKER:

13 Well, we're open for hypotheticals here.

14 UNIDENTIFIED SPEAKER:

15 He's asking for your opinion.

16 A. To a hypothetical question.

17 UNIDENTIFIED SPEAKER:

18 You know what --- you've said what actually happened.

19 A. Right. What actually happened was I shared --- had I not talked to anybody
20 and gone back to my cubbyhole, would someone have come and said we want you to
21 tell us, meet us at eight o'clock. I can't answer that. I don't know what they might
22 have done.

23 UNIDENTIFIED SPEAKER:

24 One thing you can answer is no one instructed you to come
25 here when you come outside and give a debriefing?

1 A. That's correct.

2 UNIDENTIFIED SPEAKER:

3 How about your knowledge of briefings or debriefings with
4 some of the local people from Price or from the mine rescue people? Do you know or
5 did you ever hear was any of that going on?

6 A. I wasn't aware of any briefings or debriefings with anybody other than the
7 scheduled family meetings. I was only partially aware of what was going on there.
8 The other thing was I knew that the company had set up a time every morning to meet
9 with the people at the command center. The only reason I know that is that one of the
10 guys, I think Laine Adair came in or Bruce Hill, one of them and said to Jerry Taylor
11 we need to pick a time and I don't want it to be at such and such a time like we have
12 been meeting because we're having our own management meeting at that time. We
13 prefer to do it after. So I knew that the company and our command center people
14 were getting together every morning at that time at a minimum. Beyond that, I didn't
15 know.

16 UNIDENTIFIED SPEAKER:

17 One of the meetings that you cited that you attended, you
18 kind of threw it out as an example and said I think in the context that it was a group
19 effort. We were all getting together to share information. You just made a comment
20 there that you expounded upon something. I mean, that just peaked my interest. Do
21 you happen to remember was that something in particular that you expounded upon or
22 was that just ---?

23 A. Well, I mean the one meeting --- the first meeting where we talked about --- I
24 guess maybe it was the first big meeting when they had the trailer pulled in there and
25 everybody got together to compare notes. They were trying to decide where to drill

1 holes and that sort of thing. They asked something that set me to talking about this,
2 and I laid out what I told you guys already about what I thought transpired and what I
3 was basing it on and really just trying to lay out everything that I could that I thought
4 they might be interested in. I mean, I've told you everything I said I believe.

5 UNIDENTIFIED SPEAKER:

6 My last one would just be in relation to the floor heave aspect
7 that you said you picked up from the dinner hole conversation. What was the local's
8 impression both --- the miners obviously kind of clued you in to that, but did you ask
9 our local inspectors their take on floor heave in that regard?

10 A. No, I don't think so. There was --- I wasn't sure who was inspecting the mine
11 at that time or who would have had the knowledge of --- I just didn't know who and
12 didn't think to ask. I talked a lot to the local guys. Of course, I was there with Gary.
13 Those guys were in some of those meetings. I guess I kind of feel like had I been
14 saying something that was terribly misleading, I would have expected one of them to
15 say no you're all washed up about that because we see that all the time, but they
16 didn't. So I felt like --- maybe I should have asked, but that was part of why I was
17 speaking it to say this is what I'm basing it on, more or less asking, hey if I'm wrong ---.

18 UNIDENTIFIED SPEAKER:

19 Somebody let you know?

20 A. Yeah. But nobody spoke up. I mean, should of, would of, could of. I mean,
21 there's probably a lot of things I should have asked.

22 UNIDENTIFIED SPEAKER:

23 That's all I have. Thanks.

24 UNIDENTIFIED SPEAKER:

25 Joe, I just got two questions to ask you. Who and when did

1 somebody make that statement about I wonder if this is a recovery operation instead
2 of a rescue? Would it have been a company person? An MSHA person?

3 A. It wouldn't have been a company person. It was somebody that I was getting
4 a ride in with. I don't know when.

5 UNIDENTIFIED SPEAKER:

6 Do you have a copy of that expert statement? I don't know
7 that I've ever seen a copy before.

8 A. We would have it. I'm sure the accident investigation team has it. I don't
9 personally have one.

10 UNIDENTIFIED SPEAKER:

11 Can you get a copy of that?

12 MR. TEASTER:

13 Yeah, we have a copy of that. Yeah, it's in Richard Stickler's
14 stuff.

15 UNIDENTIFIED SPEAKER:

16 It's the first I'm aware of it.

17 A. Something else, I failed to mention this earlier. I don't want to keep you guys
18 here any longer. On the 16th, I hope it's come out too that there were some things
19 going on with ventilation at that time. Up in the face area it looked as though it might
20 be opening up. So that was part of what was communicated to me, too. Remember
21 we talked about people saying you need to go look at this or that? That was one of
22 the things too it looks like it might be opening up. I recall somebody had taken in the
23 spotlight and was trying to shine up ahead. I believe that that was another one of
24 those sources of hope again. Another reason to be thinking positive thoughts about
25 what we were doing, that maybe things were opening back up. So it wasn't this we're

1 dead ended plowing ahead for --- you know, that it's a recovery operation. It was ---.

2 MR. TEASTER:

3 Was it opening up?

4 A. I looked at it, and the corner of the entry was certainly opening up compared
5 to days before. I mean, there were a couple times when you were literally looking at
6 full faced coal.

7 UNIDENTIFIED SPEAKER:

8 You were in the drill holes, I guess, it's number six and seven
9 or five and six that was drilled into the # 1 entry that showed it was solid. There's no
10 voids in those. Earlier you said that the model analysis that you run showed that that
11 started under the high cover and went so far each way but didn't go all the way to
12 where the mining activity might have been at. If that would be the case, do you think
13 a secondary bump filled in up there or do you think now knowing everything that you
14 do that that bump did extend that whole entire distance?

15 A. Well, you know, we're doing a lot of analysis right now. It's just preliminary
16 and I'd just as soon not say. At the time, I didn't even know about these holes. These
17 holes were drilled --- it started on the 19th and finished on the 22nd.

18 UNIDENTIFIED SPEAKER:

19 You didn't know the analysis of those holes until later on?

20 A. To be honest with you, I didn't know too much about the outcome of any of the
21 boreholes on the surface. I didn't know much about what was going on up there at all.

22 UNIDENTIFIED SPEAKER:

23 Have you ever thought that maybe there was a
24 meeting/briefing that everybody got together and said this is what the drill holes --- I
25 mean, why was that information not shared?

1 A. Well, I guess --- there was no time that we just sat and shared information. To
2 get that, I would have had to go ask somebody. I guess I had plenty to do. I didn't
3 feel like I needed to know. I didn't see what the implication was for what I was trying
4 to do.

5 UNIDENTIFIED SPEAKER:

6 One last question. I know that you've been at Aberdeen Mine.
7 I don't know how far or whatever that day. Did anybody ever tell you that square sets
8 or cans or whatever you call them had been knocked out at Aberdeen Mine because
9 of bumps or bounces?

10 A. Well, now they used cans and they used rock props. Which one are you
11 asking about?

12 UNIDENTIFIED SPEAKER:

13 Oh. Do you know the cans that they had been knocked out at
14 Aberdeen Mine was because of the bumps or bounces?

15 A. No, I wasn't told that.

16 UNIDENTIFIED SPEAKER:

17 Did anybody ever tell you that rock props had been knocked
18 out at Aberdeen Mine?

19 A. No. I didn't see any knocked out whenever I was there and I don't recall
20 anyone telling me. We didn't sit through --- as I recall, we didn't sit through the
21 interviews. All we did was the physical factors. We showed up, took the
22 measurements and did the calculations and things. I wasn't in the interviews to hear
23 what people said.

24 UNIDENTIFIED SPEAKER:

25 If you knew that, would that have made a difference on

1 deciding to use that? You said earlier that the experts knew that this had been
2 knocked out, these rock props. So they knew that they weren't --- if you guys had
3 known earlier that other rock props or cans had been knocked out by other bumps,
4 would that make you guys think ---?

5 A. I think it would have probably changed the way I viewed it. It's hard to say.
6 That's another hypothetical.

7 [REDACTED] Ex. (b)(6) and Ex. (b)(7)(C)

8 I just have a couple questions, too.

9 [REDACTED] Ex. (b)(6) and Ex. (b)(7)(C)

10 Q. Did Mr. Heasley give you anything back in writing after he ran the model?

11 A. He sent me an e-mail and he left me a voice message and gave me the
12 model that he had done, but he never did an analysis other than just a couple lines in
13 the e-mail.

14 Q. Is that something that you already had? I don't know if --- can we have it?
15 Can we have a copy of that e-mail?

16 UNIDENTIFIED SPEAKER:

17 Well, let's check with Richard. I think he's the guy to go
18 through for those kind of things.

19 [REDACTED] Ex. (b)(6) and Ex. (b)(7)(C)

20 Okay. He will back to us?

21 UNIDENTIFIED SPEAKER:

22 Yes.

23 [REDACTED] Ex. (b)(6) and Ex. (b)(7)(C)

24 Okay.

25 A. I'm just sitting here wondering if I saved the e-mail from that far back. I've

1 had so much e-mail I can't send one until I go and delete a couple. It may be history.

2 UNIDENTIFIED SPEAKER:

3 We'll check into that, yeah.

4 Ex. (b)(6) and Ex. (b)(7)(C)

5 Q. I think Joe or Ernie asked you about whether or not any of the inspectors or
6 anybody, for that matter, had come to you and expressed concerns about their safety
7 underground or about the conditions underground being hazardous. I think you said
8 no. But you also said that you knew that Gary Jensen was apprehensive. How did
9 you know about that? Did you have a conversation with him?

10 A. When did I say Gary Jensen was apprehensive?

11 Q. I'll have to find it.

12 MR. PAVLOVICH:

13 I think maybe it was Peacock or somebody was apprehensive
14 about going over in front of the seals.

15 Ex. (b)(6) and Ex. (b)(7)(C)

16 Oh, it's Ex. (b)(6) and Ex. (b)(7)(C) Sorry.

17 A. Oh, yeah. Yeah.

18 Ex. (b)(6) and Ex. (b)(7)(C)

19 Q. It wasn't Jensen?

20 A. No.

21 Q. It was Ex. (b)(6) and Ex. (b)(7)(C) He was the only person that either for MSHA or the company
22 or anybody who expressed any of those safety concerns?

23 A. When I left the section on the night of the 16th, Gary Jensen was coming in.
24 He took off his glove and waived the big mitt out there and slapped me on the back
25 and went in to do the job. I didn't sense apprehension there. Ex. (b)(6) and Ex. (b)(7)(C) now,

1 when we went down --- we were going in there by the seals. He had been in there
2 whenever they were breaching and the roof fell, ran the guys out of there. I think he
3 was there, but he was certainly aware that it was working on making a lot of noise
4 back there. I could tell that he wasn't too enthusiastic about even going back but felt
5 like we needed to see what was what. It turned out to be really quiet. He was
6 surprised. We did a thorough mapping, and it was fruitful. It just struck me because I
7 could tell he wasn't crazy about the idea.

8 Q. How about you? How did you feel when you were getting under there? We
9 asked about other people, but were your personal thoughts? Were you ever worried
10 about your safety?

11 A. Well, I think that everyone knew it was hazardous, but I actually felt pretty
12 comfortable with what we were doing. Unfortunately, you know, --- well, I guess
13 there's nothing unfortunate about it. Initially, the first day I went in there I was attuned
14 to everything and concerned. As we grew accustomed to it and things were working, I
15 became less apprehensive and more comfortable with it. I certainly wasn't fearful.

16 Q. Then the last question that I have is about the meeting that you said Bob
17 Murray had I guess in the trailer where the tenor of the meeting seemed to be how can
18 we go faster and not whether or not we should continue or should not continue the
19 effort. I think you said Richard Stickler was there at that meeting.

20 A. I think it was another sort of an all hands meetings. It was their upper
21 management and our upper management as well as people like me.

22 Q. Did he have any particular response to that whole idea of how do we pick up
23 the pace of the advance?

24 A. I missed the whole first part of the meeting. The part that I'm referring to is ---
25 it probably just struck me --- it was more memorable to me because it came up saying,

1 when Joe asked me a question that was anyone --- I don't know how you asked it
2 exactly, but was anyone concerned about the risk. I had cited that as an example of
3 here was this case where we're talking about going faster, not sitting, concerning
4 ourselves with do we need to stop. It was just kind of beyond us. I don't think there
5 was anything going on at that time that people felt like what we were doing was
6 inappropriate. The question was how do we just get there quicker. It stuck in my mind
7 because Mr. Murray, he more or less was saying we need to push harder and so forth.
8 It was shortly after that that the folks came in from the east and were put on sections.
9 I think that was --- well, I don't know what people thought.

10 Ex. (b)(6) and Ex. (b)(7)(C)

11 Okay.

12 UNIDENTIFIED SPEAKER:

13 Joe, when the other Joe was going over the seismic events
14 and where you had the logs at, you mentioned something about the University of Utah
15 had put in additional sensors on the 10th or 11th. Can you expand on that a little bit?

16 A. Didn't know that until ---

17 UNIDENTIFIED SPEAKER:

18 Didn't know that until afterwards?

19 A. --- after this investigation started and they contacted the University.

20 UNIDENTIFIED SPEAKER:

21 I'm just kind of getting the impression that maybe you were
22 getting more events from their site because they had additional sensors.

23 A. The point that I was trying to make is that I don't know that you can look at
24 their data or the verbal reports or the written reports and put that all on the same level
25 line and say if we just add all these up, this will show a trend. You need to look at

1 what the University was doing in terms of numbers, where and what threshold levels
2 they were setting.

3 UNIDENTIFIED SPEAKER:

4 But they did put extras in?

5 A. Yes.

6 UNIDENTIFIED SPEAKER:

7 The other thing you spent pretty much all day Tuesday on the
8 7th getting there. As soon as you got there, Bill Taylor had given you a little overview
9 and you and Mike and Gary went underground. What I'm trying to figure out when I
10 look at this K order that was modified and plans approved, it's like the people on the
11 Blue Goose approved the plan to, one, use rock props or eight by eight square sets, to
12 attach them on the cable in the two and a half foot spacing. You did this while you
13 were underground. The way I understood it was that you didn't see the plan until ---
14 am I missing something? It's like they went ahead and approved this plan before they
15 got your input.

16 A. I never saw that. The only one I saw was the next morning when they had the
17 different timbers. When things were done and by whom --- maybe I thought I was
18 asked to do something I wasn't asked to do. I don't know. When I went underground,
19 that's what I was looking at.

20 UNIDENTIFIED SPEAKER:

21 I mean, it just seems like they already made up their mind
22 that that's what they were going to do before you guys even got there. Do you know
23 how he come up with the two and a half foot spacing between these?

24 A. That's what Laine Adair had proposed.

25 UNIDENTIFIED SPEAKER:

1 A. I think they market it. I don't think they're making it. No, I didn't talk to them.
2 Didn't talk to them. I was familiar with the product. They were familiar with the
3 product, putting it in. No, I didn't contact anyone.

4 UNIDENTIFIED SPEAKER:

5 That's all.

6 BY MR. PAVLOVICH:

7 Q. Joe, I just --- when you were underground or sometime during, did you ever
8 know of an excursion that was made in the # 4 entry up somewhere to maybe crosscut
9 126 or 127 with Peter Saint and Mike and maybe Bodee Allred or somebody?

10 A. Yeah. I can tell you quite a bit about that, yeah.

11 Q. Okay.

12 A. I was in the # 1 entry up in the face area. I think Kent Norton was up there.
13 The miner was finished cutting and we were putting in rock props. I was --- I don't
14 know what the right term to use is, but I was kind of lecturing the guys about not
15 getting inby anymore than they had to. This was at that time still whenever a lot of
16 people wanted to get out there. As I'm doing that, I look and here come a couple
17 lights and they go right past me, right past the mining machine, up over the face and
18 back in the hole.

19 Q. In # 1?

20 A. In # 1. I thought what in the hell is that. So somebody was questioning that
21 there too. I think it was Kent or somebody. So I went outby and found Donnie
22 Durrant. Donnie was at the phone. I said pretty much what's going on? He said can
23 you take this phone and call outside? They're going to explore in the # 1 entry. It
24 turned out it was Gary Peacock and Barry Grosely had received permission to go
25 explore up in there. I guess the --- I found out after the fact that someone felt as

1 though they never really explored the # 1 entry as completely as what should have
2 been done.

3 Q. Do you remember about where they had mined up to at that time?

4 A. I can tell you the date and the time and you can reference the log books.

5 Q. Okay.

6 A. In my notes here, you'll see this is when it was --- they entered at 12:50 and
7 they were unable to communicate by 1:10. What it was they had a handheld radio
8 and they could go as far --- I think the K order was modified or something so they
9 could go as far as they could stay in communication.

10 Q. What day was that? Do you remember?

11 A. Friday the 10th at 12:50. So I was on the phone calling out. As far as I could
12 tell here, they said it was --- they went to 124. The roof was good. The oxygen was
13 good. It was opening up a bit. They went to 124 and a half and they couldn't
14 communicate via radio. And per the stipulation, I think they didn't go much further
15 than that and they came back out. At the same time that I was doing that,
16 unbeknownst to me, Mike had gone with Peter Saint to measure the air I believe in # 3
17 and # 4. You have to remember on the 10th everything's new and we're thinking
18 maybe Pete shouldn't be back there alone so Mike's going with him. Well, they ended
19 up exploring the # 3 entry. I think Mike went in to a certain point and then Peter went
20 to the next point and somebody else went further inby. Pete went to furthest, I think.
21 That's all secondhand. You can refer to Mike's testimony for the rest.

22 Q. Okay. Did you ever talk to Grosely or Peacock when they come out of # 1?

23 A. I think I did. I think I might have talked to Gary Peacock and he said it looks
24 like we could have gone further, but I didn't want to push the limit because we'd
25 agreed not to go any further than what the communications reached.

1 Q. So was there ever any more excursions with more radios or more people or
2 hardwire or anything like that that was done at # 1?

3 A. They brought in, one of the mine rescue teams, I was told that what it was was
4 a cable reel type radio. It set there on the corner by the power center, which is still
5 sitting there. I thought about carrying it out but they said we couldn't take anything
6 back out with us. To my knowledge it wasn't used, but then I was under there part of
7 the time.

8 Q. So you think it was brought in for the purpose of going further up in the # 1
9 entry, but no more excursions were ever done?

10 A. I don't know what the purpose was. I assumed it was to go back up # 1
11 because the radios didn't work, but it could easily have been for them to string that
12 tubing back into the seal. We were going to do that but the tubing wasn't available
13 Then they did it under apparatus.

14 Q. Well, I guess out of curiosity, Peter Saint and Allred and Mike, however they
15 strung out, got somewhere, not real sure, maybe 126 or 127, somewhere in that range.
16 These other guys went, sounded like, several crosscuts, but because they ran out of
17 communication, not because they were blocked but because they ran out of
18 communication, they came out, which was okay. Why wouldn't a subsequent
19 excursion not be made with a better communication system if you're able to crawl over
20 this material quickly as opposed to trying to dig it out causing more bumps?

21 A. Well, clearly I ---.

22 Q. You don't know?

23 A. I don't know.

24 Q. Nobody ever talked about it any more?

25 A. I didn't know this was going on. I was surprised and a little embarrassed that

1 here I am telling these guys that they need to stay back and there we sent two right
2 over the ---.

3 Q. It's not like somebody called underground and said here's the plan. We've got
4 two guys that's coming in and going here.

5 A. Well, they may well have done that. They may have talked to Donnie, but I
6 just didn't know and it surprised me.

7 Q. To your knowledge, those were the last excursions over the rubblized material
8 back into those areas?

9 A. Yeah.

10 Q. You said Kent Norton was up there. What was Kent's job? What was he
11 involved in?

12 A. Well, Kent's a local inspector. Well, he's not an inspector. I guess he's EFS.

13 Q. Right. EFS.

14 A. That was early on. I think we might have had more people underground. It
15 was later on that they started to really structure the crews to where you had one
16 person with the crew more or less, one person manning the phone and then another
17 person that was taking air readings.

18 Q. So Kent wasn't really doing any one of those jobs while he was there? He was
19 just down there to your knowledge.

20 A. Well, that was my perception, but ---.

21 MR. PAVLOVICH:

22 Okay. Got anything else?

23 MR. TEASTER:

24 No, don't have any more.

25 UNIDENTIFIED SPEAKER:

1 Can we take just a short break?

2 MR. PAVLOVICH:

3 Sure.

4 BREAK TAKEN

5 BY MR. TEASTER:

6 Q. Is there anything else, Joe, that you would like to tell us? I think we've about
7 finished our questions.

8 A. Yeah. I think from my point of view, I look at rescue operations and I've
9 admittedly have been on a few of them. I told you was outside of Stillhouse. It seems
10 to me like if the agency's asked to respond to a fire and explosion, the protocol's there,
11 everything's practiced, it's rehearsed and it's a pretty tight ship. When it's an
12 unconventional, if that's the right term to use, incident like this was, --- I mean, it was a
13 ground fall on a scale that we hadn't dealt with that I'm aware of in this country in my
14 lifetime. Maybe that's an exaggeration, but certainly in my working career it was the
15 biggest ground fall I can recall. I think some of the protocols that fit well for fires and
16 explosions didn't fit very well to this. Instead of having just individual teams that were
17 trained to go in and trade off, we had crews and men that were just miners and just
18 roof control specialists and so forth going to do what they were asked to do. So it
19 seemed to me like after the fact that maybe one of the outcomes could be to --- with
20 mine rescue, who's to say that the next incident that we have to respond to is a fire
21 explosion or even a roof fall? It could be --- I think the example I used was a cage
22 down at Jim Walter Resources with a crew on it, something happens and they're stuck
23 halfway in the shaft. We, to my knowledge, hadn't responded to something like that,
24 but we would have to.

25 It seems to me that some of this command structure stuff could be universal

1 and could be rehearsed for things other than just fires and explosions, and it would
2 pay dividends. For me personally, you asked me if I had any mine emergency
3 response training. I hadn't. I've had accident investigation training. If folks like me
4 are going to be pulled into these things, maybe it would be beneficial to have
5 everybody familiar with whatever that command structure is and to be up to speed a
6 little bit more. Still, if you're in the situation like that, you're going to have all these
7 miners going in shift after shift. So it's still going to be difficult to have the kind of
8 control you do over a fire or explosion type situation. I guess that's my thoughts,
9 anyway, that maybe rehearsing an incident other than a fire or explosion would be
10 beneficial.

11 Q. That's a very valid and very good point.

12 MR. PAVLOVICH:

13 Those are excellent points.

14 BY MR. TEASTER:

15 Q. We think --- we agree. Anything else?

16 A. Probably, but I won't think about it until I'm going up the road.

17 Q. If you do and there's something else you want to tell us, give us a call. We'll
18 be available. If we think of any more questions that we have for you, Joe, we'll
19 contact you.

20 A. I guess I would say for the record that I think --- maybe it's worth saying that
21 the folks that I worked with were --- I think everyone was trying to do the very best that
22 they could do. I wouldn't find fault with anybody I worked with out there, especially the
23 guys working on the crews underground. I thought there was good communication
24 amongst people and I thought the company was pretty responsive to most all the
25 ideas that were presented. It's just really unfortunate the way things turned out all

1 around.

2 MR. PAVLOVICH:

3 We would ask you, again, that you kind of keep this interview
4 confidential until we've finished all our interviews. Like we said, if we have any further
5 questions, Joe --- we appreciate the efforts you've put forth out there. We really do. I
6 know you went in there with your absolute best intentions to try to rescue people and
7 to do everything you could within your knowledge and ability to try and maintain a
8 good level of safety there. I know you're a dedicated person and you're an asset to
9 MSHA. We certainly appreciate the work you put forth and we appreciate you coming
10 in to talk to us.

11 I realize you're in an unusual situation having been there
12 through the event, now being on the investigation team and now also being
13 interviewed by an independent review team. So we appreciate you putting up with us
14 and our questions and giving us your factual information as well as your opinionated
15 information. I thank you for that. I certainly commend you for your efforts and thanks
16 for your hard work.

17 A. Thanks.

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