

1 STATE OF WISCONSIN : CIRCUIT COURT : MANITOWOC COUNTY
2 BRANCH 1

3 STATE OF WISCONSIN,

4 PLAINTIFF,

JURY TRIAL

TRIAL - DAY 14

5 vs.

Case No. 05 CF 381

6 STEVEN A. AVERY,

7 DEFENDANT.

8 **DATE:** MARCH 1, 2007

9 **BEFORE:** Hon. Patrick L. Willis
10 Circuit Court Judge

11 **APPEARANCES:** KENNETH R. KRATZ
Special Prosecutor
12 On behalf of the State of Wisconsin.

13 THOMAS J. FALLON
Special Prosecutor
14 On behalf of the State of Wisconsin.

15 NORMAN A. GAHN
Special Prosecutor
16 On behalf of the State of Wisconsin.

17 DEAN A. STRANG
Attorney at Law
18 On behalf of the Defendant.

19 JEROME F. BUTING
Attorney at Law
20 On behalf of the Defendant.

21 STEVEN A. AVERY
Defendant
22 Appeared in person.

23 **TRANSCRIPT OF PROCEEDINGS**

24 Reported by Diane Tesheneck, RPR

25 Official Court Reporter

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1 THE COURT: At this time the Court, again,
2 calls State of Wisconsin vs. Steven Avery, Case No.
3 05 CF 381. We're here for a continuation of the
4 trial in this matter this morning. Will the parties
5 state their appearances for the record, please.

6 ATTORNEY KRATZ: Good morning, Judge, the
7 State of Wisconsin appears by Calumet County
8 District Attorney Ken Kratz, Assistant Attorney
9 General Tom Fallon, Assistant District Attorney Norm
10 Gahn, all appearing as special prosecutors.

11 ATTORNEY STRANG: Good morning. Steven
12 Avery is here in person. Jerome Buting represents
13 him, Dean Strang appears on his behalf as well.

14 THE COURT: Is there anything this morning
15 before we resume the defense cross-examination of Ms
16 Eisenberg?

17 ATTORNEY FALLON: I just wanted to alert
18 the Court that Mr. Strang and I are working out the
19 final language of a stipulation that we would like
20 to put on the record after Dr. Eisenberg completes
21 her testimony. We're waiting for the completion of
22 her testimony to finalize the language regarding a
23 stipulation to save us a witness.

24 THE COURT: Very well. The coordinator may
25 bring the witness in and we'll bring the jury in.

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(Jury present.)

THE COURT: You may be seated. Good morning, members of the jury. When we left off yesterday afternoon the defense was conducting its cross-examination of Dr. Eisenberg. We'll resume this morning. Mr. Strang, you may continue.

THE CLERK: You want the witness to be sworn?

THE COURT: I think we will, we've been doing that. We'll have the clerk re-swear the witness.

DR. LESLIE EISENBERG, called as a witness herein, having been first duly sworn, was examined and testified as follows:

THE CLERK: Please be seated.

CROSS-EXAMINATION

BY ATTORNEY STRANG:

Q. Welcome back. Good morning.

A. Good morning to you.

Q. Yesterday when we were broke off -- when we broke off, we were talking about a site somewhat southwest of, you know, what we have all here been calling the Avery Salvage Yard property. I want to just go back, though, a little bit to get us up there again. And, now, when I say go back

1 a little bit, I'm going to go back to the Janda
2 burn barrel, number two, just for a little bit.

3 Okay.

4 A. Yes, sir.

5 Q. Which was your tag -- not your tag, but tag
6 number 7964?

7 A. That's correct.

8 Q. Okay. Now, again, nowhere did you find evidence
9 that you were looking at bone fragments from more
10 than one body?

11 A. That is correct.

12 Q. The bone fragments you saw under tag number 7964
13 from the burn barrel were burned, charred, some
14 of them calcined, as they had been in the burn
15 area?

16 A. The human bone.

17 Q. Yes, the human bone, because you did find some
18 nonhuman bone?

19 A. In the location --

20 Q. In the burn area and in the burn barrel?

21 A. That's correct.

22 Q. Some of them were what you called avian bone?

23 A. Avian simply is a Latin term for -- means bird
24 bone.

25 Q. A bird, right. So whether it's a chicken, or a

1 turkey, or a pheasant, some sort of something
2 with wings?

3 A. Yes.

4 Q. All right. So you correct me if I forget to add
5 the human, because it's ordinarily human bone I
6 mean to be talking with you about.

7 A. Understood.

8 Q. Okay. Now, one of the things we didn't cover and
9 I want to cover with respect to the burn barrel,
10 is when you are looking at these human bone
11 fragments you are using not just your eyes, of
12 course, but you are also using your sense of
13 smell; is that fair?

14 A. That's fair.

15 Q. Smelling, do I smell the odor of let's say fuel,
16 some accelerant or something, correct?

17 A. Yes.

18 Q. The only human bone fragments on which you
19 detected an odor of some sort of accelerant or
20 flammable fluid were the bone fragments that came
21 out of the Janda burn barrel; is that accurate?

22 A. No, I would qualify that by saying that the
23 container in which those human -- those fragments
24 from 7964 associated with burn barrel number two
25 behind the Janda residence, upon opening the

1 container, there wasn't an odor of fuel. Whether
2 or not they were specifically human bone, I could
3 not say.

4 Q. Very good. Thank you. Because I was not clear
5 on your report, but that -- that makes sense. So
6 you opened this Tupperware type container, or was
7 this a plastic bag, some container?

8 A. A sealed lidded container.

9 Q. Plastic lidded container.

10 A. Yes.

11 Q. And it's there that you get the waft of some kind
12 of flammable liquid or fluid?

13 A. Yes.

14 Q. But, of course, there is no way to tell which --
15 which of the bone fragments or non-bone material
16 that may be coming from?

17 A. Right, there was no way to tell from the contents
18 of that container where that odor was coming
19 from.

20 Q. All right. Very well. Now, you did not detect
21 the distinctive smell of burnt rubber from any of
22 the containers you examined here that contained
23 human bone fragments?

24 A. I did not.

25 Q. And by that, I mean any of the containers, all of

1 the tag numbers from whatever source?

2 A. I did not.

3 Q. Neither did you -- did you note any residue from,
4 let's say burnt rubber, that was visible to you,
5 in any of the containers you examined?

6 A. No burned rubber, that's correct.

7 Q. Now, if we're warmed up, I think let's go, now,
8 back to tag number 8675 where we left off
9 yesterday afternoon. And this is the -- get
10 ourselves oriented again.

11 ATTORNEY STRANG: I want to go to the ELMO.

12 ATTORNEY BUTING: It may not be turned on.

13 Q. (By Attorney Strang)~ Okay. This is just 402
14 again, which we saw yesterday, tag 8675, are the
15 items that came to you, reportedly, from the GPS
16 coordinates of that red flag.

17 A. That's correct.

18 Q. Somewhere southwest of the Avery property?

19 A. Yes.

20 Q. Have you ever seen a photograph of the Avery
21 property, from the air?

22 A. I believe I have seen one.

23 Q. All right. You may or may not be able to work
24 with Exhibit 91, but I will show it to you. Can
25 you orient yourself from that photograph? This

1 is an exhibit that's been admitted, I'm sorry, I
2 should have shown it to you; it's Exhibit 91?

3 A. Yes, I can.

4 Q. Okay. You can see where the Avery salvage
5 property is?

6 A. Yes, I can.

7 Q. All right. Does it look to you like we're
8 looking east from an airplane?

9 A. It does, because the Avery and Janda properties
10 appear at the lower left hand corner of the
11 salvage yard.

12 Q. Terrific. Thank you. Let me pop this up on the
13 ELMO. Okay. So, obviously, someone taking this
14 photograph is up in an airplane? And what we're
15 doing is we're flying probably about close to due
16 east here.

17 A. I'm sorry, close to?

18 Q. To due east.

19 A. Due east, yes.

20 Q. Toward the lake. And the road coming through at
21 an angle in the upper left corner of the picture
22 is Highway 147.

23 A. I believe it is.

24 Q. And we can see Avery Road coming down to the
25 northeast corner of the salvage yard.

1 A. That's correct.

2 Q. Okay. And what -- We can't place the location
3 from which the material under tag number 8675
4 came, but we can see here that there's
5 essentially quarry area and some wooded areas to
6 the south of the Avery property?

7 A. Yes, that's correct.

8 Q. So I'm going to refer to tag 8675 as the quarry
9 pile; does that work?

10 A. It does, understood.

11 Q. All right. Now, you found, in the material from
12 the quarry pile, two fragments that appeared to
13 you, in your experience, to be pelvic bone; is
14 that right?

15 A. That's correct.

16 Q. There were some cuts, appeared to be some cuts on
17 those pelvic bone fragments?

18 A. Yes.

19 Q. But you weren't able to conclude, 100 percent
20 certain, that these were human pelvic bone
21 fragments; do I understand that correctly?

22 A. That's correct.

23 Q. Okay. Now, you suspected them of being human
24 pelvic bone; am I understanding you correctly?

25 A. Yes.

1 Q. You still suspect them of being human pelvic
2 bone?

3 A. Suspected possible human.

4 Q. Right. And part of the problem you had in
5 identifying those as certainly human is that they
6 were so small.

7 A. It was less their size than what the contours of
8 the bone looked like after they were cut. But it
9 was clearly a joint articulation at the right
10 side of the pelvis where the pelvis meets the
11 lower part of the spine.

12 Q. You say the right side, you actually were able to
13 say which side of the pelvis?

14 A. Yes.

15 Q. Okay. And the overall thickness of those
16 fragments was consistent with a human being?

17 ATTORNEY FALLON: Objection, she indicated
18 suspected and possible and that's as far as she can
19 go. I don't believe there's any testimony regarding
20 consistent or non-consistent. She couldn't
21 identify --

22 THE COURT: I think his question is just
23 asking about one element of the bones, not
24 concluding that it was a human bone. So as I
25 understand the question, I'm going allow it.

1 ATTORNEY STRANG: The thickness. And
2 actually, you know, it's a fair point.

3 Q. (By Attorney Strang)~ Let me just drop back and
4 ask you a foundational question or two before I
5 get to that. One of the things that
6 distinguishes human bones from even larger
7 animal -- large animal bones, is the wall
8 thickness of the bone, is that -- am I correct in
9 that?

10 A. You are partially correct. It's the relationship
11 or the ratio of the thickness of the outside of
12 the bone to the size of what we would call the
13 marrow cavity, the inside of the bone.

14 Q. Okay. So if we have a round bone, there's a wall
15 thickness, so to speak, and then a marrow cavity,
16 you are describing that as, inside?

17 A. A space, like a cylinder.

18 Q. Right. And then the other wall?

19 A. Correct.

20 Q. And if we were looking at something like a deer,
21 a relatively large animal, would we find, in a
22 long bone of a deer, that the wall thickness of
23 the bone was less than the wall thickness of a
24 similarly length -- similarly long human bone?

25 A. No, the thickness -- the diameter, the

1 measurement of the outside of the bone in humans
2 would be less than that in a deer bone, for
3 example.

4 Q. Now, I think I lost you -- I mean -- You are
5 talking about the ratio of the wall thickness to
6 the thickness of the marrow cavity?

7 A. That's correct.

8 Q. And that's -- It's a thicker wall relative to the
9 marrow cavity in the human bone.

10 A. No, it's a thinner wall.

11 Q. I have it the other way around?

12 A. Yes.

13 Q. Okay. All right. So the question, then, is the
14 thickness of the bone wall here that you observed
15 on these two pelvic bone fragments, was that
16 thickness at least consistent with human pelvic
17 bone?

18 A. Let me answer your question in two parts. The
19 first part is that the architecture or the make
20 up of these pelvic bone cut fragments is
21 different in character and shape than the long
22 bones you have been talking about. The internal
23 structure of these bones is made up almost
24 entirely of honeycomb looking bone.

25 Q. All right.

1 A. And so using the long bone as an example may not
2 be an accurate comparison. Secondly, the
3 thinness of the outside bone of these pelvic cut
4 fragments is not inconsistent with the thickness
5 I would expect to see relative to the honeycomb
6 bone in humans.

7 Q. Okay. It is not inconsistent with the human --

8 A. Correct.

9 Q. -- bone. And let me ask you just maybe the
10 simplest, most straight forward question here, is
11 what made you suspect that these pieces of pelvic
12 bone could be human?

13 A. The contours of the bone, and more particularly,
14 the shape of what we call the articular surfaces,
15 where one bone fits with another bone at the hip
16 joint.

17 Q. Those appeared consistent with a human being?

18 A. With the shape and the contours of what would be
19 expected in a human bone.

20 Q. All right.

21 A. Yeah.

22 Q. Now, I would like to show you something that's
23 not been marked as an exhibit. And I don't have
24 a small copy of it, so I'm going to pause and
25 tell Mr. Fallon what it is that I want to put up

1 on the screen, if you would bear with me. I will
2 let you in on the secret now. I'm going to show
3 you what's marked on the CD Rom that I got from
4 the report that you and Trooper Austin did.

5 A. Yes.

6 Q. What's marked as skeleton 1, it's a JPEG file,
7 skeleton one, okay?

8 A. Yes.

9 Q. And I don't -- That's what you are about to see.
10 Now you know. This is, again, one of these
11 computer generated models that Trooper Austin did
12 under your supervision?

13 A. He was not working under my supervision, but we
14 worked cooperatively to depict my findings.

15 Q. He was good with the computers, you were good
16 with human skeletons?

17 A. Hopefully, yes.

18 Q. Yes. And, again, this isn't a photograph, but
19 what you know in looking at this model is that
20 the features you see are consistent with an adult
21 female human skeleton?

22 A. Without seeing this side by side with what might
23 be a male skeleton, I will agree to that
24 characterization.

25 Q. Okay. And, look, I'm not trying to push you

1 somewhere you don't want to go on this; this is
2 from your report?

3 A. Yes.

4 Q. Do you need to look at your report or reorient
5 yourself to what skeleton figure 1 was?

6 A. This is from Trooper Austin's report?

7 Q. Yeah, I mean, the report the two of you put
8 together.

9 A. That's fine, I don't believe that's necessary.

10 Q. Okay. So you are comfortable and I don't know,
11 frankly, that female versus male makes a big
12 difference on this point, but show us the pelvis.

13 A. May I approach.

14 Q. We'll give you a laser point, or you can approach
15 if you like. But ...

16 A. Thank you.

17 Q. Sure.

18 A. As I mentioned yesterday, the pelvic girdle or
19 the pelvis, that we all probably think about as
20 one bone, is actually three different bones.

21 Q. All right. You talked about the fragments you
22 saw under tag 8675 being right pelvic bone, so
23 let's identify that.

24 A. Okay. I should clarify, one of those -- for one
25 of those fragments, it's impossible to side, the

1 iliac crest that we talked about yesterday. But
2 the other two fragments that are still
3 articulated at a joint surface are from the right
4 side.

5 Q. So show me the right pelvic bone here, if you
6 would. And this is obvious it's left as we're
7 all looking to it, but when you say right or left
8 on the human body, you are talking about as if
9 you were in the person's skin?

10 A. When you -- and I'm sorry, I should have
11 clarified that -- when we look at a graphic or
12 photograph like this, computer generated image,
13 we, in the same way we were looking at the face
14 yesterday, we are then looking at someone who
15 would be facing us. So the right hand side would
16 be the person's right hand side.

17 Q. Correct. Yes.

18 A. As we're facing, correct.

19 Q. My right pelvic bone?

20 A. Correct.

21 Q. So right pelvic bone is one of the bones, left
22 pelvic bone is the second of the bones that make
23 up the pelvis?

24 A. Well, they actually have fancy names, but there
25 are a left side called the innominate, a right

1 side called the innominate, and they both are
2 joined, left and right, at the sacrum, which is
3 at the base of the spine.

4 Q. That's the tailbone that hurts when you slip and
5 fall on the ice?

6 A. It's the very bottom of that bone, yes.

7 Q. Okay. All right. Innominate is
8 i-n-n-o-m-i-n-a-t-e?

9 A. That's correct.

10 Q. Okay. Now -- So you actually had three bones
11 that you thought associated with the pelvis under
12 tag 8675 from the quarry file?

13 A. That's correct.

14 Q. Two that look from the right pelvis, one from the
15 sacroiliac -- sacroiliac?

16 A. The iliac crest, so it would be either this
17 topmost area, what you can feel when you palpate
18 or touch your hip, or from the right side, that's
19 correct.

20 Q. Were these fragments too small to suggest to you
21 whether they might be male or female?

22 A. It was not a matter of sides but simply what
23 parts of the bone we had that would not allow
24 that determination.

25 Q. When you say cuts, you saw cuts on these, are you

1 able to be any more specific about the type of
2 cut that you saw?

3 A. It was a long, linear cut, on either side of
4 those two bones that were still in proximity.
5 They were essentially a slicing cut on one side
6 and a sharp slicing cut on the other side.

7 Q. Any way to tell what instrument may have made
8 that cut?

9 A. We --

10 ATTORNEY FALLON: Objection, lack of
11 foundation.

12 ATTORNEY STRANG: I can ask some
13 foundational questions --

14 THE COURT: Go ahead.

15 ATTORNEY STRANG: -- if that would help.

16 Q. (By Attorney Strang)~ One of the things you do in
17 your work is look for human damage to bones or
18 damage caused by human agency, if you will?

19 A. If present, yes.

20 Q. If present. I mean, you look for it, sometimes
21 it's present, sometimes it's not, but you are
22 always looking for it.

23 A. Correct.

24 Q. You looked for that here?

25 A. Yes.

1 Q. Damage to the bones by human agency, correct?

2 A. That's correct.

3 Q. The unnatural defect that you were describing in
4 the parietal and occipital bones yesterday was an
5 example?

6 A. That's correct.

7 Q. Another common example would be to look for
8 evidence of cutting that you might see in bone?

9 A. That's correct.

10 Q. Now, that -- that actually may give you some help
11 on occasion in deciding whether you are looking
12 at a human bone or an animal bone, if the piece
13 is so small that you can't tell the difference,
14 in the sense that animals might often be
15 butchered and you would see signs of cutting near
16 the ends or joints of bones?

17 A. That's correct.

18 Q. Are you able to, not every time now, but on
19 occasion are you able to draw any professional
20 conclusions about what type of instrument may
21 have used to cut, or is that beyond what you can
22 do?

23 A. That is beyond my expertise and certainly would
24 refer that kind of work out to someone who
25 specializes in that kind of analysis.

1 Q. Okay. You may have some suspicions, but wouldn't
2 make -- wouldn't feel competent to make a final
3 conclusion?

4 A. As to what instrument --

5 Q. Right.

6 A. -- may have caused the cut? That's correct.

7 Q. Are you capable of discerning the characteristic
8 differences between a cut made by something
9 that's sawtooth and a cut made by a smooth edge?

10 A. Visually, that is often possible to do.

11 Q. But, again, a final conclusion you would refer
12 out?

13 A. Yes, I would.

14 Q. All right. Did it appear to your eyes that these
15 cuts were -- if you could draw any conclusion at
16 all -- that the cuts on these pelvis bones were
17 from a smooth edged instrument or a toothed
18 instrument?

19 A. I cannot answer your question.

20 Q. Very well. But the cuts were fairly long and
21 straight cuts?

22 ATTORNEY FALLON: Objection, she's
23 indicated this is beyond her ability to answer these
24 types of questions.

25 ATTORNEY STRANG: No, no. I think -- I

1 think that you did testify to, if I heard you just a
2 minute or so ago describing the cut more
3 specifically -- you said -- or maybe I misheard you,
4 they were fairly long cuts?

5 THE COURT: I will overrule the objection
6 because I think the question goes to not what type
7 of instrument it came from, but rather the
8 appearance of what she saw in the bone.

9 ATTORNEY STRANG: And the Court is right.

10 Q. (By Attorney Strang)~ Not interested in the
11 instrument, just what did you see about the cut,
12 again?

13 A. That they were straight and linear. But because
14 of the burning and charring of the bone itself,
15 it was difficult to make any additional
16 observations beyond that.

17 Q. All right. Could you tell, for example, whether
18 the cut went horizontal to the ground or
19 vertical?

20 A. If I could place those two adjoining fragments in
21 anatomical position, which I was able to do, as
22 part of the right pelvic structure, those cuts
23 were made on either side, in what I would call a
24 north/south direction, an up and down direction.

25 Q. Up and down if the skeleton or person was

1 oriented as I am now, standing up?

2 A. Correct.

3 Q. Okay. These -- These three small fragments you
4 described were not the only bone fragments that
5 you found under tag 8675?

6 A. That's correct.

7 Q. There were 10 bone fragments in total, or in
8 addition to the pelvic bone fragments?

9 A. In addition.

10 Q. Okay. So we're talking about a total of 13 bone
11 fragments?

12 A. There were also nonhuman unboned burns --
13 burned --

14 Q. Unburned bones?

15 A. Unburned bones. Thank you.

16 Q. Okay.

17 A. Under that same tag number.

18 Q. Okay. But 13 bone fragments that were burned?

19 A. Correct.

20 Q. The charring and partial calcine -- calcined
21 condition that you saw was essentially consistent
22 with the charring and the calcined condition that
23 you saw in human bone fragments from the Janda
24 burn barrel and behind Steven Avery's garage?

25 A. That is correct, sir.

1 Q. Of the 13 charred bone fragments under tag 8675,
2 only one of those was -- was clearly nonhuman?

3 A. No, certainly more than one was nonhuman.

4 Q. Of the 13?

5 A. Yes.

6 Q. Okay. Let's go to your report. I'm interested
7 here, I think, in the first report at page nine?

8 A. Yes, sir, I am there.

9 Q. I was looking at the second full paragraph down
10 on page nine of your first report.

11 A. Yes, sir.

12 Q. So what you saw is a tag 8675 contained many
13 elements of unburned nonhuman bone, which you
14 just told us, right?

15 A. Yes.

16 Q. And other items, as well as 10 fragments of bone
17 with suspected cut marks?

18 A. Yes, that's what I have written.

19 Q. Okay. Eight of the ten fragments, one definite
20 nonhuman, were burned/calcined?

21 A. That's correct.

22 Q. So of the -- of the eight burned bone fragments
23 that showed suspected cut marks, of those eight,
24 one was definitely nonhuman?

25 A. At -- At that point in my analysis, that's as

1 much as I knew.

2 Q. Okay. Were you later able to establish more in
3 terms of separating nonhuman from human among the
4 10 bone fragments we're discussing now?

5 A. I was.

6 Q. And what did you -- what was the separation you
7 eventually made?

8 A. I do not have my working notes here with me in
9 court today and I am, unfortunately, not able to
10 answer that question with any certainty.

11 Q. Just don't remember now?

12 A. I do not.

13 Q. Do you remember the bottom line being that the
14 three pelvic area bones that you have described,
15 you continue to suspect may be human, but can't
16 be certain?

17 A. That is correct.

18 Q. And as to the other 10 charred bones, are there
19 some that you continue to suspect may be human,
20 but can't be certain?

21 A. There is that possibility. I should say that
22 none of those fragments are diagnostic; in other
23 words, I cannot associate them with one
24 particular bone or another.

25 Q. Right. And I know you can't give us a number any

1 more among the 10 charred bone fragments that
2 weren't pelvic, but the bottom line is that you
3 still suspect that some of them may be human, you
4 are not certain of that?

5 A. The three larger fragments that show burn
6 patterns consistent with burn patterns found on
7 human bone elsewhere on the property, yes.

8 Q. Okay. Very well. Of the bone fragments under
9 tag 8675, from the quarry pile, that you suspect
10 may be human, were the two from the right pelvic
11 bone, or the right innominate bone, the only --
12 the only two that you were able to associate with
13 each other?

14 A. Actually, they came to me still articulated.

15 Q. Oh, okay.

16 A. The bones were in anatomical position, when I
17 received them.

18 Q. As they arrived?

19 A. Correct.

20 Q. Others, because they were non-diagnostic, you
21 couldn't associate one with the other?

22 A. That's correct, non-diagnostic and much, much
23 smaller.

24 Q. So, in the same way, then, if we go back to the
25 child's nursery rhythm, you know, the leg bone is

1 connected to the knee bone and the knee bone is
2 connected to the shin bone and the shinbone to
3 the ankle bone, that kind of thing; you can't --
4 you are obviously unable to tell us whether these
5 fragments were from contiguous or, you know,
6 associated bones?

7 A. The non-bone pelvic fragments, I cannot.

8 Q. What we have, then, I guess in the end, first,
9 your conclusion was that the vast majority of
10 human bone fragments, presented to you under all
11 tag numbers, quarry pile, Janda burn barrel,
12 Steven Avery's garage area, or behind Steven
13 Avery's garage, the vast majority of the human
14 bone fragments, from all those sites,
15 collectively, the vast majority was found behind
16 Steven Avery's garage?

17 A. That's correct.

18 Q. All of these exhibited similar charring and
19 calcined appearance?

20 A. That is correct.

21 Q. From all three sites?

22 A. The human bone, yes.

23 Q. All of them were fragmented, similarly, from the
24 three sites, again, human bone?

25 A. That's correct.

1 Q. And while you made mention yesterday, briefly, to
2 not knowing what the weather was, you know, and
3 whether -- whether some weather condition might
4 have caused bone fragments to be found east or
5 west or south of the burn pit at Steven Avery's
6 garage; do you remember that --

7 A. Yes, I do.

8 Q. -- testimony? You certainly would agree that it
9 would be very strange weather conditions, indeed,
10 that would transport human bone fragments from
11 the Avery garage area into burn barrel number two
12 on the Janda property?

13 A. In fact, I would submit there would be no weather
14 conditions that could make that happen.

15 Q. You would rule that out?

16 A. I would.

17 Q. Likewise, the quarry pile?

18 A. Yes, sir.

19 Q. All right. So what -- what you conclude is that
20 by human agency the bone fragments here were
21 moved or located where they were found?

22 A. Some bone fragments identified as human had been
23 moved, that's correct.

24 Q. Including, I think we agreed yesterday, possibly
25 human bone fragments found in the general area

1 behind Steven Avery's garage?

2 A. Based on some of the information you provided me
3 with yesterday, there is some evidence for
4 disbursal --

5 Q. All right.

6 A. -- that's correct.

7 Q. Now, you have no evidence that human bone
8 fragments actually were burned at more than one
9 site, do you?

10 A. I do not know that.

11 Q. You just don't have any evidence that there were
12 multiple burn sites, correct?

13 A. Not based on the material I was given to examine.

14 Q. Right. And in any event, the burning, charring,
15 calcining, all was roughly consistent as between
16 the three sites: Quarry, Janda burn barrel and
17 behind Avery's garage?

18 ATTORNEY FALLON: I'm going to object to
19 that question. This is the third time that question
20 has been asked in this context. The witness
21 indicated that she cannot say that the bones at the
22 quarry site were human, to a reasonable degree of
23 scientific certainty.

24 ATTORNEY STRANG: Okay.

25 ATTORNEY FALLON: So whether they are

1 burned, or calcined, or not charred, or burned, or
2 whatever, is irrelevant.

3 ATTORNEY STRANG: Let's do it this way. I
4 don't agree that it's irrelevant, but let me take
5 the human qualifier out.

6 Q. (By Attorney Strang)~ The bone fragments, here we
7 have to set aside the completely non-burned bone
8 fragments, animal bones that weren't burned.

9 A. Right.

10 Q. But the burnt bone fragments that you saw from
11 the three sites, again, all were roughly similar
12 in their burning, charring, and calcining?

13 A. That is correct.

14 Q. You are aware that the burn pit behind
15 Mr. Avery's garage was one possible burn site, if
16 you will, on the property that the -- the various
17 properties that the police examined?

18 A. Yes, that's true.

19 Q. That burn pit was described to you as, again,
20 this sort of rectangular area that was at grade,
21 but sort of surrounded by a higher mound of dirt?

22 A. I don't -- My understanding was that it was a
23 mound itself and the pit was part of that mound;
24 that may or may not be correct.

25 Q. Right. And have you ever seen a photograph of

1 that burn pit?

2 A. I have not.

3 Q. All right. I won't show you one then. But

4 essentially this was described to you as an open

5 burn area, although possibly with sides to it?

6 A. Correct.

7 Q. You are familiar with a burn barrel, correct?

8 And the general idea of a burn barrel?

9 A. Yes, I am.

10 Q. Seen pictures of burn barrels?

11 A. Yes.

12 Q. A burn barrel here would be a possible burn site

13 for a human cremation?

14 A. I guess anything is possible.

15 Q. Well, burn barrels are used for burning things,

16 right?

17 A. Most often not used for burning human remains --

18 Q. Shouldn't be --

19 A. -- however.

20 Q. Should not be used for burning human remains, but

21 a burn barrel would be large enough to put a

22 human being in if one wanted to.

23 A. Depending on the size of the barrel, it's

24 possible.

25 Q. Okay. And the jury has seen the barrels here,

1 so. Were you aware of an aluminum smelter on the
2 Avery salvage property?

3 A. Only in so far as that item was described in
4 Trooper Austin's report.

5 Q. Aware of the large wood furnace on the Avery
6 salvage property?

7 A. I cannot say for sure.

8 Q. All right. And again, then, you have no way of
9 knowing what other possible burn sites that were
10 in a quarry or anywhere else, in the vicinity of
11 Mishicot, Wisconsin, of course?

12 A. That's correct.

13 Q. Do you have enough experience with burnt human
14 remains to know whether an enclosed burn area
15 will do a faster job of cremating human remains
16 than an unenclosed burn area?

17 A. I would respond to that by saying that's really
18 outside of my range of expertise.

19 Q. Okay. So the answer is you just don't know?

20 A. I do not know.

21 Q. All right. Is it also outside your area of
22 expertise to offer an opinion on whether a burn
23 area that's actually fed with a source of
24 flammable gas or fluid would cremate faster than
25 a burn area that did not have -- was not fed by

1 flammable gas or fluid?

2 A. Again, I would offer the same response, that's
3 beyond my range of expertise.

4 Q. What you can say is that the burnt human bone
5 fragments that you saw from behind Steven Avery's
6 garage, as they came to you, were consistent with
7 human bone fragments that could have been moved
8 to that site after burning?

9 A. I would have to answer no to that question.

10 Q. Why were they inconsistent with human bone
11 fragments that could have been moved to that site
12 after burning?

13 A. My answer would be that, with the hypothetical
14 transport that you are talking about, the moving
15 of bones, I would expect to see some breakage to
16 some fragments, or many fragments, with that
17 transport. And the kinds of signs that I would
18 look for for breakage would be a bone break where
19 on the surface is the break, the break would be
20 lighter in color than the surrounding burned
21 bone, which would indicate to me a more recent
22 break from handling, whatever caused that
23 handling. And I did not see any -- anything like
24 that.

25 Q. Well, we do know that the very recovery of burn

1 bone fragments from behind Mr. Avery's garage
2 involved shoveling, correct?

3 A. That's correct.

4 Q. Transport to a sifting screen?

5 A. Yes, sir.

6 Q. Sifting on the screen, correct?

7 A. Correct.

8 Q. Some of them falling through to a second screen?

9 A. Yes, sir.

10 Q. Some of them falling through altogether to a tarp
11 below?

12 A. If that's how they set it up.

13 Q. All right. Possibly sifting on a second screen?

14 A. Possibly, yes.

15 Q. And from all of that, you saw no breakage or
16 spalling of the human bone fragments you looked
17 at?

18 A. I did not.

19 Q. But I think we have also established that as
20 bones from behind the garage came to you, we have
21 no way of knowing their relationship to one
22 another or to the human skeletal anatomy as they
23 were found?

24 A. We do not know the relationship of one fragment
25 to the next, to the next, that's correct, but we

1 do have general locational information assigned
2 to individual tag numbers.

3 Q. Right. Just behind the garage, for example?

4 A. Yes.

5 Q. All right. So while shoveling and sifting may
6 not have produced this sort of breakage, you
7 think that bones being carried in a barrel or
8 some other container and poured out would have
9 produced breakage; is that your opinion?

10 A. I -- I really can't answer that question.

11 Q. Okay. So you are not able to say that the bone
12 fragments you found are inconsistent with having
13 been transported to the burn area and poured out
14 there?

15 A. Are you referring to the burn fragments from the
16 burn barrel?

17 Q. No, no. I'm talking about the burn fragments of
18 human bone found behind Mr. Avery's garage?

19 A. And you are asking me, were they transported
20 there?

21 Q. No, you obviously don't know whether they were or
22 were not transported, you weren't there.

23 A. I was not there, but based on my archaeological
24 experience and the volume of human -- of burned
25 human bone fragments behind the garage, I find it

1 highly unlikely that that was not the primary
2 burn location.

3 Q. All right. But I guess that rests on an opinion
4 that transport in a barrel or some other
5 container, and being poured out, would have done
6 more damage to those human bone fragments than
7 shoveling, sifting, putting into a box and
8 transporting to Madison would have done?

9 A. I really don't know.

10 Q. You don't know one way or the other?

11 A. That's correct.

12 Q. What you do know is that somehow bones were
13 transported from one place to another place
14 because they wound up in at least two different
15 spots, human bones that is, behind Avery's garage
16 and in the Janda burn barrel?

17 A. There was transport --

18 ATTORNEY FALLON: Objection to the
19 question. She just indicated that there was not a
20 transport, in her opinion, to the burn pit. So
21 there's only one transport of human bone that the
22 testimony has revealed, so I object to the question
23 as mischaracterization.

24 THE COURT: Mr. Strang.

25 ATTORNEY STRANG: I don't think it's a

1 mischaracterization at all and she certainly could
2 answer here. The fact that she said the bones
3 clearly were transported, moved from original
4 location, both behind the garage and by dint of the
5 fact that they are found in the Janda burn barrel.

6 THE COURT: That she -- her previous
7 testimony was that they were moved from behind the
8 garage?

9 ATTORNEY STRANG: No, no, moved somewhere,
10 somehow the bones were moved because they were found
11 in at least these two separate locations.

12 THE COURT: Let's ask her again.

13 Q. (By Attorney Strang)~ Human bone fragments were
14 moved here, that's your professional conclusion,
15 isn't it?

16 A. There is evidence from the Avery property that
17 there was transport of human bone. And I believe
18 that transport occurred from the original burn
19 pit and adjacent areas, to barrel number two.

20 Q. And you base that opinion on what?

21 A. On the overwhelming majority of burned human bone
22 fragments behind the garage, in the area and
23 adjacent areas of the burn pit, the finding of
24 very delicate and fragmentary dental structures
25 within that universe, if you will, of burned

1 human bone fragments behind the garage and
2 absolutely none, for example, in burn barrel
3 number two.

4 And it's my opinion that if transport
5 occurred from the burn barrel to the burn pit,
6 that there would have been a greater
7 representation left over in the burn barrel of
8 more of the skeleton. And I do not see that. I
9 also would expect to see a less -- a lesser
10 volume of material found in burn barrel number
11 two, along with a few human bone fragments that
12 were in there.

13 Q. Well, I guess if someone was taking the burn
14 barrel to the Avery garage area, and was trying
15 very hard, or thought he or she had dumped
16 everything out of the burn barrel, we might see
17 very little in the burn barrel, that's true,
18 isn't it?

19 A. Very little human bone or --

20 Q. Yes, very little human bone in the burn barrel.

21 A. That is true, but that's also assuming that the
22 person who does that can distinguish between
23 human bone and nonhuman bone.

24 Q. Because you saw much more nonhuman bone in the
25 burn barrel?

1 A. Unburned nonhuman bone and larger bones -- larger
2 nonhuman bones as well.

3 Q. And some burned nonhuman bones in the burn
4 barrel?

5 A. Some possible burned nonhuman bones in the burn
6 barrel.

7 Q. And, again, you did not see the burn barrel in
8 place, correct?

9 A. I have never visited the property, so I have not
10 seen the burn barrel in place.

11 Q. The contents of the burn barrel came to you in
12 one of these sealed bins.

13 A. That's correct.

14 Q. So you have no idea and aren't able to tell this
15 jury what the layering was in the burn barrel
16 itself?

17 A. That's correct.

18 Q. You found, in the burn barrel, similarly, no
19 evidence of breakage caused by transport?

20 A. That's correct.

21 Q. The same would be true of the possible human
22 bones in the quarry pile, no breakage associated
23 with transit?

24 A. That's correct.

25 Q. And just so I'm clear, everyone of these human,

1 or suspected human bone fragments, by the time
2 they reached you, had been transported into a
3 plastic bin, or some container, and then
4 transported 90 or 100 or 110 miles, whatever it
5 is, to Madison, Wisconsin?

6 A. That's correct. The quarry area contained those
7 suspected possible human bones, that's right.

8 Q. But I'm also talking about the Janda burn barrel
9 and Steven area -- Steven Avery garage area.

10 A. That's correct. It was collected and transported
11 to me.

12 Q. All transported?

13 A. Yes.

14 Q. Large number of bone fragments in a bin, lying
15 one against the other?

16 A. Correct.

17 Q. And even after all that transport, you didn't
18 see, when you finally had a chance to look at
19 these human bone fragments, you didn't see a sign
20 of breakage?

21 A. I did not and I was very careful in looking for
22 any and all evidence, to look carefully at the
23 ends of every fragment.

24 Q. Including those delicate dental structures you
25 just mentioned a few minutes ago?

1 A. That's correct.

2 Q. If I understand your opinion, Dr. Eisenberg, you
3 think the most probable burn site here, on the
4 evidence you have, is the area behind Steven
5 Avery's garage?

6 A. Yes, sir.

7 Q. All right. As you sit here, though, you cannot
8 rule out another burn site as being a possible
9 site of burning of these human bone fragments,
10 can you?

11 A. I cannot.

12 Q. You are a reasonable person?

13 A. I hope so.

14 Q. I think so. And you cannot reasonably rule out
15 another possible burn site, can you?

16 A. Based on the information I have at hand, I
17 cannot.

18 ATTORNEY STRANG: That's all I have.

19 THE COURT: Mr. Fallon.

20 ATTORNEY FALLON: Thank you.

21 **REDIRECT EXAMINATION**

22 BY ATTORNEY FALLON:

23 Q. Doctor, let's start with the line of questioning
24 regarding your finding a complete absence of
25 breakage, spalling, and damage to these fragments

1 after they were removed from the pit, sifted by
2 law enforcement, and transported to you. What
3 does that tell you about the recovery efforts
4 engaged in by the officers and Crime Lab
5 personnel?

6 A. It indicates to me that whoever had an
7 opportunity to handle those remains, and recover
8 those remains, and package them, and transport
9 them, did not add any additional damage, or did
10 not create any artificial damage that I examined
11 when I looked at the remains.

12 Q. Given the condition of the remains, did that
13 suggest to you that these remains were carefully
14 extracted from their location and presented to
15 you?

16 A. That would be the conclusion I would draw.

17 Q. All right. Now, just so that we're crystal clear
18 on this, the various fragments from the gravel
19 pits southwest of the property, originally you
20 were only able to determine one was clearly
21 nonhuman. In your subsequent review and
22 analysis, you determined several more were
23 clearly not human; is that correct?

24 A. That's correct.

25 Q. And as a matter of fact, there was only three

1 left that you had a reasonable suspicion on that
2 could be human; is that correct?

3 A. That could possibly be human, that is correct.

4 Q. And as a matter of fact, as you sit here today,
5 you cannot tell us that those bones, to a
6 reasonable degree of anthropological or
7 scientific certainty, are human, can you?

8 A. I cannot.

9 Q. All right. Now, you did offer an opinion that
10 you believe the location for the primary burning
11 episode here was the burn pit behind the garage;
12 is that correct?

13 A. That is correct.

14 Q. Would you please elaborate for us your reasoning
15 on that?

16 A. Number one, in the order of priority, would be
17 that the overwhelming majority of fragments,
18 burned fragments that were identified by me as
19 human, were found in that location behind the
20 garage, in and adjacent to the burn pit, that
21 there were, in my opinion, many small, delicate,
22 brittle fragments that would have been left
23 behind some place else had that not been the
24 primary burn location.

25 And if that had been the case, I would

1 have been able to recognize those fragments from
2 another location and did not, except for burn
3 barrel number two. And that all the human bone
4 fragments that were fragmented and badly burned
5 from that location, show the same -- the --
6 approximately the same degree of charring,
7 burning, and calcination variously throughout the
8 material recovered in the burn pit and adjacent
9 areas.

10 Q. Since you have concluded that the burn pit was
11 the location of the primary burning episode, tell
12 us why, in your opinion, burn barrel number two
13 would not have been?

14 A. I believe that burn barrel number two would not
15 have been the primary burn location because I
16 would have expected to find more bone fragments
17 that I would have been able to -- bone fragments,
18 and human bone fragments, and dental structures
19 that I would have been able to identify as human
20 in burn barrel number two than actually I was --
21 than actually were found.

22 Q. Now, this may be a self-evident question, but I
23 want to make sure that we all understand. Given
24 the nature and condition of the fragments you
25 examined, would it have required professional

1 training and experience to be able to identify
2 human from nonhuman bone, if such bones were --
3 for someone to transport those bones? In other
4 words, would someone have to know human from
5 nonhuman?

6 ATTORNEY STRANG: That's wildly
7 speculative, your Honor.

8 ATTORNEY FALLON: Let me see if I can
9 rephrase that or articulate that question; it's
10 poorly worded, I agree with counsel.

11 Q. (By Attorney Fallon)~ Let's keep it simple.
12 Given the nature and condition of the charring,
13 the calcine defect on these bones, does it take a
14 professional such as yourself to be able to
15 clearly identify human from nonhuman burned bone?

16 A. I would say yes, except when nonhuman bone is of
17 a size, and intact, that someone might recognize
18 a deer bone or some other nonhuman bone. But,
19 yes, I would agree with you, given the charring,
20 and burning, and calcination of the fragments, in
21 fact, the majority of the contents of the burn
22 pit and adjacent area, that, yes, it would take
23 someone who has experience looking and
24 identifying human from nonhuman bone fragments.

25 Q. Would you say the same for what was found in burn

1 barrel number two?

2 A. Yes, I would.

3 ATTORNEY FALLON: That's all. Thank you.

4 THE COURT: Any redirect (sic)?

5 **RECROSS-EXAMINATION**

6 BY ATTORNEY STRANG:

7 Q. It would take much less experience with anatomy,
8 or identifying bone, to distinguish burn from
9 non-burn bone, that's true?

10 A. It -- Would you ask that again, I'm sorry.

11 Q. It would take much less experience to distinguish
12 burned bone from non-burned bone, wouldn't it?

13 A. Yes, sir, it would.

14 Q. You also found nonhuman bone under the tag
15 numbers that came from -- reportedly came from
16 behind Mr. Avery's garage?

17 A. Yes.

18 Q. And taking all three sites, the quarry, the Janda
19 burn barrel, and the Avery garage area, as a
20 whole, for the fragments that you found that were
21 burned, the burning charring and calcination was
22 roughly similar from all three places, wasn't it?

23 ATTORNEY FALLON: Asked and answered.

24 THE COURT: I will allow it as a
25 clarification of some of the other questions that

1 have been asked.

2 A. Actually, I would say no to your question. I
3 would indicate that in the quarry location, tag
4 number 8675, there was nonhuman bone intact. In
5 other words, it wasn't fragmentary, most of it,
6 and was clearly unburned. And it was in 8675
7 that there was more unburned nonhuman bone
8 than --

9 Q. We're going past each other, and it's my fault.
10 Of the burned -- I mean, you found some burned
11 bone from all three sites?

12 A. That's correct.

13 Q. And of the burned bone that you found, the
14 condition was roughly similar in all three sites?

15 A. That is correct.

16 ATTORNEY STRANG: That's all. Well --
17 That's all.

18 THE COURT: Mr. Fallon, anything else?

19 ATTORNEY FALLON: No, thank you. The
20 witness may be excused.

21 THE COURT: Right. The witness will be
22 excused at this time. And given the time, I believe
23 we'll take our morning break at this time. Members
24 of the jury remember not to discuss the case among
25 yourselves during the break.

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(Jury not present.)

THE COURT: You may be seated. We'll resume in 15 minutes.

(Recess taken.)

THE COURT: Counsel, there was some mention earlier of a stipulation. Is there something the parties wish to present at this time or should we bring the jurors back in?

ATTORNEY STRANG: Mr. Fallon is doing it. We have reached a stipulation and I assume he's sort of retyping it, the language of it, your Honor.

THE COURT: Okay.

ATTORNEY STRANG: But I can't speak for him on that, I'm just assuming that. I know we agreed on the language.

THE COURT: Was it something the parties wanted to present to the jury before we begin the next witness?

ATTORNEY STRANG: I think he does, and it would make sense to do it.

THE COURT: All right. All right. Mr. Fallon, do I understand the parties have a stipulation they wish to read to the jury.

ATTORNEY FALLON: Yes, Judge. The parties -- sorry for the delay, but the parties

1 wanted to make sure that Dr. Eisenberg's testimony
2 was complete before we could finalize the language
3 on a stipulation saving us the production of a
4 witness from Virginia from the FBI Laboratory, one
5 Dr. Les McCurdy. I don't know what the Court's
6 preference is, if you would like one of us to read
7 it, or the Court might want to read, it matters not
8 to me.

9 THE COURT: If the parties wish, I will
10 read it, otherwise one of you can read it.

11 ATTORNEY STRANG: I would think since it's
12 a stipulation between the parties I think it would
13 be better if Mr. Fallon read it.

14 THE COURT: Very well.

15 ATTORNEY FALLON: All right.

16 THE COURT: Anything else before we bring
17 the jurors back in?

18 ATTORNEY FALLON: No.

19 THE COURT: Okay. We can bring the jurors
20 in at this time.

21 ATTORNEY STRANG: Oh, you know, should move
22 in 401 and 402 while we're waiting, your Honor.

23 ATTORNEY FALLON: You can do that in front
24 of the jury and I will go along with that.

25 THE COURT: All right.

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(Jury present.)

THE COURT: You may be seated. Mr. Strang, I understand that the defense wishes to move admission of some exhibits.

ATTORNEY STRANG: I do. I move admission of Exhibit 401, which was the skeleton diagram tag 7964, and Exhibit 402, which was a schematic map of the Avery Salvage yard, and then the quarry pile site. I also used, for demonstrative purposes, a third image of a skeleton. And it matters not to me whether that's marked and admitted or not. It was used simply for demonstrative purposes.

THE COURT: Any objection to admission of the marked exhibits?

ATTORNEY FALLON: I have no objection to the admission of 401 and 402 and nor do I think it's necessary for us to produce a photograph of the exhibit counsel used for demonstrative purposes, so.

THE COURT: Very well, 401 and 402 will then be deemed admitted.

Members of the jury at this time I believe the parties have a stipulation to present to the jury. Mr. Fallon.

ATTORNEY FALLON: Yes, thank you, Judge. The parties are agreed that bone fragments

1 identified as human from the burn pit behind Steven
2 Avery's garage, bone fragments identified as human
3 from burn barrel number two behind the residence of
4 Barb Janda, and bone fragments suspected as possible
5 human bones from the quarry pile in the Radandt
6 gravel pit south of the Avery Salvage Yard, were
7 sent to the FBI Laboratory in Quantico, Virginia, on
8 November 2nd, 2006, November 7th, 2006, and
9 December 19th, 2006, to attempt further DNA
10 analysis. If called to testify, Dr. Leslie McCurdy,
11 of the FBI DNA Analysis Unit, would testify that due
12 to the condition of the submitted bone fragments, no
13 DNA examinations could be conducted.

14 THE COURT: And, Mr. Strang, is that an
15 accurate statement of the parties stipulation?

16 ATTORNEY STRANG: It is. That's the
17 stipulation as to Dr. McCurdy's testimony, were he
18 called.

19 THE COURT: Thank you. Members of the
20 jury, you may take those facts as established. And
21 at this time, then, the State may call its next
22 witness.

23 ATTORNEY KRATZ: Thank you, Judge, the
24 State calls Curtis Thomas to the stand.

25 **CURTIS THOMAS**, called as a witness

1 herein, having been first duly sworn, was
2 examined and testified as follows:

3 THE CLERK: Please be seated. Please state
4 your name and spell your last name for the record.

5 THE WITNESS: Curtis Thomas, T-h-o-m-a-s.

6 **DIRECT EXAMINATION**

7 BY ATTORNEY KRATZ:

8 Q. Good morning, Mr. Thomas and thank you for making
9 it here. Could you tell the jury, please, what
10 you do for a living.

11 A. Yes, I'm an electronics engineer with the Federal
12 Bureau of Investigation.

13 Q. And from which FBI office are you stationed?

14 A. I'm stationed currently in Quantico, Virginia.

15 Q. Placed in front of you, Mr. Thomas, is an
16 exhibit, No. 403; do you see that?

17 A. Yes, I do.

18 Q. Tell the jury what that is, please?

19 A. It's my curriculum vitae. It's basically a
20 resume of what I have done and my current
21 position.

22 Q. Working for the FBI, what do you currently do; in
23 other words, what is your day usually made up
24 doing?

25 A. We examine electronic devices such as cellphones,

1 PDA's, other various electronic circuits that may
2 contain electronic data pertaining to a crime.

3 Q. Are you ever asked to make identification of
4 electronic components?

5 A. Yes, we are.

6 Q. Mr. Thomas, let me ask you if you do that in a
7 forensic capacity; in other words, after your
8 examinations in the laboratory, are you sometimes
9 asked to come to court or otherwise apply this to
10 legal principles?

11 A. Yes, I am.

12 Q. The FBI Lab in Quantico, Virginia, does that
13 enjoy any certifications?

14 A. Yes, we are currently ASCLD lab certified.

15 Q. You are going to have to explain what that means?

16 A. It's an Association of Criminal Laboratory
17 Directors Laboratory Accreditation Board is what
18 the full acronym stands for. It's basically an
19 internal validation that we go through to make
20 sure that we're following all the rules and
21 handling the evidence in the proper manner.

22 Q. All right. Exhibit No. 403, your curriculum
23 vitae, does that include your educational
24 background?

25 A. Yes, it does.

1 Q. And can you briefly describe what that is, for
2 the jury.

3 A. I have a bachelor's degree in computer
4 engineering.

5 Q. To entitle you or to allow you to perform
6 examinations and make identifications of
7 electronic equipment, have you had any specific
8 training and do you have experience in that
9 field?

10 A. I have received training as far as electronic
11 forensic examinations and how to handle evidence
12 properly. As far as identification goes, we
13 handle many different kinds of cellphones on a
14 daily basis and, therefore, I'm familiar with
15 many different models and makes of cellphones.

16 Q. All right. Are you familiar with the term
17 exemplar or standard?

18 A. Yes, I am.

19 Q. Does your lab in Quantico, Virginia, have
20 exemplars or standards for -- let's first talk
21 about cellphones?

22 A. Yes, we do.

23 Q. Can you describe that for jury, please.

24 A. We have a cabinet area that contains any sort of
25 cellphone that we have received in for

1 examination. We generally buy a copy of it so
2 that we can test -- perform tests on it before we
3 do examinations on the actual evidence and make
4 sure we don't change anything.

5 Q. All right. These exemplars, these standards or
6 examples, if you will, do you have those for
7 electronic devices other than cellphones?

8 A. Yes, we do, we have PDA's and also GPS devices.

9 Q. We need to slow down just a little bit. For
10 those jurors who don't know what a PDA is; what
11 is that?

12 A. A PDA stands for personal digital assistant such
13 as a palm pilot or pocket PC device.

14 Q. What are those used for generally?

15 A. Generally they are used to house contact
16 information and function as an electronic
17 calendar.

18 Q. All right. Does your unit analyze electronic
19 components on a daily basis? That's a poor
20 question, let me ask it a different way. Are
21 there individuals, other than you, in Quantico,
22 Virginia, at the FBI Lab, that do this kind of
23 work as well?

24 A. Yes, I work in an office of five people.

25 Q. All right. How do you typically receive

1 submissions for analysis, Mr. Thomas?

2 A. We're generally sent a communication requesting
3 our assistance and detailing what we're asked to
4 do.

5 Q. All right. Who is that generally sent by?

6 A. Generally sent from and FBI Field Office, but
7 it's -- we also accept requests from local police
8 officers as well.

9 Q. I guess my question is, you generally get
10 requests from a law enforcement agency?

11 A. That's correct.

12 Q. You don't do this kind of thing for the general
13 public or for some corporation or something, do
14 you?

15 A. No, we do not.

16 Q. Let me ask you, Mr. Thomas, in this case, now,
17 were you asked not only by a local agency, the
18 Wisconsin Division of Criminal Investigation, but
19 the local field office of the FBI here in
20 Wisconsin, to analyze some electronic components
21 that were recovered?

22 A. Yes, I was.

23 Q. Investigator Wiegert from the Calumet Sheriff's
24 Department is going to bring you a exhibit, he's
25 first going to open it. It's been marked as

1 Exhibit No. 415. I'm first going to ask you if
2 you are able to identify that box and then I will
3 have you identify the contents.

4 A. I do recognize the box, the box -- the box the
5 evidence was sent to us in.

6 Q. Okay. If you would be so kind, Mr. Thomas, as to
7 open that box for the jury and tell the jury
8 what's in that box, please.

9 ATTORNEY BUTING: This is 411?

10 ATTORNEY KRATZ: It's 415.

11 ATTORNEY BUTING: 415.

12 A. This box contains burnt electronic components.

13 Q. All right. As we go through that box, I'm going
14 to show you some exhibits as well. I'm first
15 going to show you some photos, but to assist you,
16 I'm going to show you what you are going to see
17 that's marked as Exhibit No. 404. I ask you to
18 refer to the large screen here in the courtroom
19 and tell us what the jurors are looking at,
20 please.

21 A. That is a layout of basically all the components
22 that are inside this box, spread out in a more
23 easy to view fashion.

24 Q. All right. When electronic components are
25 recovered, whether they are burned, or whether

1 they are recovered at some other potential crime
2 scene, do you typically receive them in a
3 packaged form similar to what's in front of you
4 as Exhibit 415?

5 A. We receive them in various different containers,
6 including paint cans that have been sealed up,
7 boxes that have been taped up, just pretty much
8 whatever the evidence is collected in, they send
9 to us.

10 Q. All right. Let's look at Exhibit No. 404,
11 generally. And why don't you give us an
12 overview, why don't you tell the jury -- you have
13 a laser pointer, by the way, in front of you, if
14 you would like to use that, please feel free.
15 Just give us an overview and tell the jury what
16 it is that these components are and what it is
17 that we're looking at here?

18 A. There are components from approximately three
19 devices in here. You can see here, this is the
20 front cover for a Motorola RAZR cellular
21 telephone. This is the back cover for the same
22 phone. This here is some of the front internal
23 pieces.

24 This is the front lens cover for a
25 PowerShot camera from Canon. This right here is

1 the circuit board that's inside a Palm Zire PDA.
2 And these little rectangular devices are pieces
3 of compact flash memory cards that would go
4 inside the camera to hold the pictures.

5 Q. Now, you have talked about three -- at least
6 three distinct electronic components, one of them
7 was a cellphone. Let's start with that first.
8 In the submission from the Division of Criminal
9 Investigation and our local law enforcement
10 agencies, what were you asked to do, if anything,
11 with that particular cellphone?

12 A. When the device was sent to us, they asked us if
13 we could extract any electronic data from the
14 cellphone.

15 Q. In the condition that you received it in, in the
16 burned condition that we now see all of these
17 components, were you able to extract any data
18 from that cellphone?

19 A. No, I was not.

20 Q. Let me ask you, Mr. Thomas, were you asked to
21 extract, if you could, any images from the
22 digital camera that was sent to you as well?

23 A. Yes, I was.

24 Q. Tell the jury, how does a digital camera work,
25 generally, and then explain for the jury what

1 process, or what you did to try to extract data
2 from that?

3 A. A digital camera works by taking in light through
4 the lens. It's then stored in an electronic
5 nature onto a compact flash card which -- of
6 which there are several in this submission. As
7 far as in this case, pretty much no effort was
8 taken to retrieve electronic -- electronic
9 information because, upon looking at it, it was
10 obvious that everything was damaged too far to
11 retrieve any such information.

12 Q. All right. You talked about a flash card or the
13 actual memory card that kind of goes into the
14 camera, are you able to just point out to the
15 jury -- we may see some other pictures of that,
16 but point to the jury where those memory cards or
17 flash cards that go into a camera are?

18 A. There's one here, a couple more here, and a
19 couple more here. Pretty much anything up here,
20 that's around this size, came from it. They kind
21 of split into sometimes multiple pieces, so each
22 one of those little rectangles doesn't represent
23 an individual compact flash card, but perhaps
24 more just a piece of one of the ones that was
25 submitted.

1 Q. And, again, you weren't able to retrieve any data
2 from that; is that correct?

3 A. That's correct.

4 Q. At some point, Mr. Thomas, you told the jury that
5 you found a third component, can you describe
6 that please.

7 A. Yes, as we were examining the evidence that was
8 sent to us, we noted that there was more
9 components than would be just left over from a
10 burned cellphone and a burned camera. And we
11 noticed that it was mainly this circuit board
12 right here. And this is the main board to a Palm
13 Zire PDA.

14 Q. All right. Let's go through the components.
15 Some are probably going to be easier than others.
16 What I'm going to have you look at, in front of
17 you is Exhibit No. 405; tell the jury what that
18 is, please.

19 A. That is the back cover for a Motorola RAZR
20 cellphone.

21 Q. And how do you know that that's for a Motorola
22 RAZR cellphone.

23 A. You can clearly see the M here, which is the
24 Motorola logo. And we also have an exemplar at
25 the FBI Lab to compare it to.

1 Q. All right. Motorola RAZR, is that also known as
2 a different model number or type?

3 A. Yes, it's also known as a V3.

4 Q. All right. Can you describe for the jury, for
5 those jurors who haven't heard of this kind of
6 phone, is this a commonly used or a common type
7 of cellphone?

8 A. Yes. All four of the major cellular carriers
9 offer one.

10 Q. Offer one what?

11 A. A Motorola RAZR cellphone.

12 Q. Do you know anybody that has one?

13 A. Yes, I do, my wife actually has one.

14 Q. Okay. I'm going to show you, Mr. Thomas, what
15 has been marked as Exhibit No. 406; again, these
16 are photographs that are in front of you, so if
17 you need a closer look, you can certainly take
18 them. Tell the jury, what is Exhibit 406?

19 A. Exhibit 406 is the back cover of the burned
20 cellphone; again, being compared with our
21 exemplar that we have at Quantico.

22 Q. What does that mean? Why don't you use the laser
23 pointer and tell us what you are talking about.

24 A. Basically we -- this is the burned evidence that
25 was sent to us here and this is our device that

1 we have at the lab. And basically we just took
2 pictures of them side by side, to show what it
3 would have looked like before it was burned.

4 Q. Next exhibit that might help the jury is
5 Exhibit 407. Tell us what that is, please.

6 A. Yes, that is the front cover for the Motorola
7 RAZR cellphone being compared, once again, with
8 the exemplar device that we have.

9 Q. All right. And why, Mr. Thomas, at least in
10 these images, is the exemplar placed right next
11 to the evidence, the burned evidence that was
12 recovered in this case?

13 A. It's for comparison purposes, so you can clearly
14 see where the burned evidence came from in the
15 original device.

16 Q. So in 407, if you could show us the burned
17 evidence that was recovered and what part of the
18 phone that is.

19 A. All right. This burned -- This is the burned
20 evidence piece right here and you can clearly see
21 here is the Motorola logo, which also appears
22 over here and you can also clearly see this
23 little speaker port, which is cut into the front
24 cover of the phone as well, as well as this
25 rectangular space for the camera being cut out.

1 Q. Finally, or at least finally regarding the phone,
2 I'm going to have you look at Exhibit No. 408 and
3 tell us what the jurors are looking at here,
4 please.

5 A. This is the internal key pad, which is present on
6 -- this here is the burned evidence, again, and
7 this here is our exemplar.

8 Q. And that's the internal key pad for a Motorola V3
9 RAZR phone?

10 A. That's correct.

11 Q. After your visual examination and after examining
12 the exemplar, were you able, then, to identify
13 those components, at least the components that
14 you have shown the jury here today, as coming
15 from a particular cellphone?

16 A. Yes, I was.

17 Q. And what was that conclusion that you were able
18 to draw?

19 A. We were able to conclude that these pieces came
20 from a Motorola RAZR V3 cellphone.

21 Q. Next item that you had talked about was a digital
22 camera. Just very quickly, however, I'm going to
23 just show you the rest of the photos that were
24 provided. What's Exhibit No. 409? What is
25 Exhibit 409? The picture?

1 A. Oh, Exhibit 409 is, once again, just pieces of
2 the burned cellphone placed together.

3 Q. All right. And Exhibit 410?

4 A. Exhibit 410 is simply a photo of some of the
5 burned evidence placed together.

6 Q. Okay. And from Exhibit 410, do you see any items
7 that are associated with a digital camera?

8 A. Yes, this piece right here is a lens cover for a
9 Canon PowerShot camera.

10 Q. As we zoom in on Exhibit 410, this might be kind
11 of obvious to everybody, but do you see any
12 markings on that digital camera cover that helped
13 you in identifying what kind of a camera this
14 came from?

15 A. Yes, there's the words PowerShot A310 appear.

16 Q. All right. And I understand that you do this for
17 a living and are probably an expert in this, but
18 you don't need to be an expert to see what camera
19 this is from, do you?

20 A. No, you do not.

21 Q. That notwithstanding, Mr. Thomas, there were
22 other electronic components to the camera that
23 were recovered; is that right?

24 A. That's correct.

25 Q. And, again, could you describe those for the

1 jury, are those shown in this exhibit, or do you
2 need to go to a different exhibit?

3 A. It's in a different photo.

4 Q. All right. Let me go to those, please. I'm
5 first going to show you, again, another exhibit,
6 that is, Exhibit 411, a little clearer picture of
7 the name; do you see that?

8 A. Yes.

9 Q. Again, what does that say?

10 A. It says PowerShot A310.

11 Q. What's Exhibit No. 412? What are we looking at?

12 A. Burned pieces of the Motorola RAZR V3 cellphone.

13 Q. All right. And Exhibit 413?

14 A. It's another zoom in on the earlier shot that
15 contained all the burned evidence laid out.

16 Q. Now, does any of this evidence associate with the
17 camera itself?

18 A. Yes, it does.

19 Q. Can you show that for the jury, please.

20 A. This circuit board right here is from the digital
21 camera.

22 Q. From the A310?

23 A. Yes.

24 Q. Is there anything else that you see that is
25 obviously associated with the camera?

1 A. Other than the compact flash cards, no.

2 Q. I'm going to leave this exhibit up -- let me ask
3 your opinion. Based upon the exhibits that you
4 have now shown these jurors, are you able and
5 were you in this case able to identify from which
6 digital camera those components came?

7 A. Yes, I was.

8 Q. What was that camera?

9 A. We determined it was a PowerShot A310.

10 Q. From Canon?

11 A. That's correct.

12 Q. All right. Let's talk about PDA's a little bit;
13 you said that stood for what?

14 A. Personal digital assistant.

15 Q. I think you mentioned one of the brands of a PDA
16 was something called a Palm Pilot?

17 A. That's correct.

18 Q. Are you there other brands of PDA's?

19 A. Yes, there are.

20 Q. And what are some of those, if you know.

21 A. Pocket PC and also Blackberry.

22 Q. Now, have you heard of a manufacturer of a
23 personal digital assistant that's called a Palm
24 Zire or Palm Zire?

25 A. Palm is the manufacturer of that device, yes.

1 Q. The Palm Zire 31, that particular model, do you
2 have familiarity with that?

3 A. Yes, I do.

4 Q. And at the time of your examination, at the time
5 that you did what was asked of you by local law
6 enforcement, describe for the jury what, if any,
7 familiarity you had with that particular brand of
8 PDA?

9 A. That particular PDA, we just happened to be
10 working on downloading memory and such from that
11 device, so I was familiar with what it looked
12 like, both inside and out.

13 Q. Mr. Thomas, I'm going to take you back to our
14 original exhibit, that is, Exhibit No. 404. Have
15 you looked at this and, again, if you are able,
16 from Exhibit 404, which is all the components
17 that were recovered in this case, if you can
18 point to the large screen as to which of those
19 components are associated with a Palm Zire?

20 A. This here is the main circuit board of the Palm
21 Zire and these two clear pieces of glass, one of
22 them is the screen, the LCD screen for the glass,
23 or for the PDA. And the other one is what's
24 known as a digitizer for the PDA.

25 Q. You are going to need to tell us what a digitizer

1 is, please.

2 A. PDA's allow you to touch the screen to input
3 information into them and the digitizer is the
4 piece of technology that allows this to take
5 place. It records where you tapped on the screen
6 and sends that information to the PDA.

7 Q. So, as I don't own one of these deals, but when
8 you see say somebody taking out something that
9 looks like a pen and they tap it on the screen,
10 is that the digitizer thing that you are talking
11 about?

12 A. That's correct.

13 Q. Looking at these components and looking and
14 describing for the jury, were you able to
15 identify, then, from what personal digital
16 assistant these components came?

17 A. Yes, I was.

18 Q. Could you describe that for the jury, please.

19 A. We determined that they came from a Palm Zire 31
20 PDA.

21 Q. I will have you look at Exhibit No. 404, which
22 are the -- a photograph of all the components and
23 compare that to the box that's in front of you,
24 Exhibit 415; does it appear that the electronic
25 components photographed in 404 are the very same

1 components that not only are in front of you in
2 415, but were also analyzed by you?

3 A. Yes, they are the same.

4 Q. The identification of electronics and electronic
5 components, does that require specialized
6 training and experience?

7 A. Yes, it does.

8 Q. And, again, you believe that you have that
9 through your work with the FBI?

10 A. That's correct.

11 Q. Your findings, Mr. Thomas, that is, the
12 identification of the Motorola RAZR phone, the
13 Canon PowerShot A310, and the Palm Zire 31, in
14 rendering those opinions, do you hold those
15 opinions to a reasonable degree of professional
16 certainty?

17 A. Yes, I do.

18 Q. After having come to those conclusions, did you
19 have a official report, again, authored by
20 yourself, performed in this case?

21 A. Yes.

22 Q. I'm showing you -- Do you have the exhibit number
23 in front of you?

24 A. 414.

25 Q. I'm showing you Exhibit No. 414, tell the jury

1 what that is, please.

2 A. This is my report that I generated once I was
3 finished examining the evidence.

4 Q. And does that report include your findings, that
5 is, include the identification of the three
6 electronic items that were recovered and which
7 you analyzed and identified?

8 A. Yes, it does.

9 Q. The last two exhibits I want you to take a look
10 at are two boxes that have been handed to you,
11 Exhibit No. 8 and Exhibit No. 9. Could you grab
12 those, please, and tell the jury what those are.

13 A. They appear to be consumer electronic devices
14 which are the same, as you can see, be similar to
15 our exemplars that we have in house.

16 Q. All right. First of all, they are boxes; is that
17 right?

18 A. They are boxes, yes.

19 Q. And which one is Exhibit No. 8; are you holding
20 that?

21 A. Yes.

22 Q. And could you tell the jury what the box on
23 Exhibit No. 8 reflects.

24 A. It says Zire 31.

25 Q. And would that be, at least from a manufacturing

1 standpoint, if you went to buy that in a store,
2 would the components or would the non-damaged
3 Palm Zire 31 that you have identified likely be
4 in that box if you purchased it?

5 A. Yes, it would.

6 Q. And show the jury Exhibit No. 9, please. You can
7 hold it up and show them what that is. What is
8 it?

9 A. It is the box for a Canon PowerShot A310.

10 Q. And, once again, would that likely be the box, if
11 you had purchased a Canon PowerShot A310, the
12 same box that would contain the undamaged
13 components as you have identified in not only the
14 photographs in Exhibit No. 415, but also are
15 included in your official FBI report?

16 A. Yes.

17 ATTORNEY KRATZ: I would at this time,
18 Judge, move the admissions of Exhibits 404 through,
19 I believe it's 415?

20 THE COURT: Any objection?

21 ATTORNEY BUTING: No objection.

22 ATTORNEY KRATZ: And I will pass the
23 witness, Judge.

24 THE COURT: 403 was the witness' CV?

25 ATTORNEY KRATZ: And 403, I'm sorry, Judge.

1 THE COURT: Any objection to that?

2 ATTORNEY BUTING: No objection to that.

3 THE COURT: Very well. Those exhibits are
4 all admitted. Mr. Buting.

5 ATTORNEY STRANG: Thank you, your Honor.

6 **CROSS-EXAMINATION**

7 BY ATTORNEY BUTING:

8 Q. Good morning, sir.

9 A. Good morning.

10 Q. You have been working at the FBI just for about
11 three years now, right?

12 A. That's correct.

13 Q. And there's five of you in your particular
14 division?

15 A. Yes.

16 Q. Are they all about as young as you, or some of
17 them quite a bit older?

18 A. It varies.

19 Q. You are at an age where people use these kinds of
20 devices more than probably us old folks anyway,
21 right?

22 A. I guess.

23 Q. You use digital PDA's yourself, right?

24 A. I personally do not use a PDA, no.

25 Q. Oh, really, okay. But others in your lab do?

1 A. Not on a personal basis, no.

2 Q. Well, as part of their business, do they use them
3 at all?

4 A. We use them as part of our job, just to examine
5 them.

6 Q. Oh, okay. So nobody in your lab actually has
7 these devices?

8 A. Not personally, no.

9 Q. All right. Let me just clear one thing up. The
10 FBI Lab, Mr. Kratz, as you indicate, is the
11 submissions from law enforcement, right?

12 A. That's correct.

13 Q. The FBI Lab does not do any tests for the defense
14 on a case, do they?

15 A. Our lab does not, no.

16 Q. So, even if I wanted to use your lab for
17 anything, it's not available?

18 A. No.

19 Q. Okay. You identified --

20 ATTORNEY BUTING: Could we put up one of
21 those exhibits, the overall shot, 409 and 410,
22 please?

23 ATTORNEY KRATZ: Do you want 404, the one
24 with all of them?

25 ATTORNEY BUTING: That's fine, 404, yeah.

1 Yeah, that's the one.

2 Q. (By Attorney Buting)~ Is -- 404 is an overall
3 layout of all of the items that you received,
4 every single one?

5 A. That's -- That picture was not taken by me, that
6 picture was taken here, as far as I know.

7 Q. Okay. Does that appear to be an accurate
8 representation of everything that you got in that
9 box, though?

10 A. It appears to be all the electronic pieces that
11 were contained in this box.

12 Q. Okay. And did you make an effort to actually
13 sort of fit these pieces back together?

14 A. No, we did not.

15 Q. So, for instance, do you know whether there's any
16 pieces missing from a complete PDA?

17 A. There are pieces missing just -- most likely they
18 have been consumed wholly by the fire.

19 Q. Well, I'm not sure that you can express that
20 opinion, but my point is that not necessarily all
21 of the pieces are there, right?

22 A. No.

23 Q. For instance, there's not -- there's a case, an
24 outer case that that PDA, circuit -- internal
25 circuit board fits into?

1 A. That's correct.

2 Q. Also a keyboard of some sort?

3 A. Yeah, there were four buttons at the bottom.

4 Q. Okay. And I don't know if the same holds true

5 for the cellphone and the camera, but there's

6 buttons and internal components that are missing?

7 A. That's correct.

8 Q. And in some instances even the outer cases that

9 these components are composed -- or contained in

10 are also missing?

11 A. That's correct.

12 Q. Okay. The digital camera, have these -- or uses

13 compact flash, is that what you called it?

14 A. Yes.

15 Q. Those little rectangular cards that we put in our

16 cameras?

17 A. That's correct.

18 Q. You said that no effort was made, though, to try

19 and retrieve any digital files from them?

20 A. That's correct.

21 Q. In the course of your work, how many cases have

22 you done where you're working with burned

23 electronics?

24 A. I have done a few.

25 Q. Less than five?

1 A. Most likely, yes.

2 Q. Okay. So most of your work is not -- is not
3 dealing with burned electronic parts, it's intact
4 parts?

5 A. That's correct.

6 Q. And in those instances, you are able to take, for
7 instance, a compact flash card and retrieve data
8 from it, potentially, right?

9 A. That's correct.

10 Q. But you never actually tested these cards to see
11 whether there might be some photographs or
12 digital files on the cards?

13 A. The condition that these cards were in precludes
14 any sort of testing that we would have done, lest
15 we completely destroyed this evidence. As you
16 touch most of this stuff, it is crumbling apart.

17 Q. Well, for instance, the compact flash cards,
18 could they have been -- did you try to insert
19 them into any kind of a card reader?

20 A. There was no connector left on most of them.

21 Q. Okay. The connector being some sort of metal?

22 A. It's plastic.

23 Q. Okay. And you have no other way, other than
24 being able to insert them into a card reader to
25 analyze what's on them?

1 A. We have the capability to remove the actual flash
2 memory chips from devices to read them, if
3 necessary.

4 Q. But you didn't do that here?

5 A. No.

6 Q. Okay. And as to the Palm Pilot, you are familiar
7 with how they are used, right?

8 A. Yes.

9 Q. And people keep appointments on them, for
10 instance?

11 A. Yes, they do.

12 Q. So the owner of this one, for instance, may have
13 had appointments that she was going to go to on
14 her last day, that we know of?

15 A. It's possible.

16 Q. As well as future dates for that matter, right?

17 A. That's possible.

18 Q. And how is that information stored on a Palm
19 Pilot?

20 A. It's also stored in flash memory.

21 Q. Okay. And do you see -- or did you find that
22 sort of a flash card amongst this?

23 A. The flash -- It doesn't store it in a separate
24 flash card, as the camera does. It instead uses
25 flash memory that would be contained on the main

1 circuit board.

2 Q. Okay. And did you make any effort to try and
3 retrieve any of the data from that flash memory
4 on the PDA?

5 A. No, we did not.

6 Q. Okay. So you weren't able to find, for instance,
7 whether she had appointments scheduled on her PDA
8 or not?

9 A. That's correct.

10 ATTORNEY BUTING: All right. Thank you,
11 sir. That's all I have be.

12 ATTORNEY KRATZ: Just two questions.

13 **REDIRECT EXAMINATION**

14 BY ATTORNEY KRATZ:

15 Q. Mr. Thomas, you mentioned, especially when we're
16 talking about combustible or things that are
17 destroyed in a fire, what kinds of components
18 usually, or as you look at this evidence, what
19 kind of components survived and what kind of
20 components didn't?

21 A. In this case and in --

22 ATTORNEY BUTING: I object. Hold on. I
23 object to the question as to what kind of components
24 didn't. I mean, that's speculative. That calls for
25 speculation. The first part is okay.

1 ATTORNEY KRATZ: I can ask what kind of
2 components aren't here, Judge, and what they are
3 made from.

4 THE COURT: You can phrase it that way.

5 ATTORNEY BUTING: Sure. That's fine.

6 BY ATTORNEY KRATZ:

7 Q. What kind of components survived; what materials
8 or products are these components made from?

9 A. Are primarily metal.

10 Q. And the components that you don't see, the
11 components that are missing, are you able to say
12 what those are primarily made of?

13 A. They are primarily made of plastic.

14 ATTORNEY KRATZ: That's all I have for
15 Mr. Thomas. Thank you.

16 ATTORNEY BUTING: Just one quick follow-up.

17 **RE-CROSS-EXAMINATION**

18 BY ATTORNEY BUTING:

19 Q. Are you able to state that the only missing
20 pieces here are plastic or are there also
21 potentially some metal pieces that are missing
22 too that aren't here?

23 A. We did not perform that sort of examination so
24 I'm not certain.

25 Q. All right. So you don't really know what --

1 exactly what pieces are missing, you just looked
2 at what pieces you had?

3 A. That's correct.

4 ATTORNEY BUTING: All right. thank you.

5 THE COURT: Very well. You are excused.

6 ATTORNEY KRATZ: I would ask that
7 Mr. Thomas be released from his subpoena and be
8 allowed to go back to Virginia.

9 ATTORNEY BUTING: That's fine.

10 THE COURT: Very well. You may leave the
11 evidence there.

12 THE WITNESS: Okay.

13 ATTORNEY KRATZ: We'll remove those things
14 and we're able to call another witness now --

15 THE COURT: Yes.

16 ATTORNEY KRATZ: -- if you would like us
17 to.

18 ATTORNEY FALLON: State will be calling
19 Bill Newhouse.

20 THE CLERK: You can step over there.

21 Please raise your right hand.

22 **WILLIAM L. NEWHOUSE**, called as a witness
23 herein, having been first duly sworn, was
24 examined and testified as follows:

25 THE CLERK: Please be seated. Please state

1 your name and spell your last name for the record.

2 THE WITNESS: William L. Newhouse,

3 N-e-w-h-o-u-s-e.

4 ATTORNEY FALLON: Thank you. Good morning,

5 sir.

6 **DIRECT EXAMINATION**

7 BY ATTORNEY FALLON:

8 Q. What do you do for a living?

9 A. I'm employed as a firearm and toolmark examiner
10 with the Wisconsin State Crime Laboratory in
11 Madison, Wisconsin.

12 Q. How long have you been so employed?

13 A. I joined the Wisconsin State Crime Laboratory in
14 November -- I'm sorry, September of 2002.

15 Q. Prior to joining the Wisconsin State Crime
16 Laboratory, what other employment have you held?

17 A. Well, I have to back up to 1972. I accepted a
18 position with the California Department of
19 Justice in August of 1972, as a -- out there they
20 call us criminalists -- as a trainee,
21 essentially, at that time. I didn't really
22 encounter firearms and toolmark work, which is
23 the work I do here in Wisconsin, until probably
24 the fall of 1974.

25 I, at that time, went through --

1 initiated the training courses they had in place
2 in the Sacramento Crime Laboratory that dealt
3 with the firearms and toolmark section and dealt
4 with the kinds of examinations that we were
5 expected to perform in the course of case
6 examinations in the firearm section. I completed
7 that training course successfully.

8 And January of 1975, then, still in
9 Sacramento, I was asked to take a week long
10 course, again as part of my training, that dealt
11 with the theory of identification and how is it
12 you can say anything about a bullet or a
13 cartridge casing and answer questions about
14 whether they were fired from a particular gun or
15 not.

16 After I completed that, and I think the
17 next week I was in another course that dealt with
18 ammunition problems. I was then assigned to the
19 firearm section of the Sacramento Laboratory and
20 was responsible, until I left that laboratory,
21 for most of the firearms work that came into that
22 firearms section of the laboratory.

23 Q. And when were you doing your firearms
24 identification work for the State of California,
25 about what time frame are we in?

1 A. We're talking about the spring of 1975 until
2 1981.

3 Q. And after that, where did you next have
4 professional experience?

5 A. I moved to the Montana State Crime Laboratory in
6 January of 1981. Took a position there as that
7 State's Firearm and Toolmark Examiner. While I
8 was there in Montana, I had the opportunity to
9 obtain some additional training.

10 I went to the FBI Academy. It was
11 probably in 1984, approximately. Took a course
12 there. It was a week long course that dealt with
13 specialized techniques in firearms and toolmark
14 identification. We look at special problems that
15 we encounter in the firearms section. And I was
16 there until November of 1988.

17 At that time I then moved to Kansas
18 City, Missouri Police Department Crime laboratory
19 as a Firearms and Toolmark Examiner, one of four
20 in that laboratory, and was responsible primarily
21 for firearms case work in that laboratory.

22 The last two years that I was in the
23 firearms section there, before I came to
24 Wisconsin, I was Chief Criminalist of the
25 Firearms Section in which I had supervisorial

1 (sic) duties in addition to the case work duties.

2 And then in, as I mentioned, in
3 September of 2002, I came from Kansas City up to
4 the Wisconsin State Crime Laboratory.

5 Q. And prior to engaging in this field, did you
6 receive any bachelor's degree from any
7 university?

8 A. I have a bachelor of science degree in physics
9 from Purdue University. I received that in June
10 of 1970.

11 Q. And did you pursue any post-graduate training, at
12 least in some respects?

13 A. I took a number of graduate courses for
14 approximately two years, until I -- until August
15 of 1972, when I went to California. Those
16 were -- most of them were in physics courses.
17 And I was doing that while I was looking for
18 employment after I had gotten my degree.

19 Q. All right. First of all, if you could tell us
20 what is firearms and toolmark identification, if
21 you can just generally tell us about that field.

22 A. In the firearms section of most crime
23 laboratories, we're dealing with evidence that's
24 recovered in the course of criminal
25 investigations that involve shootings. So,

1 obviously, what I'm going to be looking at, in
2 most cases, there's going to be a gun.

3 I'm interested in and have to be able to
4 define how a gun functions, whether it's
5 functioning properly, perhaps whether it's been
6 altered in some cases and, of course, whether or
7 not I can fire the gun safely, or whether or not
8 it was capable of being operated safely in the
9 instant in which -- from which it was recovered.

10 I'm also asked to look at bullets and
11 cartridge casings. We fire these guns, the
12 bullets, of course, are -- leave the gun, the
13 cartridge casings, depending on the design of the
14 gun, can leave the gun and are recovered at the
15 crime scenes, occasionally recovered at
16 autopsies.

17 I'm asked to examine those items of
18 evidence, the cartridge casings and bullets. And
19 most often I'm asked to determine, if a gun has
20 been recovered, whether that gun, or that bullet,
21 or that cartridge casing has been fired in a
22 particular weapon. In those instances where I
23 may not have a gun, then the question may be, was
24 this group of cartridge casings all fired in the
25 same gun or do we have more than one gun

1 involved.

2 The same questions apply to bullets.
3 So, then the next thing I do in that section most
4 frequently is look at bullets and cartridge
5 casings, compare them to test fired bullets and
6 cartridge casings so that I can answer those
7 questions.

8 The other element of firing the gun
9 involves gunpowder and gunpowder residues. And
10 it's also part of, or one of the duties that I
11 have, to examine clothing; to examine patterns on
12 skin of shooting victims; and answer questions
13 about distance, can I determine, if possible,
14 what distance the shooting victim may have been
15 from the gun when the gun was discharged.

16 Q. All right. Have you had any -- Do you currently
17 belong to any professional organizations?

18 A. I do.

19 Q. And what are those?

20 A. I'm a member, and have been for something over 20
21 years, of the Association of Firearms and
22 Toolmark Examiners.

23 Q. All right. And have you testified in courts of
24 law regarding your findings and expressed
25 opinions on those findings?

1 A. Yes, I have.

2 Q. Do you have any estimate for us as to
3 approximately how often you have been called upon
4 to testify in court proceedings regarding
5 firearms identification issues?

6 A. I'm satisfied it's been much in excess of 300
7 times at this point.

8 Q. I believe there's an exhibit placed in front of
9 you, and what is the number on that exhibit, for
10 us?

11 A. Exhibit 416.

12 Q. 416. And what is Exhibit 416?

13 A. 416 is a curriculum vitae, a description of my
14 experience and the training that I have received
15 in the 30 some years of experience I have had in
16 crime laboratories.

17 Q. All right. All right. Mr. Newhouse, in this
18 particular case, were you called upon to examine
19 some weapons, some bullet fragments, and some
20 cartridges?

21 A. Cartridge casings, yes, I was.

22 Q. Did you conduct such an examination?

23 A. I did.

24 Q. And were you able to make any findings or any
25 comparisons, based on your examination?

1 A. Yes, I did.

2 Q. All right. Well, before we get into that, if you
3 could -- I think it would probably be good if you
4 would define some terms for us. Some of us are
5 not so proficient in firearms technology and
6 language. So, first of all, can you tell us what
7 a cartridge is?

8 A. Most of you are probably familiar, if only
9 secondarily through TV, with guns, and know that
10 what you fire in a weapon is a cartridge. You
11 may not be aware of what the different components
12 of a cartridge are, and it's the components, of
13 course, most often, that I'm asked to look at.
14 You are going to hear me talk about some of these
15 parts of a cartridge and how they relate to and
16 connect with different parts of the weapon.

17 A cartridge is a composition of about
18 four different parts. A cartridge consists of a
19 cartridge casing, and we'll see some of these
20 later, I presume, at least pictures of them. We
21 also have a bullet or a projectile. This is part
22 of a cartridge. And, of course, the bullet is
23 what is aimed at a particular target and what
24 will, if the weapon is working properly and the
25 cartridge works properly, what will strike that

1 target.

2 Inside of the cartridge, inside the
3 cartridge casing, is gunpowder. Gunpowder is a
4 propellant. It's a chemical that, under the
5 conditions that we expose it to when we're firing
6 the gun, essentially explodes in the gun. And,
7 of course, when it does that, a couple of things
8 happen. It forces the bullet out of the barrel
9 of the weapon and, again, down range from
10 wherever the weapon is pointed.

11 The last component in a cartridge is
12 what we call a primer. There's a part of the gun
13 that's going to cause the cartridge to fire.
14 That part of the gun actually strikes a different
15 chemical in the gunpowder that's present in the
16 cartridge casing and that is very shock
17 sensitive. It gets struck. It explodes. It
18 ignites the gunpowder and then our cartridge
19 fires and the gun should work as it's intended
20 to.

21 Q. Generally, on a gun, where would the primer be
22 located or found.

23 A. Really only two places on any cartridge, these
24 days at any rate. We may have a rim fire
25 cartridge, and in this case that's the kind of

1 ammunition that was used. And in the case of a
2 rim fire cartridge, the primer is located around
3 the edge of the head of the cartridge.

4 And we may also have, in other weapons,
5 a center fire. In that instance, the primer is
6 located in the center of the head or the end of
7 the cartridge.

8 Q. All right. And you began to explain, I think you
9 did, on how the cartridge is actually fired. So
10 let me ask you, then, what happens to the bullet
11 as it is propelled down the barrel and out toward
12 its intended target?

13 A. Well, we have to know where the bullet starts
14 out. Of course, it's in the cartridge. But in
15 the weapon, the cartridge is going to be
16 chambered or located right at the end of the
17 barrel of the weapon.

18 The muzzle of the weapon is the very
19 front and most portion of that barrel. And at
20 the back of the barrel will be a part of the
21 barrel that's called the chamber. And it's
22 designed to receive a cartridge. When the
23 cartridge is fired, the bullet is projected or is
24 expelled from the cartridge and into the barrel.

25 If the gun is going to work properly

1 that barrel has to be sealed by the bullet. That
2 is, no gases can escape around the sides of the
3 bullet. And so the bullet, as it comes down the
4 barrel of the gun, is in contact with that inner
5 surface of the barrel. We have, then, the lead
6 surface or the copper jacketed surface of the
7 bullet being scraped by the inside of the barrel
8 of the weapon.

9 Q. All right. What happens to the cartridge when
10 the weapon is fired?

11 A. That's going to be determined by the design of
12 the weapon. Some weapons are designed to keep
13 the cartridge, the fired cartridge casing now,
14 inside the weapon, so that it has to be extracted
15 manually.

16 In other designs of weapons, allow you
17 to extract the cartridge casings in certain ways.
18 We may have what's called a bolt on a weapon that
19 if you actually pull up and back and that will
20 cause the cartridge casing that's been fired in
21 the weapon to be extracted and rejected from the
22 weapon.

23 And, finally, there's a design of a
24 weapon that's very common that's called a
25 semi-automatic design. And, in this instance,

1 the cartridge, when it's fired, the weapon is
2 designed to use the gases, the energy that's
3 created by the explosion of that gunpowder in
4 there, to actually drive back a part of the
5 weapon, extract whole that cartridge casing from
6 the chamber and then there will be another part
7 of the weapon that the cartridge casing comes
8 into contact with that causes the cartridge
9 casing to be ejected from the weapon.

10 And, then, the next step in this kind of
11 weapon is that that same part of the gun that's
12 driven backward and extracts the fired cartridge
13 casing, moves forward again, under spring
14 pressure most of the time, and it pushes the next
15 cartridge that's in the weapon up into the
16 chamber, and at the same time cocks the weapon.

17 So on a semi-automatic weapon, if you
18 fire a cartridge in that weapon, it ejects --
19 extracts and ejects the cartridge casing,
20 chambers the next round, cocks the weapon, and
21 now the gun can be fired by a pull of the
22 trigger.

23 Q. All right. And just so that we're clear, we have
24 had some other terminology used by some of the
25 other witnesses, a phrase called a shell casing.

1 What is the relationship, if any, between a
2 cartridge, and a shell casing, and what have you?

3 A. There's a number of different terms that are used
4 commonly in the public that refer to the same
5 thing. I generally, and in my reports, describe
6 a fired cartridge casing as a cartridge casing.
7 But it can also be called a shell casing. Some
8 people call them hulls, that's generally in
9 shotguns, but it is misused also. If you heard
10 the term shell casing, it's the same thing as
11 what I'm referring to as cartridge casing.

12 Q. All right. Given this process that you have
13 described about how -- what happens to the bullet
14 upon its being fired and what happens to the
15 cartridge casing; what makes firearms
16 identification possible?

17 A. You have heard me describe, I think, that when a
18 cartridge casing or cartridge is fired in a gun,
19 that we have contact between different parts of
20 the gun and the cartridge casing. And, then, I
21 know I described, specifically, that when the
22 bullet passes through the barrel of the gun that
23 it's in contact with that inner surface of the
24 barrel.

25 Whenever there is a contact between

1 either the bullet and the cartridge casing with a
2 part of the gun, we have the opportunity for a
3 marking to be transferred to that item. Let's
4 talk, specifically, about the bullet. When that
5 bullet passes through there and is scratched by
6 the inside of the barrel of the weapon, and I
7 look at that surface of the bullet under
8 magnification in the laboratory, what I'm going
9 to see are a series of scratches. We call them
10 stria. They are actually three dimensional
11 engravings, something more than scratches, in
12 most instances, on the surface of the bullet.

13 When I test fire the gun in the
14 laboratory, I fire it into a water tank and I
15 retrieve the bullets that I fired. I can examine
16 those test fired bullets and demonstrate to
17 myself that I have a pattern of these engravings,
18 of this stria, on that surface of the bullet.
19 And I can compare, test to test, two bullets that
20 I test fired in the weapon and establish that, in
21 fact, when I fire a bullet from that particular
22 weapon there is a pattern I can expect to see on
23 that bullet.

24 And so now I know, having done that,
25 that when I look at a bullet that I don't know

1 what gun it has been fired from, that if I find
2 that pattern on there, then I have the
3 opportunity to draw a connection between the
4 bullet that's been recovered and submitted to the
5 laboratory and possibly the gun that's been
6 submitted too. And that connection is going to
7 be based on the presence of these patterns of
8 markings.

9 With the cartridge casing, they have
10 exactly the same thing going on, and of course we
11 have different parts of the gun that are
12 involved. I will talk about two because they
13 were involved in my examination in this case.

14 I told you that a part of the gun
15 strikes the cartridge and causes it to fire.
16 It's that primer causes an explosion and, of
17 course, the cartridge goes off and the bullet
18 goes away. That firing pin, that piece of metal
19 in the gun that actually strikes the cartridge,
20 has markings on it that were created during the
21 manufacture of that firing pin. And some of
22 those markings can be transferred to the
23 cartridge casing.

24 Again, I test fired the cartridge
25 casing. I don't know when I test fire the gun

1 what parts of the weapon may be marking the
2 cartridge casings in a way that will allow me to
3 come to any conclusion about it, or whether there
4 will be any marks there. I examine my test
5 fires. I will examine the firing pin impression.
6 And under magnification, I may see a pattern of
7 markings in the firing pin impression.

8 And, again, if I do, and can demonstrate
9 that that's occurring with that ammunition on
10 every cartridge casing I fire in there, then I
11 know I have something to look for on cartridge
12 casings that have been recovered in the course of
13 an investigation and maybe tie that into that
14 gun. The other part --

15 ATTORNEY BUTING: I'm sorry, could we have
16 a little bit more question and answer to break it up
17 and follow along. The narrative is rather lengthy.

18 THE COURT: That's a good point.

19 ATTORNEY FALLON: Very well.

20 Q. (By Attorney Fallon)~ We'll develop that a little
21 further as we get into some of the opinions you
22 will offer. But I wanted to have you define
23 another term or two for us, if you would.
24 There's a phrase that I'm sure many people have
25 heard on television and elsewhere called lands

1 and grooves; could you tell us what they are?

2 A. These relate to the inner surface or the inside
3 of the barrel of the modern gun. When they
4 manufacture that barrel, they put grooves on the
5 inside surface of the barrel.

6 And, additionally, when they put those
7 grooves into that surface of the barrel, they
8 turn the tool that they are using to put the
9 grooves in there and give it a twist. We call,
10 of course, the grooves of the barrel are the
11 grooves. The term that's applied to the area of
12 the barrel between the grooves, we call lands, or
13 l-a-n-d-s. Don't know where the term came from,
14 but that historically has been the term applied
15 to that area between the grooves in the barrel of
16 the rifle -- or of the weapon.

17 Q. Okay.

18 ATTORNEY FALLON: Your Honor, I think this
19 would be a good place to break for lunch.

20 THE COURT: All right. Members of the jury
21 we'll take our lunch break at this time. We will
22 resume at 1:00. I will remind you not to discuss
23 the case at all during the lunch break. You're
24 excused at this time.

25 (Jury not present.)

1 THE COURT: You may be seated. Counsel,
2 were you going to be prepared to meet in chambers at
3 1, 1:00?

4 ATTORNEY BUTING: Yes, we could do that.

5 THE COURT: The package that you were
6 expecting came in?

7 ATTORNEY BUTING: Yes.

8 THE COURT: Very well. We'll see you at
9 1:00 then in chambers.

10 ATTORNEY FALLON: Judge, would it be
11 beneficial to have a quick five minute chat right
12 now perhaps?

13 THE COURT: Back in chambers?

14 ATTORNEY FALLON: Yeah.

15 THE COURT: Okay.

16 (Noon recess taken.)

17 THE COURT: Members of the jury, I have
18 been informed that some of you have had questions
19 about whether or not the trial is proceeding on
20 schedule. I discussed that matter with counsel
21 during the break and I have been assured that the
22 trial is proceeding on schedule.

23 And I can also tell you that because of
24 the weather situation today and tomorrow, it's
25 likely that we'll leave early today and we may be

1 well adjourning early tomorrow as well. We'll
2 try to make arrangements to get the bus here a
3 little sooner to accommodate that schedule. At
4 this point, Mr. Fallon, you may resume your
5 direct examination.

6 ATTORNEY FALLON: Thank you, Judge. Good
7 afternoon, sir.

8 **DIRECT EXAMINATION CONTD.**

9 BY ATTORNEY FALLON:

10 Q. I believe we left off with your discussion of
11 lands and grooves. And I just wanted to have one
12 more question on that topic before we move on.

13 And that is, why are there lands and grooves, or
14 how does it come to be that there are lands and
15 grooves in the barrel of the rifle that occur
16 during manufacturing?

17 A. The manufacturers put those in the barrel. And
18 you remember, I described how they will turn the
19 tool that creates the grooves in the barrel.
20 Those are there because when the bullet passes
21 through the barrel, it fills the barrel, engages
22 that rifling, and when it leaves the barrel it is
23 now spinning and that makes the bullet more
24 stable and makes the gun much more accurate.

25 Q. Now, I'm going to have Investigator Wiegert show

1 you some exhibits, sir, as we begin the remainder
2 of your testimony. First of all, I would like
3 Exhibit 247, which I believe it is the rifle.
4 The record should reflect that Investigator
5 Wiegert is handing Exhibit 247 to Mr. Newhouse.
6 And I would ask you, sir, do you recognize that
7 item?

8 A. I do.

9 Q. And what is, for the record, item -- Exhibit 247?

10 A. Exhibit 247 is a .22 caliber Marlin manufactured
11 semi-automatic rifle. Actually known as the
12 Glenfield Model 60. And this was a weapon that
13 was submitted to the laboratory in the course of
14 this investigation.

15 Q. And how is it that you are able to recognize that
16 particular weapon as the one that was submitted
17 to you for examination?

18 A. I mark or, in some cases, with guns in
19 particular, place a sticker on the weapon with
20 the information that associates it with --
21 associates it with our case number and the date
22 that I opened the box that it was in and so on.

23 Additionally, I had also, when it was
24 submitted to the laboratory, I had checked it to
25 make sure it wasn't loaded, and safe to handle

1 and store in the laboratory, before I examined it
2 in the firearms section. I also have a tag on
3 there with that same kind of information on it.

4 Q. And I see you are holding the exhibit, you are
5 pointing to what appears to be a green tag on the
6 trigger guard?

7 A. That's correct.

8 Q. And that is a tag that you affixed to the weapon
9 upon your receipt of it?

10 A. Yes.

11 Q. All right. I would like to have Investigator
12 Wiegert also show you one other item -- well, two
13 other items. Exhibit 250, the shell casings; do
14 you have Exhibit 250 in front of you?

15 A. I do.

16 Q. And do you recognize that exhibit?

17 A. Yes, I do.

18 Q. And for the record, what is Exhibit 250?

19 A. Exhibit 250 is a paper bag, a box, and eventually
20 you get to 11 fired cartridge casings, all of
21 them .22 caliber cartridge casings.

22 Q. And are those the casings that were submitted to
23 you for examination and comparison in this case?

24 A. They are.

25 Q. And, finally, if Investigator Wiegert would

1 provide to you Exhibits 276 and 277. Which one
2 are you holding at the moment?

3 A. I have Exhibit 277.

4 Q. All right. And tell us what Exhibit 277 is?

5 A. Exhibit 277 is a bullet, a bullet fragment if you
6 like, that we designated as Item No. FL when it
7 was received in the laboratory.

8 Q. All right. And Exhibit 276?

9 A. Exhibit 276 is a second bullet. And this one we
10 designated as Item FK when it was received in the
11 laboratory.

12 Q. All right. Were all these items submitted at the
13 same time, or did they come in in different -- at
14 different times?

15 A. They came in at different times.

16 Q. All right. And as a result of which, how many
17 reports did you generate regarding your
18 examination of those items?

19 A. I wrote two reports to describe the conclusions I
20 came to.

21 Q. All right. Let's take them one at a time. We'll
22 start with the first report. At approximately
23 when was that first report prepared by you
24 regarding your findings?

25 A. The first report that I wrote was written on

1 February the 21st of 2006.

2 Q. All right. So let's begin, then, with that
3 report and your examination regarding that
4 report. With respect to that first or initial
5 examination what were you asked to do?

6 A. Well, I had -- I knew that we had submitted in
7 the case a rifle and that some cartridge casings
8 had also been recovered and submitted. I was
9 asked to examine and test fire the rifle, and
10 then to answer the question, determine if I
11 could, whether the cartridge casings that had
12 been recovered had actually been fired in this
13 rifle, or whether they had been fired in some
14 other weapon.

15 Q. All right. All right. Let's begin with the
16 rifle. What was the first thing that you had to
17 do in order to attempt any subsequent
18 comparisons?

19 A. The procedure, the approach to a weapon
20 examination is really the same on just about any
21 gun that I look at. Initially, I'm concerned
22 about whether the weapon is safe to fire. I know
23 I'm going to want to do that.

24 I also want to examine the weapon, as I
25 did in this case, and document various features

1 of the weapon that might allow me to identify it
2 later, or that give me some idea of a possible
3 problem with its function if I examine it
4 closely.

5 Additionally, I'm interested in whether
6 or not there might be, in most cases, some other
7 kind of evidence on the weapon. Just depends on
8 whether it's been examined by someone else or not
9 or whether I'm the first to actually handle it.

10 So, in this case, the first thing I did
11 was to go through the weapon. It had already
12 been through the DNA section. I didn't need to
13 be concerned about any materials or substances on
14 the exterior of the weapon. And so I just
15 documented serial number, caliber, make, model,
16 length of the barrel, various physical
17 characteristics of the weapon.

18 One of the other things that I did in my
19 initial examination is to examine the bore of the
20 weapon, to look down the barrel. For two
21 reasons, one, I want to know that it's not
22 obstructed. And the only way to do that is to
23 look down there and make sure there is not a
24 bullet caught up somewhere in the middle of the
25 barrel.

1 And the other was to look at the
2 condition of the barrel. That gives me some idea
3 of what I might expect to see when I fire it, and
4 in particular what condition the bullet that I
5 recover from test firing it might be.

6 Q. All right. And did you subsequently, then, test
7 fire that weapon?

8 A. I did.

9 Q. And what determination did you make regarding the
10 weapon's functioning capability?

11 A. After I worked my way through the gun, I was
12 satisfied it was working and in safe enough
13 condition to fire. So I went ahead and selected
14 some ammunition from the collection there at the
15 laboratory and actually fired the weapon
16 recovering cartridge casings and the bullets and
17 also confirming that the weapon does function as
18 it was designed to function.

19 Q. All right. And what kind of ammunition did you
20 select for your test firing?

21 A. The cartridge casings that had been submitted,
22 the recovered cartridge casings, were
23 manufactured by CCI, one of the companies that
24 makes ammunition. So I fired, from my
25 collection, three CCI cartridge casings. I'm

1 sorry, three CCI cartridges.

2 Q. All right. And those cartridges contained the
3 bullets that you previously described, in terms
4 of how the weapon operates?

5 A. Yes.

6 Q. All right. And, generally, just for our benefit,
7 what is a bullet? What does it consist of? What
8 is in the bullet?

9 A. Virtually all bullets are going to be either lead
10 composition, or they will be a lead core that's
11 contained within some kind of a copper alloy
12 jacketing. In this case, the bullets that I
13 fired initially in this weapon, particularly for
14 the comparison to and the examination of the
15 cartridge casings that were submitted, were lead
16 bullets.

17 Q. All right. All right. Now, after you determined
18 that the .22 caliber rifle was functioning
19 properly, what did you do with respect to
20 determining whether any of the cartridge casings
21 had been fired from that rifle?

22 A. Well, as I said, I recovered the cartridge
23 casings that I had fired in this weapon. The
24 next step was to compare those to the recovered
25 cartridge casings, those ones that were

1 submitted. And at that moment, or at the point
2 that they were recovered, of course, we didn't
3 know what gun they were fired in.

4 The examination is a microscopic
5 examination. I'm looking at very, very, tiny
6 markings that are placed, as I described earlier,
7 on the cartridge casings, by the different parts
8 of the gun.

9 First thing I do is to look at my test
10 fires, to again assess what expectation I can
11 have of finding markings that are placed there by
12 the gun, what they look like, what patterns I
13 will see. Having done that, I would then, using
14 my microscope again, place one of the cartridge
15 casings that we're wondering whether it was fired
16 from the gun, and one of my test fired cartridge
17 casings, on the microscope, and do a direct
18 comparison, under magnification, of those
19 markings that I see on the cartridge casings.

20 Q. And were you able, then, to make a determination
21 as to whether the casings submitted to you had in
22 fact been fired from that gun?

23 A. Yes, I was.

24 Q. And what conclusion did you reach?

25 A. I was able to determine that all 11 of the

1 cartridge casings that had been submitted had, in
2 fact, been fired in this rifle.

3 Q. And the opinion that all of them had been fired
4 in that rifle, do you hold that opinion to a
5 reasonable degree of scientific certainty?

6 A. I do.

7 Q. And your opinion that the weapon, the .22 caliber
8 Marlin Glenfield 60 rifle, was functioning
9 properly upon its submission to you; do you hold
10 that opinion to a reasonable degree of scientific
11 certainty?

12 A. Yes, I do.

13 Q. All right. I would like to direct your attention
14 then to the second examination that you prepared
15 in this particular case. I want to direct your
16 attention to May of 2006; were you once again
17 asked to conduct an analysis involving that very
18 same Marlin Glenfield rifle?

19 A. Yes, I was.

20 Q. All right. This time, what was the requested
21 task or examination that was expected?

22 A. By now, two bullets, two pieces of metal that
23 looked like bullets, at any rate at that point,
24 had been recovered. I was asked, again, to
25 determine, if possible, whether those two bullets

1 had been fired from this same weapon that I had
2 already identified the cartridge casings as
3 having been fired in.

4 Q. All right. And are those the previously
5 identified exhibits, 277 and 276, which are in
6 front of you?

7 A. They are.

8 Q. All right. And they have the Crime Lab
9 designation Item FL and FK; is that correct?

10 A. That's correct.

11 Q. All right. Let's begin with a closer
12 description, if possible, of the bullet
13 fragments, or suspected bullet fragments that you
14 were asked to examine. First of all, let's begin
15 with Exhibit 276 identified as bullet FK. Tell
16 us, if you can, what the condition of that
17 particular fragment was upon its submission to
18 you for examination?

19 A. Well, the bullet in Exhibit 276 which, again, is
20 our Item FK, is probably -- or would not be
21 immediately recognizable to most people as a
22 bullet. It's in very poor condition. It doesn't
23 look like it did when it was still in the
24 cartridge.

25 ATTORNEY BUTING: Your Honor, I object and

1 move to strike that comment as to what other people
2 would think it looked like. He can give an opinion
3 as to its condition, but he can't express an opinion
4 about whether other people would have recognized it.

5 THE COURT: I think he's talking about its
6 apparent condition. I'm going to overrule the
7 objection.

8 ATTORNEY FALLON: Thank you.

9 Q. (By Attorney Fallon)~ All right. Please describe
10 further the condition of the bullet.

11 A. This is -- has been damaged greatly, no longer
12 looks like a bullet. Of course, having looked at
13 these for 35 years, it does look to me like a
14 bullet that has passed through or has struck some
15 harder object than the bullet.

16 When I examine it in the laboratory
17 initially, I do a number of things. I weigh the
18 bullet. I look at it under the microscope to
19 determine what kinds of, or if any, rifling
20 characteristics might be present on what remains
21 of this bullet.

22 I'm also interested in the bullet
23 composition. I want to -- I want to fire a
24 bullet like that from this gun, for comparison,
25 and so I'm interested in whether this is a lead

1 bullet, or whether this is a lead bullet that's
2 coated with copper, and so on. And all of those
3 things were part of what I documented and
4 recorded in the course of my examination of this
5 item, State's Exhibit 276.

6 Q. And what can you tell us about the bullet. You
7 said you wanted to select one that was similar to
8 what had been submitted to you. So I guess my
9 question is, what would you have selected or --
10 not what would you have -- what did you select
11 for purposes of making a comparison?

12 A. When I did the microscopic examination, it was
13 clear it was a coated bullet and not a lead
14 bullet. It was also clear it was a .22 caliber
15 bullet to me. Additionally, under the
16 microscope, I could see markings that were put
17 there by the rifle, in particular the barrel
18 through which it was fired.

19 Those lands and grooves that I described
20 earlier, in the bullet, leave what we refer to as
21 land and groove impressions. And in this
22 particular item, Exhibit 276, I could identify
23 under the microscope, eight remaining land and
24 groove impressions on that bullet.

25 Q. All right. Was that enough to be able to make

1 any comparisons whatsoever as to whether that
2 bullet was fired from that gun, or any other gun
3 for that matter?

4 A. The next step was to look at that under greater
5 magnification on the microscope. And the fact
6 is, on this Exhibit 276, although I had eight of
7 these land and groove impressions remaining on
8 the bullet, under greater magnification I could
9 see that I had none of the very small detail,
10 those things that make up patterns that I was
11 trying to describe earlier. None of that was
12 present, or at least not enough of it for me to
13 use to come to any conclusion about what gun
14 fired this bullet in Exhibit 276.

15 Q. All right. Now, I need you to explain something.
16 You previously described the bullets you
17 selected, the CCI bullets, as being lead bullets.
18 And then you just made some comment about not
19 lead but coated with a different substance. Can
20 you kind of explain --

21 A. Yes.

22 Q. -- so that we're not --

23 A. Yes.

24 Q. -- confused here?

25 A. Yes. Most .22 caliber bullets, with the

1 exception of .22 magnums, are actually lead
2 bullets. But many of them are coated with a very
3 fine powder of copper, or possibly a copper
4 alloy, that they actually impress into the
5 surface of the bullet. And that is the kind of
6 bullet that we have here in Exhibit 276.

7 That's important to me because I know
8 that if I'm going to compare this to the test
9 fired bullets from this gun, I want to shoot the
10 same kind of thing. So I selected, then, for
11 this second set of examinations with the bullets,
12 an ammunition that, in fact, was copper coated.

13 Q. All right. Although it was a lead bullet, but
14 the coating was not lead, the coating was copper?

15 A. Correct.

16 Q. Okay. All right. So, just so we're clear, were
17 you able to make any comparisons then with
18 respect to bullet FK, Exhibit 276?

19 A. I was able -- or it was limited to a class
20 characteristics comparison, a term I haven't used
21 yet. I knew by examining the bullet in Exhibit
22 276, that it had been fired from a gun
23 manufactured with 16 lands and grooves and a
24 right hand twist. That much information is on
25 the bullet. It's also a .22 caliber bullet.

1 This weapon is a .22 caliber bullet.
2 And in the barrel of this gun are 16 lands and
3 grooves and a right hand twist. However, I can
4 say no more than that about this bullet. And the
5 fact of the matter is, I cannot specify exactly
6 what gun this bullet was fired in, again, because
7 I don't have those small stria, those scratches
8 on the bullet surface, that I can use for that
9 kind of conclusion.

10 Q. All right. So in terms of class characteristics
11 is that a general category, or a specific
12 category, or tell us. I'm not a gun person, so
13 what do I -- what should I take from that?

14 A. It means that, based just on the class
15 characteristics on Exhibit 276, I know it was
16 fired in some gun, among a group of guns,
17 thousands of guns, if you like, tens of thousands
18 of guns, that were manufactured with 16 lands and
19 grooves and a right hand twist, and were
20 .22 caliber. And I can be no more specific than
21 that, based on what we have left on this bullet.

22 Q. All right. And do you hold that opinion to a
23 reasonable degree of scientific certainty?

24 A. I do.

25 Q. All right. Let's direct our attention, then, to

1 the remaining bullet, Item FL, Exhibit No. 277;
2 were you able to conduct an analysis of that
3 particular bullet?

4 A. I did.

5 Q. And were you able to make a determination as to
6 whether Exhibit 277, bullet designation FL, was
7 fired from the Marlin Glenfield .22 caliber rifle
8 in front of you?

9 A. Yes, I was.

10 Q. And what conclusion were you able to reach?

11 A. In this case, I was able to be more specific.
12 And, in fact, because of markings on the bullet
13 in State's Exhibit 277, I was able to conclude
14 that this bullet had been fired from this
15 specific gun.

16 Q. All right. So Exhibit 277 had been fired from
17 Exhibit 247?

18 A. Yes, that's correct.

19 Q. All right. Now, how is it that you were able to
20 make that determination?

21 A. Again, we have to refer to, or talk about what's
22 present, at high magnification, on the surface of
23 that bullet. And on this bullet I have, in fact,
24 patterns of scratches, or patterns of stria,
25 present on a number of different areas of the

1 bullet, even in the condition it's in, that I
2 could -- could relate to, that I could identify
3 with the same patterns on the test fired bullets.

4 Furthermore, the patterns that were
5 there, the markings that I see, are patterns that
6 I recognize as being more than could be expected
7 to be seen, more than we would ever see on a
8 bullet that was not fired from the same gun. It
9 has to exceed what I recognize as those -- those
10 set of markings that we expect to see on two
11 bullets not fired from the same gun.

12 So when I looked at State's Exhibit 277,
13 the pattern I saw there, the quality and quantity
14 of the pattern correlations and matchings that I
15 saw there, was enough for me to come to a
16 conclusion that, in fact, the reason they had the
17 same pattern on this bullet and my test fired
18 bullets, is because it had been fired from the
19 same gun.

20 Q. All right. Is there -- Does that mean it could
21 not have been fired from any other gun?

22 A. It does.

23 Q. The opinion that Exhibit 277, item designation
24 FL, was fired from Exhibit 247, the Marlin
25 Glenfield, Model 60, .22 caliber rifle; do you

1 hold that opinion to a reasonable degree of
2 scientific certainty?

3 A. I do.

4 Q. The opinion that it could not have been fired
5 from any other gun; do you hold that opinion to a
6 reasonable degree of scientific certainty?

7 A. I do.

8 Q. Did you prepare two brief reports and a disc
9 summarizing your findings?

10 A. The findings with regard to the bullets was on a
11 report dated May 10th of 2006. I also had taken
12 photographs of some of what I saw under the
13 microscope and had had those transferred to a
14 disc.

15 Q. All right.

16 ATTORNEY FALLON: For the record, your
17 Honor, counsel has seen them, I have had the two
18 reports marked and a disc marked to complete the
19 testimony, would offer them into evidence, and
20 tender the witness for cross-examination.

21 THE COURT: Any objection?

22 ATTORNEY BUTING: No objection.

23 THE COURT: All right. The exhibits are
24 received.

25 ATTORNEY BUTING: Give us the numbers,

1 please.

2 ATTORNEY FALLON: Certainly, 418, 419 and
3 417, the disc.

4 **CROSS-EXAMINATION**

5 BY ATTORNEY BUTING:

6 Q. Good afternoon, sir.

7 A. Good afternoon.

8 Q. Let me go back a little bit and maybe have you
9 explain to the jury in a little bit more detail a
10 few things. Okay.

11 A. Certainly.

12 Q. About your field. Now, one thing, sir, you are a
13 little bit far from the microphone. If you could
14 pull it toward you, or pull your chair up, or
15 lean forward, I think that would probably help.

16 A. Okay.

17 Q. That's much better. Thank you. You say you
18 belonged to this organization for 20 years now,
19 the Association of Firearms And Toolmark
20 Examiners; is that right?

21 A. Probably more than that, but at least 20 years.

22 Q. Okay. And that's a reputable organization, it's
23 been around a long time?

24 A. Yes, it has.

25 Q. And if you have been a member that long, I assume

1 you have kept up with -- do you get sort of a
2 regularly monthly publication?

3 A. Yes, we do.

4 Q. Do you get the AFTE Journal?

5 A. It's a quarterly journal but, yes, I do.

6 Q. Okay. And that's a journal that is -- where
7 articles are published, people in your field
8 share studies and information with other people
9 such as yourself?

10 A. That's correct.

11 Q. And I take it that to belong to that organization
12 you -- there's certain guidelines or
13 qualifications that you have to have?

14 A. Yes, there are.

15 Q. It's not just pay your money and you are in,
16 right?

17 A. No.

18 Q. Okay. And you abide by those guidelines and
19 qualifications, right?

20 A. I had to satisfy them to become a member, yes.

21 Q. Right. And you continue to abide by whatever
22 requirements are recommended, or the
23 recommendations of that organization, right?

24 A. Beyond maintaining the work that I do in the
25 field, and then paying the fee every year, there

1 are no other requirements to receive the journal.

2 Q. Okay. But you do read the literature?

3 A. Yes, I do.

4 Q. All right. And you also said that your lab, the
5 Crime Lab, is a member of ASCLD, that's
6 A-S-C-L-D, often referred to by people like you
7 as ASCLD?

8 A. I don't think I said that, but we are ASCLD lab
9 accredited.

10 Q. I thought you did say that actually, but I may be
11 wrong.

12 A. No.

13 Q. And is that true of the entire Crime Lab, all the
14 different units are A-S-C-L-D qualified?

15 A. No.

16 Q. Your unit, though, is ASCLD accredited, right?

17 A. Yes, it is.

18 Q. And in order to become accredited by that
19 organization which, again, we had some testimony
20 about it, but that's a different witness, that's
21 actually an Association of Crime Lab Directors,
22 right?

23 A. Yes.

24 Q. And they do a number of things in terms of
25 reviewing the procedures and the qualifications

1 of the people in the lab, whatever unit they are
2 accrediting, before they get -- before they give
3 out that accreditation, right?

4 A. That's correct.

5 Q. And that includes they review your protocols for
6 tests and examinations, right?

7 A. Yes, they do.

8 Q. And proficiency tests as well?

9 A. Yes.

10 Q. Do you do proficiency tests?

11 A. Yes, I do.

12 Q. What sort of proficiency tests does a firearm and
13 toolmark person do?

14 A. We do probably two a year. One of them will be a
15 firearms case, may be a set of bullets that we
16 have to determine were fired from the same gun or
17 maybe cartridge casings. We're also asked, once
18 a year, to do a proficiency test that's focused
19 on more specific toolmark kind of comparison.
20 Might be a bow cutter case. Might be a mark made
21 by a screw driver.

22 Q. Okay. So, it's not just bullets, it's also other
23 tool markings?

24 A. Yes.

25 Q. And then you also have a protocol for different

1 types of examinations that you do?

2 A. We have procedures in place that relate to how we
3 perform certain examinations.

4 Q. Okay. And one of the things that ASCLD requires,
5 and I believe the other association, the AFTE, is
6 that you make sure that you have proper
7 documentation of what you examine, right?

8 A. That's correct.

9 Q. That can include notes, right?

10 A. Yes.

11 Q. Photographs?

12 A. Yes.

13 Q. And peer review, right?

14 A. That's correct. That's an element of our
15 examination process, yes.

16 Q. Okay. And, in fact, the guidelines, I believe,
17 require that -- that your documentation be good
18 enough that another person in your absence can
19 look at it and come to the same conclusion,
20 right?

21 A. That's correct.

22 Q. And when you do these examines you actually have
23 -- you are supposed to have two people look at
24 it. You look at it, come to a conclusion, and
25 then you have another person look at it up here,

1 and come to the same conclusion?

2 A. That's correct.

3 Q. And that's part of your protocol?

4 A. Yes, it is.

5 Q. Okay. Now, when we talked about proficiency
6 tests, you are aware, I assume, of a gentleman by
7 the name of Alfred Biasotti?

8 A. Yes, I am.

9 Q. You probably have been questioned about this
10 gentleman before, haven't you?

11 A. Not specifically that I recall, no.

12 Q. Okay. Then I will be the first. He's a very
13 well-known -- he produced a very well-known study
14 in your field, correct?

15 A. Yes, he did.

16 Q. And forgive me for a moment while I get the
17 actual name of it, it's called a Statistical
18 Study of the Individual Characteristics of Fired
19 Bullets; does that sound right?

20 A. Yes, it does.

21 Q. Actually, that was a study done quite some time
22 ago, 1959, but still is relied on in your field?

23 A. Yes.

24 Q. All right. And what he concluded is, that among
25 other things, that in the real world, there's no

1 such thing as a perfect match when it comes to
2 cartridges and bullets, correct?

3 A. That's correct, if by that you mean everything
4 lines up, yes.

5 Q. Right. And in his study -- Actually, his study
6 echoed the findings of another study that found
7 only 21 to 38 percent of the marks will match up
8 on bullets fired from the very same gun; does
9 that sound right?

10 A. That sounds like an appropriate range if we're
11 talking about percent match.

12 Q. Okay. So that when you are looking at these
13 bullets and you are calling something a match,
14 you are doing so with only 21 to 38 percent of
15 those markings matching up?

16 A. If, in fact, on the particular bullets I'm
17 looking at, that may be the case that if we look
18 at percent matching, that may be that only
19 21 percent match.

20 Q. All right. And yet you could still call it a
21 match?

22 A. That's correct.

23 Q. Now, part of that is because, in your field, your
24 opinion is really what we would call subjective,
25 correct?

1 A. There are subjective elements to it. There are
2 objective qualities to the examinations and
3 conclusions as well.

4 Q. Well, let me just give you an example. You
5 mentioned in this case there were bullets with 16
6 lands and grooves, the rifle you believe had 16
7 lands and grooves, right?

8 A. That's correct.

9 Q. There's no magic number when you are looking at a
10 bullet that says you have to have 14 -- you have
11 to see 14 of those match up in order to call it a
12 match, right?

13 A. No, the number of actual groove impressions or
14 land impressions that remain on a bullet that
15 we're examining does not have to be a certain
16 number of the original number that were there.

17 Q. Okay. So you are a little bit -- you're probably
18 a little bit familiar with fingerprints for
19 instance, right?

20 A. Not really too much. In terms of identification,
21 no.

22 Q. Okay. So you are not aware of how many standards
23 they have, about how many points of similarity
24 have to match up before they can make a call?

25 A. I'm aware that they have -- or that some agencies

1 operate under the need or requirement to have a
2 certain number of points.

3 Q. Okay. But in your field there is no quantitative
4 number or guidelines that you have to follow
5 before you call something a match or not a match?

6 A. There is no required guideline. There are
7 guidelines established that have been published
8 in the literature of that same journal we have
9 been talking about.

10 Q. Okay. But it's not something that you follow?

11 A. No, that's not true.

12 Q. Well, it's not something that you -- do you have
13 a specific number that have to be -- you have to
14 get to in terms of number of lands and grooves
15 before you can call something a match?

16 A. I have a certain number of matching stria. We're
17 going to have -- I'm going to have to use
18 terminology I haven't defined yet.

19 Q. We'll define stria a little bit more later. But
20 just tell me what is it, you have a specific
21 number?

22 A. Again, there's nothing regarding how many land
23 and groove impressions must be on a bullet. The
24 only requirement is that we have a pattern of
25 markings on the bullet or the cartridge casing

1 and that they satisfy some kind of minimum
2 requirement.

3 Q. But the minimum requirement is a subjective
4 requirement. It's your opinion that there's
5 enough to call a match, right?

6 A. No, that's not correct.

7 Q. Is there a specific number you must have, you
8 know, 40 particular stria in order to call it, or
9 what?

10 A. There are -- And, in fact, Mr. Biasotti, in that
11 treatise that you named a moment ago, there are a
12 certain number of stria that have been identified
13 and that we recognize as a number, beyond which,
14 we know we will not see that amount of
15 correlation in a non-match type of comparison.

16 That's going to require a little
17 explanation probably, but the point of what I'm
18 trying to say is that Mr. Biasotti, in fact, with
19 that paper, was the one who first defined it,
20 that there are and we can talk about minimum
21 criteria of consecutive matching stria or
22 markings and treat that as a threshold, above
23 which we can be sure, statistically, that this is
24 an identification.

25 Q. Well, tell us, what is the minimum? What's the

1 number? Is there a number associated with the
2 minimum?

3 A. Yes, there is.

4 Q. What is it?

5 A. When we're talking about a three dimensional
6 stria comparison, if you look under the
7 microscope, the markings I'm looking at, as I
8 alluded to earlier, I think are not just
9 scratches, they actually have depth. They have
10 width. They have that three dimensional element
11 to it. So we're not just counting lines.

12 When I'm performing this kind of a
13 comparison, the all important question is, of
14 course, when do I know I have enough for an
15 identification. Mr. Biasotti's research,
16 followed up by any number of other three or four
17 other important papers over the last few years,
18 have defined that minimum criteria. And it's
19 available for examiners to use, if they wish, to
20 rely on it.

21 In response, what the actual number is,
22 when I'm looking at three dimensional patterns of
23 marks on bullets, or any toolmark for that
24 matter, and we're talking about stria, that if I
25 have two consecutive groups of three marks, or a

1 single run of consecutive markings that number
2 six, or more than that, of course, this is a
3 minimum conservative criteria again, then I can
4 be assured, again, based on these studies that
5 have been published in the AFTE Journal and that
6 all of these researchers have completed, I can be
7 assured that, in fact, that is not possible with
8 two bullets fired from different guns.

9 When I see that minimum criteria or one
10 more, I can be assured, based solely on that,
11 that those two bullets had to have been fired
12 from the same gun in order to observe that set of
13 matching stria.

14 Q. All right. Let me -- Jumping around a little bit
15 here, but as long as we're on this topic, tell
16 us, what was the number you found for Item FL in
17 this case?

18 A. If we look at Item FL and we look at the
19 photographs, a little more specifically later if
20 you want to, you will see one run on, I believe
21 it was groove impression number three, of
22 approximately -- not approximately -- of six
23 consecutive stria. What I was trying to remember
24 was whether there were actually seven or not.
25 But at any rate, we have at least six consecutive

1 stria. And, again, that is the minimum criteria
2 that would allow me, based solely on what I'm
3 seeing in that one groove impression, to come to
4 the conclusion that it was fired from this
5 particular gun.

6 Q. And you are stating that from your memory; is
7 that right?

8 A. Well, I have reviewed my case notes and my
9 photographs.

10 Q. Okay. I'm going to show you Exhibit 420, if you
11 could identify that for us, please.

12 A. Exhibit 420 is a worksheet that I used to
13 document the cartridge casings, or my examination
14 of the cartridge casings.

15 Q. And that worksheet has information that you fill
16 out, it's sort of a graph, or actually more like
17 a chart, and it's where you make note of a number
18 of things, right?

19 A. That's correct.

20 Q. And nowhere on this document do you indicate
21 anywhere what you just testified to to the jury,
22 is it?

23 A. That's correct.

24 Q. What it does say, though, is this particular
25 worksheet includes both -- well, let's put it up

1 on the ELMO. You can see it from the screen, I
2 believe, from where you are sitting. Actually, I
3 marked the wrong exhibit. Let me give you
4 another one.

5 (Exhibit No. 425 marked for identification.)

6 Q. Just to clarify for the jury here, look at
7 Exhibit 425 for a minute.

8 A. Okay.

9 Q. You said you did this on two different dates?

10 A. That's correct.

11 Q. One date you did the cartridges. The first one I
12 gave you, actually, was the worksheet for the
13 cartridges.

14 A. Cartridge casings, yes.

15 Q. So, let me direct your attention now to 425
16 instead, which is the worksheet from the bullets,
17 correct?

18 A. That's correct.

19 Q. Okay. Let's put that up. All right. We have
20 got Exhibit 425 up on the screen. Let me zoom
21 out a little bit so we see the whole thing. And
22 at the top there's a chart that you fill out that
23 includes some numerical types of information,
24 right?

25 A. Some of it are measurements of the bullets that I

1 made, yes.

2 Q. Okay. And this includes both Item FL and FK,
3 right?

4 A. Yes, it does.

5 Q. And for both of them you indicate .22 caliber; is
6 that right? Is that what that says?

7 A. Yes.

8 Q. It doesn't say .22 caliber long either does it?

9 A. No.

10 Q. There's a difference, right.

11 A. The dimension that you see there, the 0.22 inch,
12 is approximately the diameter of the bullet.

13 Q. Okay. Doesn't tell you whether it's a
14 .22 caliber long, .22 caliber short, or plain old
15 .22 caliber, does it?

16 A. Just tells me it's a plain old .22 caliber and
17 just that measurement does not allow me to
18 conclude whether it's a .22 long, short, long
19 rifle.

20 Q. Well, in this particular instance, with FL and
21 FK, were you able to conclude, from looking at
22 the bullet alone, whether this was a .22 caliber
23 long, short, or plain old .22 caliber?

24 A. Are we talking about FL or FK, I'm sorry.

25 Q. Let's look at FL.

1 A. Okay. FL, the other characteristic of the bullet
2 that might allow me to determine and distinguish
3 a long from a long rifle and from a short is the
4 weight of the bullet. The weight of the bullet
5 there is 19.7 grains. And the weight of the
6 bullet when --

7 Q. We're talking about this column right here,
8 right?

9 A. That's correct.

10 Q. Okay.

11 A. The weight of a long rifle bullet is generally
12 around -- it's 40 grains. There is a few
13 variations in that out there the manufacturers
14 have produced. A .22 short bullet, I honestly
15 don't recall what the weight of those are, but
16 they are much less than that, than 40 grains.
17 The 19.7 grains is clearly -- because of the
18 condition of the bullet, which I also observed, I
19 recognize I'm missing parts of the bullet. And
20 so I don't see that 40 grain weight that you
21 would expect from a .22 long rifle.

22 Q. Well, but you don't know what you have got,
23 whether it's a .22 long or not, so you don't
24 really know what the weight is supposed to be?

25 A. Based on the weight, no, I don't know.

1 Q. So, there's really nothing you can tell from this
2 bullet whether this is a .22 long or not, right?

3 A. Well, that's not true. I know it's not a .22
4 short, because if I had 20 grains of a .22 short
5 bullet I would have more of the bullet --

6 Q. Okay.

7 A. -- there than I have.

8 Q. Fair enough. Fair enough. But can you tell the
9 difference between a long and a short, just from
10 this bullet?

11 A. The difference between a long rifle and a -- or
12 I'm sorry, a long and a short, or a long rifle
13 and a short?

14 Q. Right.

15 A. There's two different things. I can't tell the
16 difference between a long rifle and a long. I
17 can tell the difference here between a long rifle
18 and a short, and a long and a short.

19 Q. All right. Well, let's not get bogged down on
20 that. As long as you talked about the weight,
21 let's talk about that. If it is a long, .22 long
22 caliber, a full bullet would be about 40 grains,
23 right?

24 A. Again, I don't recall the weight on a .22 long.

25 A .22 long rifle is 40 grains.

1 Q. Okay. And in this instance then, Item FL would
2 be about -- only about half of that, correct?

3 A. That's correct.

4 Q. And Item FK is actually about three-quarters of
5 it, right?

6 A. Yes, it is.

7 Q. So Item FK is actually more -- a larger fragment
8 than FL?

9 A. More of the original bullet is present in FK.

10 Q. Okay. Now, third column over is -- TWT means
11 twist. It's a right hand twist, both of them,
12 right?

13 A. Yes.

14 Q. The next one is lands and grooves. And it says
15 11 of 16 for the first one and 8 of 16 for the
16 second one, right?

17 A. Eleven remaining and sixteen original and eight
18 remaining, yes.

19 Q. Okay. All right. And then over by the grains,
20 it says coated, that explains the -- that
21 particular type, right?

22 A. Yes.

23 Q. And in the base construction, concave coated for
24 both?

25 A. Yes.

1 Q. And I can't read that last column; what is that?

2 A. That's an indication that I marked the container
3 in which the bullet was received, but I did not
4 mark the bullet.

5 Q. Okay. Just the container. And then down below
6 you have some handwritten notes. First part is
7 packaging, fairly routine. And then below that
8 you have got FL. It says no markings in the land
9 impression, correct?

10 A. Correct.

11 Q. That means the land portion of the barrel is
12 making no impressions on this particular bullet
13 that you can tell.

14 A. It means that, on this bullet, I have no markings
15 in the impression made by the land.

16 Q. Fine. So you are left with the grooves. And you
17 do have useful groove -- useful markings in the
18 groove impression, test to test, comparisons
19 typical of coated .22 caliber bullets, right?

20 A. Yes.

21 Q. But, again, nothing in this document records any
22 kind of minimum number that you testified about
23 earlier?

24 A. That's right.

25 Q. And the determination, let's just get back to

1 that for a moment. The whole determination of
2 whether you are seeing these little scratches or
3 stria or you are not, it requires a subjective
4 eyeball opinion, right?

5 A. Certainly requires an evaluation of what's
6 present there and the judgment about what that
7 means, yes.

8 Q. And you are looking at these like two -- is this
9 a comparison microscope with two fields?

10 A. Yes, it is.

11 Q. So you have got a test bullet in one and the
12 evidence bullet in the other?

13 A. That's correct.

14 Q. And then you are looking through this microscope
15 and you are making an eyeball comparison based on
16 your judgment, experience, and what not, right?

17 A. Exactly.

18 Q. Sort of like used to be done with hair
19 comparison, microscopic analysis; are you
20 familiar with that?

21 ATTORNEY FALLON: Objection, no foundation,
22 argumentative, and speculation.

23 Q. (By Attorney Buting)~ Well, are you familiar with
24 that field?

25 ATTORNEY FALLON: Could we have a ruling on

1 the objection before counsel starts asking more
2 questions?

3 THE COURT: Well, I'm going to sustain the
4 objection. I will let him ask the next question, if
5 he is familiar with it.

6 ATTORNEY BUTING: I meant to withdraw and
7 rephrase, is what I was trying to do.

8 Q. (By Attorney Buting)~ Are you familiar with the
9 field of hair comparison, microscopic analysis?

10 A. Familiar is one thing, I have no expertise in
11 hair comparison.

12 Q. I understand, but you are aware -- I mean you
13 have been in Crime Labs for 30 years, right?

14 A. Yes, I have.

15 Q. And you are aware that that was a field, forensic
16 field, that was offered by Crime Labs for many
17 years, right?

18 A. It was a comparison or examination that was
19 performed for a long time, yes.

20 Q. And it is no longer, right?

21 A. I'm satisfied that some laboratories may still be
22 -- are probably still performing hair
23 comparisons.

24 Q. Generally, it's been discredited, however?

25 ATTORNEY FALLON: Objection.

1 Q. (By Attorney Buting)~ If you know. If you know.

2 A. Certain elements, certain conclusions that are
3 based on a hair examination certainly are
4 discredited.

5 Q. All right.

6 A. Hair examination itself, done properly,
7 interpreted correctly, has not been discredited.

8 Q. To your knowledge. But you are not an expert in
9 that field, right?

10 A. I'm not an expert in that field.

11 Q. So, this eyeball comparison that you are making,
12 this judgment, just so we're clear, a difference
13 between objective and subjective, let's use some
14 other types of tests that your Crime Lab does.
15 DNA, for instance, would you agree that DNA is a
16 more objective test than yours?

17 A. No, I would not.

18 Q. All right. You are aware that DNA, though, the
19 test that comes up with specific numbers and
20 genetic markers, and it either matches or it
21 doesn't, right?

22 A. They produce statistics that give them
23 probabilities.

24 Q. But before you even get to that, they have to
25 determine whether something is completely

1 excluded, whether it just can't be, it doesn't
2 match, right?

3 ATTORNEY FALLON: Your Honor, I'm going to
4 interpose an objection again, the witness is not
5 trained in DNA. There is no foundation for these
6 questions.

7 THE COURT: I'm going to sustain the
8 objection.

9 Q. (By Attorney Buting)~ Is it your opinion that
10 your field of forensics is just as objective as
11 DNA; is that your opinion?

12 ATTORNEY FALLON: Objection. Same
13 objection.

14 THE COURT: Without more foundation, I
15 agree. The objection is sustained.

16 Q. (By Attorney Buting)~ Beyond this minimum number
17 that you -- or description that you have given
18 us, there's no particular number at which a
19 perfect match can be declared; is that right?

20 A. I would never declare a perfect match, because I
21 have never seen one and I don't need more than
22 the minimum criteria that have been specified in
23 the research and the literature that's been
24 published.

25 Q. And is that a specific written protocol of your

1 department in the lab?

2 A. Absolutely not.

3 Q. There is no protocol on how to -- or what's
4 required in order to make a match, is there?

5 A. That is not described in our procedures, no.

6 Q. What is described is that you have to document
7 whatever it is you are examining, right?

8 A. We're required to document our comparisons. I do
9 that with photography.

10 Q. Okay. And you also -- And you always make sure
11 there is another person who looks at the same
12 thing, so it's a peer review?

13 A. That's correct.

14 Q. Okay. Going back just a minute to some of the
15 basics of your field. This kind of testimony, or
16 this kind of analysis, has been going on for many
17 years, early in the 19th century, or something
18 like that, right?

19 A. Mid to late 19th century, I believe.

20 Q. And originally, one of the bases (sic) for it
21 was that at that time firearms were hand-forged
22 or handmade, by and large, right?

23 A. Many of them were, certainly. Certainly all of
24 them were at the beginning.

25 Q. Sure. And by doing that handmade process, there

1 were many more unique kind of markings,
2 scratches, features inside of a rifle barrel at
3 that time, right.

4 A. Probably not correct, no.

5 Q. Well, all right. Would you agree with me that
6 modern manufacturing of guns has made guns more
7 uniform from one particular gun off the line than
8 to the next, same manufacturer.

9 A. No, that's not true.

10 Q. Okay.

11 A. In terms of what I'm looking at for
12 identification, no.

13 Q. Well, let's just talk about the lands and the
14 grooves for a minute. All right. The way a
15 barrel is made these days, most often is it's
16 cast.

17 A. No.

18 Q. Is it forged?

19 A. Forging would be part of the process of creating
20 the metal blank that's used to create the barrel.

21 Q. Okay.

22 A. Forging has nothing to do with the inside of the
23 barrel and the process that creates the lands and
24 grooves inside that barrel.

25 Q. But the process that drills the barrel open,

1 hollow, is a mechanical process?

2 A. Yes, it is.

3 Q. And it's done by a machine, that same machine
4 that makes rifle number one that's coming down
5 the line, rifle number two that's coming down the
6 line, and so forth, right?

7 A. You will have the same tool used to make many,
8 many barrels.

9 Q. Okay.

10 A. You will have the same tool used to put the
11 grooves and the lands in many, many barrels.

12 Q. All right. So there are actually two tools, one
13 that bores out the -- hollows out the tube and
14 then it deliberately -- I mean it's put through
15 another machine that deliberately puts this --
16 these grooves with a twist in it?

17 A. That's correct.

18 Q. And the twist is done in order to make --
19 deliberately make the bullet spin as it's fired,
20 right?

21 A. Yes.

22 Q. And sometimes the more it spins the more accurate
23 it can be to its target?

24 A. Yes.

25 Q. Okay. The Marlin 60, would you agree is,

1 probably is, or is close to, the most popular .22
2 made in the world?

3 A. I really -- I don't know any sales figures or
4 anything. I see a lot of them and suggests to me
5 that it's very popular.

6 Q. Well, you keep -- you have data banks and data
7 bases that you rely on, right?

8 A. For some things, yes.

9 Q. Okay. And from that I assume you learn something
10 about the rifle that you are examining and
11 testing, right?

12 A. Yes.

13 Q. You are aware that the Marlin 60 has been made
14 for 40 -- since 1960, right?

15 A. I don't think I knew when they started making it.

16 Q. Okay. But it's been around for decades, would
17 you agree with that?

18 A. It has.

19 Q. And it's mass produced by Marlin and it's
20 considered a very accurate rifle.

21 A. I believe it would be, yes.

22 Q. Partly because it has those 16 lands and grooves
23 with the twist. Some rifles have much less,
24 right?

25 A. Yes.

1 Q. And so, for that reason, plus the fact that it's
2 relatively inexpensive, it's quite common; would
3 you agree with that?

4 A. Yes, I would.

5 Q. Did you examine any other Marlin 60 firearms for
6 this case?

7 A. I did not.

8 Q. I'm going to read for you a statement from the
9 AFTE, A-F-T-E, Journal, the organization that you
10 belong with. And you tell me if you agree or
11 disagree with this particular statement. Quote,
12 "Currently the interpretation of
13 individualization/identification is subjective in
14 nature, founded on scientific principles and
15 based on examiner's training and experience."

16 A. That's correct.

17 Q. Okay. Let me go back for just one minute. When
18 you talked about class, whether something is part
19 of the same class, which is what you concluded
20 the FK was?

21 A. Yes.

22 Q. There's really sort of three different levels
23 that you could come up with a similarity between
24 bullets that would be class, sub-class, or
25 individual characteristics?

1 A. Yes.

2 Q. So that when a rifle comes from the same class,
3 and certainly any Marlin 60 is the same class;
4 would you agree?

5 A. Assuming that Marlin manufactured all Marlin 60's
6 with 16 lands, grooves, and right hand twists,
7 yes.

8 Q. Okay. So that would make this Item FK could have
9 been fired by any Marlin 60?

10 A. Based on what remains on that bullet, yes.

11 Q. And as you candidly admitted, there are least
12 tens of thousands, if not millions, have been
13 made over the years?

14 A. I suspect not millions, but certainly tens of
15 thousands.

16 Q. Okay. And then the next more unique kind of
17 feature that you could find is called sub-class
18 features, right?

19 A. Yes.

20 Q. And then even more unique, or supposedly unique
21 than that, would be these individual
22 characteristics?

23 A. That's correct.

24 Q. By the way, do you know how many other, if any,
25 firearms are manufactured with 16 lands and

1 grooves and a right hand twist?

2 A. I'm familiar with one other, a .22 caliber pistol
3 manufactured by Jennings. They are no longer in
4 business, but they manufactured some .22 caliber
5 pistols with 16 lands and grooves and a right
6 hand twist, and there may be others as well.

7 Q. And Item FK, is that the sort of ammunition that
8 could also have been fired in a Jennings .22
9 caliber, or not?

10 A. Yes, it is.

11 Q. So, when you talk about class of possible
12 firearms for that bullet, you have to include not
13 just Marlin, but this whole, however many number
14 of Jennings there are, right?

15 A. That's correct.

16 Q. Okay. All right. Now, let me just go for a
17 minute to the cartridges. I'm going to show you
18 what's been marked as -- these are Exhibits 424,
19 21, 22, 23 and 24. Can you identify these?

20 ATTORNEY FALLON: Excuse me, counsel, are
21 those the cartridge photos?

22 ATTORNEY BUTING: Yes, those are all the
23 cartridge, I believe.

24 A. These are copies of photographs that I took of
25 the cartridge comparisons.

1 Q. Okay. Some of them are -- I am going to put one
2 or two of these up on the screen. Some of them
3 are just photograph of the cartridge itself,
4 unfired, and others of one of these comparisons
5 having one side one and one side the other,
6 right?

7 A. Three of them are comparisons of the test fire to
8 one of the cartridges submitted. And the fourth
9 picture is a photograph of the head of one of the
10 cartridges submitted.

11 Q. Let's start with that last one first since -- I
12 will go ahead and leave the photocopies up here
13 with you so you can refer to them as numbers.
14 That's 421?

15 A. I'm sorry. Yes, it is.

16 Q. And that's just a close up photograph of the
17 cartridge before it's fired?

18 A. No.

19 Q. After it's fired?

20 A. This is a photograph of, as I indicate there on
21 the bottom, one of the cartridge casings from
22 what we refer to as Item EI and is in State's
23 Exhibit 250. I took a picture of it just to
24 illustrate what we see when a cartridge casing
25 has been fired, that indentation you see, the

1 rectangular one at 3 o'clock, I guess --

2 Q. Sure.

3 A. -- is the firing pin impression that was created
4 by the gun that fired that cartridge casing.

5 Q. Okay. And so that little rectangular thing at 3
6 o'clock is a very distinctive marking that
7 apparently occurred when these shells were fired?

8 A. That's correct.

9 Q. And this is one of the shells, 11 shells, that
10 was given you in that box, right?

11 A. Yes.

12 Q. Okay. I don't want to belabor this too much, but
13 let's look at Exhibit 424. Is that one of these
14 where you made a comparison side by side?

15 A. Yes, it is.

16 Q. So in this one, you can kind of see the line down
17 the middle and you have got numbers or lettering
18 at the bottom that says test fire from Item DD.

19 A. That's correct.

20 Q. And that shows a very close match even to the
21 unaided -- to the layperson. One can see that
22 this marking over on the right side of the
23 picture matches up very nicely with the one on
24 the left, which is the shell that was found in
25 Item EI, right?

1 ATTORNEY FALLON: Counsel, which Exhibit is
2 this now?

3 ATTORNEY BUTING: 424.

4 ATTORNEY FALLON: Thank you.

5 A. I hope it's clear. From here, to me, it's not
6 real clear, but I will use the pointer. The
7 dividing line, that is, what separates the image
8 of my test faired cartridge casing from one of
9 the cartridge casings in Exhibit 250 here is,
10 really, in the photograph, a discontinuity from
11 the distance you are at.

12 If you could see it more closely you
13 would see there's a very fine dark line there.
14 On the right side of that line is the image of
15 the test fire, on the left side the image of one
16 of these cartridge casings. The area of interest
17 runs from approximately where the pointer is now
18 up to here.

19 And, yes, along that line, there is what
20 appears to me, of course, to be a very clear
21 correlation or agreement of detail that was
22 created by the firing pin of the rifle, the
23 Marlin Glenfield 60 rifle.

24 Q. That's fine. And that's fairly easy, I think,
25 even for myself and the jury to be able to see

1 that similarity. I want to show you now -- did I
2 mark the other ones? Do you have any bullet ones
3 up there too?

4 A. Yes, I do.

5 Q. Are they marked?

6 A. No.

7 Q. All right. Thanks.

8 (Exhibit Nos. 426, 427, 428, marked for identification.)

9 Q. I'm showing you Exhibits 426, 7, and 8, can you
10 identify those?

11 A. Exhibits 426, 427 and 428, these are all copies
12 of, again, photographs that I took of markings in
13 this case on -- that I observed during the bullet
14 comparison and, specifically, of the bullet in
15 Item 277, compared to the test fires from the
16 Glenfield Model 60.

17 Q. All right. I'm going to put one of them up on
18 the screen and you are going to have to tell us
19 what number it is on your --

20 A. That's No. 426.

21 Q. All right. Now, again, this is one of those
22 split screen ones. The one on the right is the
23 test fired bullet and the one on the left is Item
24 FL, right?

25 A. Yes.

1 Q. This is only one portion of the cylindrical kind
2 of bullet, at any rate, that you are looking at,
3 right?

4 A. Just a portion of what's remaining on that
5 bullet.

6 Q. Okay. But it's a fragment, right?

7 A. Very small portion of it, yes.

8 ATTORNEY FALLON: Excuse me, counsel, could
9 we have the witness -- now that we have that up on
10 the screen, identify which photograph goes with
11 that?

12 ATTORNEY BUTING: He did, 426. Is that
13 right?

14 THE WITNESS: Yes.

15 ATTORNEY FALLON: Okay. I'm sorry.

16 ATTORNEY BUTING: That's okay.

17 Q. (By Attorney Buting)~ You've got the pointer, I
18 don't, so I'm going to just point. Would it be
19 fair to say that the indentation, linear areas of
20 this, on either side of this, is what you call
21 the groove?

22 A. What you just pointed to -- here let me use the
23 pointer. This area here that you see defined by
24 two parallel lines, and this area here, which is
25 clearly defined by two parallel lines on this

1 side, but less obviously so here, those are the
2 land impressions as they were created by the
3 lands in the barrel.

4 Q. I see, it's the reverse here, because we've got
5 -- these are impressions?

6 A. Right.

7 Q. So on the barrel, these would actually -- the
8 flatter surfaces on the bullet is what actually
9 is the groove in the barrel; is that right?

10 A. Well, they aren't really flat, but on the bullet
11 they are raised. And they are raised because
12 they are impressions of the groove in the barrel
13 of the weapon.

14 Q. And as I recall, your notes said that the grooves
15 don't give us any particular information in this
16 case; is that what you said?

17 A. I said the land impressions don't have any
18 detail.

19 Q. Okay. And the land ones, again, are point -- are
20 which ones?

21 A. You see in the photograph the label GI No. 1, and
22 that refers to Groove Impression No. 1. I
23 labeled this one No. 1. The land impressions are
24 this area and this area, on each side of the
25 groove impressions.

1 Q. In any event, the test fired bullet on the right
2 shows quite a bit of differences in the land area
3 from the one on the left, does it not? It seems
4 to have some extra ridges or bulges sticking out
5 of some sort?

6 A. There are differences on -- between both bullets.
7 I don't know what you're referring to
8 specifically. There's a great deal of
9 differences on the bullet on the left side of the
10 photograph when you compare it to the bullet on
11 the right side of the photograph.

12 Q. A great deal of difference, right?

13 A. Absolutely, yes.

14 Q. And yet you are saying that this bullet on the
15 right, which was fired from the gun that you had
16 in front of you earlier, is a match with the
17 bullet on the left, the fragment, despite the
18 great deal of differences; is that right?

19 A. I'm saying there's enough detail there, and not
20 in this position in that photograph, but in the
21 composite of positions that we -- some of which
22 we see exhibited in other photographs, for me to
23 conclude that, yes, that bullet in my FL, Exhibit
24 277, was fired from that Marlin rifle.

25 Q. And in doing that you have to discount the

1 differences that you find on the bullet from the
2 test fire?

3 A. I have to understand them, yes.

4 Q. All right. Let's go to the next one and can you
5 tell us which exhibit that is?

6 A. Oh, your number is 427.

7 Q. Okay. 427 is on the screen now. Again, we see
8 -- show us the line on this one, from the
9 microscope, from one to the next?

10 A. It runs here. See the discontinuity,
11 particularly in this area right here, you see the
12 different colors?

13 Q. Right.

14 A. That's the dividing line that separates the image
15 of the bullet in 277 from my test fired bullet.

16 Q. And your test fired bullet, also, there's another
17 vertical line running down the line of it, the
18 center of it, right?

19 A. Yes, that's right.

20 Q. And that's not the microscope line, that's on the
21 bullet.

22 A. That's a design feature of the bullet that
23 remained in tact after firing it.

24 Q. That's not a designed feature that's on the Item
25 FL?

1 A. No.

2 Q. And, again, we see these multiple raised bumps, I
3 call them, on the right in the test fire, but we
4 don't see them on FL; is that right?

5 A. Are you talking about these?

6 Q. Yes.

7 A. Okay. Those are called cannelures. And you are
8 right, they are not, in that photograph, present
9 on the bullet in Exhibit 277.

10 Q. All right. And, finally, this is I think the
11 last photograph that you took comparing Item FL
12 with the test fired bullet. And here it looks
13 like the bullet itself is damaged, the Item FL
14 appears to be significantly damaged, in that
15 area?

16 A. We're at the edge of the useful part of Item --
17 or Exhibit 277, our Item FL bullet. And above
18 that area you see that it is impacted and just
19 been completely obliterated by the impact it made
20 with whatever it struck.

21 Q. Maybe for my benefit, again, tell me what those
22 bumps are again, cannelures?

23 A. Over here, again, on the test fire bullet, I have
24 two sets of cannelures.

25 Q. Would you spell those for the court reporter.

1 A. C-a-n-n-e-l-u-r-e-s.

2 Q. Okay. And on this one, the test fire bullet has
3 two sets of those visible?

4 A. This is the same test fire bullet we were looking
5 at before but, yes, in this photograph there are
6 two sets of them visible.

7 Q. And again, they are not at all visible on any of
8 the three photographs that you took of Item FL?

9 A. No, they are not.

10 Q. By the way, while I'm thinking of it, do you have
11 your CV up there, Item -- or Exhibit 416?

12 A. Yes, I do.

13 Q. Is there a typo on here, third from the bottom,
14 1978 to 1989, California Department of Justice?
15 The one right above it says 1981, you weren't
16 working at both the California Department of
17 Justice and -- should that be 1979?

18 A. There's clearly a typographic error there.

19 Q. And what is it supposed to be, 1979?

20 A. Should be, yes, 19 -- that refers to the -- my
21 last two years there, 1978, and it should have
22 been 19 -- should have gone to 1980 actually. I
23 don't know why it says 1989. Because in 1981 is
24 when I joined the Montana State Crime Laboratory.

25 Q. And did you go right from one job to the next or

1 were you off work for a while?

2 A. No, I left the California Laboratory, I think in
3 May of 1980. And I was -- had opened a business
4 with an acquaintance there in Sacramento that
5 eventually didn't work out. And chose then to
6 take the position in Montana in January of 1981.

7 Q. So by the time you left the California Department
8 of Justice, you had risen to the level of section
9 supervisor, right?

10 A. Criminalist 3, yes, I functioned as section
11 supervisor, yes.

12 Q. But then in your next job, you actually went sort
13 of down the ladder, when you started in Montana,
14 as just a plain old examiner, right?

15 A. They simply classified them differently.

16 Q. You weren't a section supervisor at Montana?

17 A. I was the only examiner there.

18 Q. Okay.

19 A. No one to supervise.

20 Q. Okay. And then, from there, you went to Kansas
21 City in 1988, right?

22 A. That's correct.

23 Q. This is now the third different organization you
24 have worked for, right?

25 A. At that time, yes.

1 Q. And when you left there, you were considered
2 Chief Criminalist of the toolmark section, right?

3 A. I had -- The last two years there, I had assumed
4 the supervisorial (sic) position there, which is
5 that of Chief Criminalist, yes.

6 Q. Again, there must be a typo because it says
7 7/2002 and then it says Wisconsin starts 2000,
8 which is it?

9 A. Well, no, when I left the laboratory there, I
10 left myself a month and a half or two months in
11 between before I actually started here.

12 Q. And you didn't start here as a chief head of the
13 firearms toolmark section, did you?

14 A. Again, I'm the only examiner in the firearm
15 section in the Madison laboratory. My title I
16 think is that of unit leader, for what it's
17 worth.

18 Q. You are the only firearm examiner?

19 A. In the Madison laboratory, yes.

20 Q. Well, how do you ever have anybody review your
21 work?

22 A. I do that using the photographs. And one of the
23 examiners in the Milwaukee laboratory, another of
24 the Wisconsin State Laboratories, of course,
25 reviews my photographs. And on occasion, I will

1 take cases over to him where I believe it's
2 warranted, or where he does. And that's how we
3 conduct our peer review of the examinations.

4 Q. That's how you comply with that part of your
5 protocol that says you always have an examiner --
6 two examiners look at the same thing, right?

7 A. Exactly.

8 Q. Okay. I will use the ELMO for just a minute now.
9 And when you do that, when you have that peer
10 review, you actually have -- I will just use this
11 example, 422 -- put down PC2. You have got two
12 signatures. You have got -- is this the person
13 in Milwaukee who signed off on this?

14 A. Yes, it is.

15 Q. And what's his name?

16 A. Reg Templin.

17 Q. So the first initials on 2/21/06 is yourself,
18 right?

19 A. Yes.

20 Q. And the next one below is -- on 4/13/06 is
21 Reginald Templin, T-e-m-p-l-i-n?

22 A. Yes.

23 Q. And this is the -- one of the cartridge fires,
24 test fires?

25 A. Yes, it is.

1 Q. Okay. Again, same thing with -- this is another
2 cartridge fire, this being Exhibit 423, also
3 initialed by yourself and Mr. Templin, right?

4 A. That's correct.

5 Q. And Exhibit 424, which is another cartridge fire,
6 same initials, I can't tell if it's the same date
7 that Mr. Templin signed, looks like that might be
8 a 13, 4/13/06?

9 A. Yes.

10 Q. Okay. Now, one last one from that cartridge
11 casing, again. Peer reviewed, signed by both
12 yourself and Mr. Templin, right?

13 A. Yes.

14 Q. Now, let's go to the photograph for Exhibit 426.
15 Those your initials on it, dated 5/10/06?

16 A. Yes.

17 Q. Do you see Mr. Templin's initials anywhere on
18 there?

19 A. No, they are not there.

20 Q. Is there anybody besides Mr. Templin who ever
21 reviews your work?

22 A. Occasionally, but not in this case, no.

23 Q. Okay. This, by the way, is bullet Item FL,
24 right?

25 A. Yes, it is.

1 Q. Let's look at 427, another photograph, one of the
2 ones we looked at on the screen, again, Item FL;
3 those your initials?
4 A. Yes, they are.
5 Q. Same date, 5/10/06?
6 A. Yes.
7 Q. Do you see Mr. Templin's initials anywhere on
8 here?
9 A. They are not there.
10 Q. Do you see any other firearm tool examiner's
11 initials anywhere on here?
12 A. No. Mr. Templin is the one who reviewed that
13 one, there wouldn't be anyone else.
14 Q. Do you see Item 428?
15 A. Yes.
16 Q. Also another one for Item FL; do you see your
17 initials on there?
18 A. Yes, they are.
19 Q. Do you see Mr. Templin's initials on there?
20 A. No, they are not.
21 Q. So, we have, in your documentation that you must
22 keep in order to maintain your profile --
23 protocol, no record that any other examiner,
24 besides yourself, looked at Item FL to confirm
25 whether your opinion that this bullet was fired

1 from the gun that was before you earlier, were
2 one in the same, came from the same gun, right?

3 A. The error here is that that's not where he makes
4 or records his approval, his acknowledgment that
5 he reviewed the identification via the pictures.

6 Q. Well, sir, we saw how he made very diligent
7 initials when he reviewed your opinions, your
8 subjective opinion, about the cartridges, right?

9 ATTORNEY FALLON: Objection to the
10 characterization, subjective.

11 ATTORNEY BUTING: He's giving us that,
12 certainly subjective. I'll rephrase it.

13 THE COURT: Okay.

14 Q. (By Attorney Buting)~ On each and every one of
15 the photographs that you took of the cartridge --
16 of your opinion about the cartridges, Mr. Templin
17 signed his initials, did he not?

18 A. Not at the time he reviewed the photographs.

19 Q. Well, they are on these documents, right?

20 A. That's correct.

21 Q. Do you have any documents in that file with --
22 that show the very exhibits we just showed, the
23 photographs with Mr. Templin's name -- or
24 initials for Item FL?

25 A. No, because he had not reviewed the printed copy.

1 He reviewed the computer stored copy.

2 Q. Do you have any documentation, anywhere in your
3 file, that establishes anyone else reviewed your
4 opinion, that Item FL was fired from the gun that
5 was before you?

6 A. That documentation is not in the file.

7 Q. Nowhere in your file?

8 A. That's correct.

9 Q. And so that would be a deviation from your
10 protocol, wouldn't it?

11 A. No.

12 Q. The protocol requires documentation, you told us,
13 right?

14 A. Yes.

15 Q. And documentation including peer review, right?

16 A. Correct.

17 Q. And yet on this very same bullet, Item FL, that
18 we have heard a lot of testimony about, once
19 again, we have something that indicates a
20 deviation from your protocol; is that right?

21 ATTORNEY FALLON: Argumentative,
22 mischaracterization.

23 THE COURT: Well, I'm going to allow him to
24 explain his answer. Why do you feel it's not a
25 deviation?

1 A. The protocol and the approved method that we use
2 for peer review involves my taking those pictures
3 that you saw, some of which you saw up there. I
4 copy them to a location on our server, in our
5 computer network, that is secure, of course, that
6 Reg Templin in Milwaukee has access to. He then
7 -- then I email him, I let him know that, in
8 fact, I have a case there that needs to be
9 reviewed before I can then send a report out, or
10 write the report expressing my opinions.

11 He reviews those photographs. If he
12 agrees that -- that those photographs that we
13 have been looking at, to him support my opinion
14 that that bullet was fired from that gun, or that
15 the cartridge casing was fired from that gun, he
16 then records, with the computer, that A, he has
17 reviewed it, and B, he has approved it.

18 And that, then, is the record of the
19 peer review. The initials that you see on the
20 paperwork which are in our file at the laboratory
21 in Madison, of course, reflects the other part of
22 the procedure and it is part of a review process,
23 but different from the peer review of my
24 identifications.

25 Once or twice a year, it's entirely up

1 to what Reg and I work out, he comes over to
2 Madison, he has to review a certain percentage,
3 approximately 20 percent, of all the cases I have
4 done since he was there last. And this case, the
5 cartridge casing examinations, because I did them
6 first, before he came in April, was one of those
7 case files that he reviewed.

8 As part of the procedure to prove that
9 he's reviewed the case file, he initials all the
10 paperwork there, all the supporting documentation
11 that I put in the case file. And that's why we
12 see this April 13 date on some of those
13 documents, and that's because he came over in
14 April, but the bullet examination was actually
15 performed in May.

16 Q. Okay. I think we understand what you are saying.
17 It's now March 1st, 10 months later, from the
18 Item FL opinions that you came to, right? And
19 you said that you see Mr. Templin twice a year,
20 so presumably you have seen him since April of
21 '03, right -- '06, I'm sorry. April of '06,
22 correct?

23 A. That's correct.

24 Q. Despite that, Mr. Templin has never signed off on
25 any of those exhibits we showed of the

1 photographs that comprise your opinion about Item
2 FL; isn't that right?

3 ATTORNEY FALLON: Objection,
4 mischaracterization, that's not what the witness
5 testified to. He explained the process. This is
6 asked and answered --

7 ATTORNEY BUTING: No, it's not.

8 THE COURT: I'm sensing there might be a
9 misunderstanding here between the questioner and the
10 witness. Explain again --

11 ATTORNEY BUTING: I understand what he's
12 saying.

13 Q. (By Attorney Buting)~ Of the 20 percent -- Are
14 you saying he has reviewed you -- reviewed 20
15 percent of your cases since April of '06?

16 A. Yes.

17 Q. Okay. And you are telling us that it just so
18 happens that of the files that he reviewed during
19 that time, Item FL just wasn't one of the ones
20 that he took a look at; is that right?

21 A. I choose -- From all those cases I worked since
22 he was here last, I choose that 20 percent at
23 random.

24 Q. Oh, you do.

25 A. And it is exactly the case, that this case file

1 was not, when he came over in October, of one of
2 those that I chose.

3 Q. Okay. So you choose the 20 percent?

4 A. I do.

5 Q. And so you come here to this jury today, though,
6 with no documentation of any sort that
7 establishes Mr. Templin has ever reviewed your
8 opinion about Item FL?

9 A. I came here today with -- able to tell you that
10 the procedure that we abide by requires, before
11 this report is approved by a supervisor and
12 allowed to leave the laboratory --

13 ATTORNEY BUTING: All right. Your Honor --

14 A. There has to have been --

15 ATTORNEY BUTING: -- he is not responsive.

16 A. -- a review by Reg Templin.

17 THE COURT: No, it is responsive.

18 ATTORNEY BUTING: Okay.

19 THE COURT: I'm going to allow it.

20 Q. (By Attorney Buting)~ Go ahead.

21 A. There has to have been, before this report is
22 allowed out of there, proof to the supervisor
23 that this case has been reviewed, that this
24 report and my conclusions have been reviewed by
25 Reg Templin, or someone else over in the

1 Milwaukee Laboratory, or this report doesn't get
2 out.

3 The fact that they even saw this report,
4 anybody saw this report is, in fact, proof that
5 Reg saw my photographs, agreed with my
6 conclusions, approved with the review process,
7 acknowledged that those conclusions were correct
8 in his mind, and the report then went out.

9 Q. Okay. And that is your assumption because of the
10 usual way in which reports get approved, right?

11 A. Well, it's not an assumption, it's what I know
12 happened.

13 Q. But you don't have any documentation in the file
14 that confirms that, do you?

15 A. I do have documentation on the computer that
16 could only have been created by him.

17 Q. And you don't have it with you?

18 A. I do not, that's correct.

19 Q. All right.

20 ATTORNEY BUTING: Thank you. That's all I
21 have.

22 THE COURT: Members of the jury, let's take
23 a stretch break before we go back for redirect.
24 Since this is going to be the last witness today,
25 I'm not sending you out for an afternoon break.

1 (Brief stretch break taken.)

2 THE COURT: Mr. Fallon, any redirect?

3 ATTORNEY FALLON: Yes, just a couple
4 questions, thank you, Judge.

5 **REDIRECT EXAMINATION**

6 BY ATTORNEY FALLON:

7 Q. I'm going to ask my colleague to see if we can
8 pull up exhibit -- Well, before we do that, you
9 indicated in cross-examination that there are
10 class characteristics, sub-class characteristics,
11 and individual characteristics, as I understand
12 it; is that correct?

13 A. Yes.

14 Q. All right. Now, with respect to Item FK, I
15 believe your testimony was there were general or
16 class characteristics that were still present on
17 Item FK?

18 A. Yes.

19 Q. Were there sufficient sub-class features or
20 sufficient individual characteristics that you
21 might have been able to rely upon to attempt any
22 identification or comparison?

23 A. On that Item FK, your 276, there were simply not
24 enough of the individual characteristics. I'm
25 not concerned with sub-class characteristics,

1 particularly in this examination. There were not
2 enough of the individual characteristics, some of
3 those little markings that we saw on some of the
4 photographs, on that item, to allow me to come to
5 any specific conclusion about the gun that fired
6 that bullet.

7 Q. All right. Now, I had a couple of questions --
8 There we go. You were asked questions about Item
9 426, Groove Impression No. 1. And you used the
10 words that "between the test fired bullet and the
11 sample bullet" there were, I think you said, "a
12 great deal of difference". First of all, tell us
13 what you mean by that.

14 A. Sure. Well, what we have to understand is
15 there's always differences. The test fired
16 bullets, when I compare those, I expect to see
17 differences. You cannot fire two bullets from
18 any gun and expect to see what we have maybe
19 heard referred to as a perfect match. Those
20 simply just don't exist.

21 What's critical is to be able to
22 understand when the difference you see are, in
23 fact, significant. Do I have to worry about this
24 difference, what I think I described as a
25 cannellure, this set of markings, or this set of

1 depressions that you see vertically over here.
2 Clearly that's a difference, a very obvious
3 difference to everyone.

4 Does it mean anything? It means
5 absolutely nothing. That's a manufacturer's
6 marking that's put on there, has nothing to do
7 with the gun it was fired in. It's not
8 obliterated by firing it through the barrel of
9 the gun. I don't even care whether it's there or
10 not. Clearly, it plays no role. That's an
11 example of the difference, it plays no role, has
12 no influence whatsoever in my evaluating those
13 markings on the bullet to determine whether it
14 was fired from a gun.

15 Other differences, differences in the
16 color here, they may have started out the same
17 color. Differences in color don't mean a thing.
18 What I'm interested in, so long as all of the
19 class characteristics are the same, what is
20 absolutely required of me, is that I recognize
21 what markings we do have here that are
22 individual, that have some significance because
23 they relate to the manufacturing process that
24 created the barrel from which this bullet was
25 fired. I have to know that they are individual,

1 individual or unique, to that particular barrel.
2 That's not an issue in this case either.

3 The other element of this is related to
4 markings that, from where you are sitting I
5 suspect you can't see, I know I can't see them
6 clearly from here. They are in this area right
7 here. And this is the only place in this
8 photograph where I have individual detail that
9 I'm trying to take a picture of to show you the
10 kind of thing I'm seeing under the microscope.
11 This isn't everything I saw under the microscope.
12 This is just an example of what I saw.

13 And I will tell you that in Groove
14 Impression No. 1, that we have some correlation.
15 We have some matching of stria in this location.
16 And, in fact, in this location, however, there is
17 not enough stria there for an identification. If
18 this is all I had on this bullet, I would have
19 had the same conclusion I had with the other
20 bullet here, because that wouldn't be enough. Of
21 course, it isn't all I had.

22 With regard to this photograph, though,
23 the usefulness of this area that I have labeled
24 DI No. 1, was that it gave me a reference point.
25 I have got all this stuff you see on these

1 bullets. I need to be comparing different parts
2 of the bullets -- of one bullet to different
3 parts of the other bullet. It's kind of nice to
4 have a place to start.

5 And there are a pair of stria there that
6 I had observed on my test fires, that when I got
7 done looking at my test fires, I knew I was going
8 to look for those on the bullet and, frankly, see
9 if I got lucky. And they were on the bullet that
10 was recovered in Exhibit 277. And the fact of
11 the matter is, they were there. That's what this
12 photograph exhibits.

13 This is part of the process, but it is
14 not the whole process. And this isn't everything
15 that lead me to the conclusion that this bullet
16 here was fired from that Marlin rifle.

17 Q. So that photograph is an example of what part of
18 the overall analysis?

19 A. It's one element of the examination.

20 Q. All right. Now, those markings, those stria that
21 you are talking about, are those the things that
22 occur during the manufacturing process that
23 actually leaves and makes firearms weapons
24 identifications possible?

25 A. These stria are a result of the manufacturing

1 process.

2 Q. All right. One second. Can you elaborate on
3 that manufacturing process, I know you talked a
4 little bit about it. But now that it's come up
5 here on cross-examination and those markings, how
6 are those markings -- how did they assist you, as
7 the examiner, in making that determination?

8 A. When I'm trying to determine whether a bullet was
9 fired from a gun, it all starts with
10 understanding what the manufacturer is doing to
11 produce that barrel. There are, unquestionably,
12 methods of creating barrels, putting grooves in
13 barrels, that will produce markings that
14 reproduce from barrel to barrel. And, clearly,
15 if you can't recognize it, I can't recognize
16 those when I'm looking at bullets, then there's
17 no way I can come to any conclusions about that.

18 Any firearms examiner has to bring to
19 the examination an understanding of how that gun
20 barrel was made and what creates these markings
21 we see on the bullets. With Marlin, I can tell
22 you exactly how they made that barrel. And
23 because I know what they did, what machining
24 processes they did, or applied to that barrel to
25 create the grooves in the barrel, I also know

1 that the defects, those microscopic defects that
2 were left in the barrel, after that process was
3 done, are going to create these markings on the
4 bullet and they are going to be unique to that
5 barrel.

6 So that's the first step in the process.
7 And I say, looking at and having this gun in
8 front of me, that what I'm looking at that's
9 going to be created by the barrel of the gun, is
10 that unique to that gun. In this case I can.

11 The next step, and the other thing that
12 requires experience and training in the knowledge
13 that a firearm examiner brings to an examination,
14 is an awareness that when we have those markings,
15 you know, I may have 150 of these tiny little
16 scratches and stria scattered around the surface
17 of a bullet. And, clearly, some of them are
18 going to line up. We expect that randomly, if I
19 have two bullets that have been fired from
20 separate guns, obviously, some of these are going
21 to line up. So there's got to be more than just
22 finding lines that line up.

23 And there is, of course. I have to be
24 aware of, part of my background has to have
25 looked at hundreds, or probably thousands by now,

1 of non-matched situations where I'm looking at
2 bullets that I know were not fired from the same
3 gun, trying to force a match, but recognizing
4 what's the -- what kind of agreement am I going
5 to see in a non-matched situation. And then
6 demanding that when I look at something like
7 this, that I have more than that, to come to an
8 identification. That is also critical for a
9 firearms and toolmark examiner.

10 And, finally, we talked about
11 consecutive matching stria a little bit. I
12 didn't get into it in a lot of detail. When we
13 look at our matching lines, there's a number of
14 different ways to evaluate them. I think counsel
15 brought up, from I think Mr. Biasotti's paper,
16 that we might find as much as 38 percent lines
17 matching on a comparison and -- on two bullets
18 that we know were fired from the same gun.

19 Is that significant? Can I look at two
20 bullets, count all the lines and see if I've got
21 38 percent, and if I have 40 percent say, oh,
22 those were fired from the same gun. Not at all.
23 The percent matching is not a good criteria for
24 judging whether a bullet was fired from the same
25 gun. We don't use that.

1 What we have found, because -- and
2 Mr. Biasotti's study that counsel quoted over
3 there, started this all up back in 1959. What we
4 have been able to define and quantify -- I can
5 provide some numbers for you if you like -- is
6 what about matching lines is significant to the
7 examiner when he is trying to make that
8 conclusion.

9 Q. If I can stop you there for a second. These
10 matching lines, those are produced in the
11 manufacturing process?

12 A. These are produced -- they are a result of
13 defects in the barrel.

14 Q. All right.

15 A. These defects create these stria, these lines, if
16 you like, on the surface of the bullet, or on the
17 cartridge casings, as the case may be.

18 Q. And that's how -- that is what they use to make
19 the identification?

20 A. Exactly. And if you could look more closely at
21 this --

22 Q. If I could interrupt you --

23 A. I'm sorry.

24 Q. -- and ask you a couple questions to conclude,
25 then. I think it's important that we make one

1 point that may not be as abundantly obvious as it
2 should be. But when you test fire a bullet in
3 the laboratory, what are the conditions under
4 which that bullet is test fired?

5 A. I want a bullet that has not been damaged. I
6 want a bullet on which the only markings I see
7 were created by the barrel of the gun from which
8 I fired it.

9 And to accomplish that in the
10 laboratory, I fire it into water. I have this
11 big old 9 foot X 2 1/2 foot X 4 foot deep water
12 tank and a port on one end of it. And I fire the
13 bullet into the water. If the water is
14 sufficient to slow it down, it drops to the
15 bottom and then I recover it, from the bottom of
16 the tank. And I know, then, that I have a bullet
17 that's only been marked by the barrel of the gun.

18 Q. All right. Now, is that the way you normally
19 receive a sample from the field?

20 A. Of course not, no.

21 Q. And so that the fact that there may appear to be
22 differences, could it simply be the result of the
23 quality of what is submitted from having been
24 shot in less than ideal situations, compared to
25 what you are doing in the laboratory when you

1 test fire a bullet?

2 A. Almost any bullet I have ever seen recovered from
3 a criminal investigation has struck something.
4 It has struck a shooting victim, it's struck a
5 wall, it's passed through a wall, whatever the
6 case may be. And as you can imagine, this is a
7 lead bullet, even a copper jacketed bullet, they
8 get damaged, broken up into pieces.

9 The kind of damage we saw on that bullet
10 is just very, very common. And so, I'm not
11 concerned about those kinds of differences. They
12 don't matter. What I'm concerned about is
13 whether this detail, this individual
14 characteristics, these stria, have they been
15 obliterated or not by its passage through a wall,
16 or by it's having struck a shooting victim. And,
17 of course, I determine that by examination under
18 the microscope.

19 ATTORNEY FALLON: Nothing else.

20 THE COURT: Mr. Buting, anything else?

21 ATTORNEY BUTING: Yes.

22 **RE-CROSS-EXAMINATION**

23 BY ATTORNEY BUTING:

24 Q. All right. It's the same exhibit, but what was
25 the number? Do you have it in front of you?

1 A. Oh.

2 Q. This is groove impression?

3 A. I don't have them anymore.

4 ATTORNEY FALLON: It's 426, counsel.

5 Q. (By Attorney Buting)~ 426 is up there. One thing
6 I just want to make clear, because I don't know
7 that it's clear, on the record, to the jury.

8 These -- What appear are lineal indentations or
9 rows on these bullets are the lands, right?

10 A. The two you just pointed at are land impressions.

11 Q. Okay. Land impressions. And the general
12 impressions that you get here, you are going to
13 get on any rifle that has 16 grooves and lands
14 with a right hand twist, right?

15 A. The characteristics of that, the width of those
16 impressions, would be characteristic of what you
17 would get from a 16 land and groove manufactured
18 barrel.

19 Q. Okay. So, the similarities in this exhibit with
20 these -- on these two sides, of having these rows
21 or lands impressions, would be something that
22 would just be considered a class characteristic?

23 A. Exactly.

24 Q. That would be common with any Marlin 60, or even
25 the Jennings pistol manufacturer, right?

1 A. That's correct.

2 Q. What your opinion is based on are these smaller
3 scratches, or stria, in the groove area, right?

4 A. In this particular case, they happen to be in the
5 groove impression, that's correct.

6 Q. Right. And in your redirect testimony, you said
7 that on this photograph, really, the only area
8 that to you demonstrated enough individual
9 characteristics on this whole photograph, is this
10 central area right here, which would be just to
11 the left of where it says GI No. 1; is that
12 right?

13 A. Only in Groove Impression No. 1, in this
14 photograph.

15 Q. In this photograph, correct. So it's your
16 opinion --

17 ATTORNEY BUTING: Zoom in on that once.

18 Q. (By Attorney Buting)~ So, in your opinion, those
19 two halves are so similar, in this instance, that
20 you are able to consider this as one of your
21 features that make this bullet unique to that
22 rifle that was before you earlier?

23 A. No, that's not what I said.

24 Q. Well, okay, let me ask it this way. Your opinion
25 is that those two sides match?

1 A. Again, I would not use that term for this
2 particular groove impression, no.

3 Q. Well, this one you thought was so unique, or so
4 similar that it was a reference point, right?

5 A. It was similar enough to be a reference point,
6 and that's why I took the photograph of it, yes.

7 Q. Okay. And so we rely on your opinion then, that
8 both sides of this photograph, in that area,
9 match?

10 A. Again, I would not say that. That's not my
11 description of this.

12 Q. Similar. What's the word you want to use?

13 A. What I would say is that in this area I have this
14 pair of stria that were easy to see, and that I
15 could look for and use as a reference point. I
16 was also very clear that, in fact, there is not
17 enough other stria -- and two is not enough -- to
18 support the conclusion that we have an
19 identification here. I had to rely on other
20 detail that -- some of which I tried to
21 photograph in the other photographs.

22 Q. None of which can be quantitated. You can't just
23 look at that and say, you know, quantitatively,
24 these match. Instead, it depends on your
25 subjective opinion to this jury that those two

1 sides match -- or I'm sorry, not match -- similar
2 enough to consider individual?

3 A. With regard to this groove impression, there is
4 quantitatively not enough information to conclude
5 an identification. That information, that more
6 complete quantitative information is present in
7 other areas on the bullet.

8 Q. But in each one of those instances, it is an
9 eyeball subjective conclusion on your part, about
10 whether those are similar -- those two strias are
11 similar or not?

12 A. I have no other way of evaluating it other than
13 looking at it through the microscope, that's
14 correct.

15 ATTORNEY BUTING: All right. Thank you.
16 That's all I have.

17 THE COURT: All right. Mr. Fallon?

18 ATTORNEY FALLON: Nothing.

19 THE COURT: Very well. The witness is
20 excused. Members of the jury, that is going to
21 conclude our session today. I did notify the bus
22 line that they should stop early today. Hopefully
23 they are here already. If they aren't, they will be
24 here shortly.

25 I will remind you again not to discuss

1 the case among yourselves or with anyone else,
2 and not be exposed to any news media accounts of
3 this case. We'll see you at the normal time
4 tomorrow morning.

5 (Jury not present.)

6 THE COURT: You may be seated. Counsel,
7 are there any exhibits that either party wishes to
8 address at this time?

9 ATTORNEY BUTING: I would move -- I would
10 move in, I think all of the exhibits that I
11 introduced, which is 420, through 428.

12 ATTORNEY FALLON: I believe 420 was the one
13 that was mismarked and never really discussed. That
14 was the worksheet on the cartridges. So I'm not
15 sure it has any particular relevance. And in terms
16 of the photograph, or the black and white copies --
17 Well, all right, I suppose we might as well move
18 them in. I was going to say the disc is a much more
19 representative. The CD ROM has all seven
20 photographs that were brought for exemplary purposes
21 and identified as Groove Impression 1, 3, and 6, so.

22 ATTORNEY BUTING: Sure. I have no
23 objection to that. The black and white simply give
24 us a frame of reference on the record from which one
25 is which.

1 THE COURT: So, is somebody going to
2 provide for the record a disc that identifies them
3 by the exhibit number they were given?

4 ATTORNEY STRANG: 417.

5 THE COURT: We have that?

6 THE CLERK: Yeah, 417.

7 THE COURT: Very well.

8 ATTORNEY BUTING: It doesn't identify each
9 individual ones inside. When you open it up, it
10 doesn't have exhibit numbers on it, but these black
11 and white ones will correspond, I think, enough that
12 you can figure it out.

13 THE COURT: Fair enough. What about the
14 420, the one that was --

15 ATTORNEY BUTING: I will withdraw 420. We
16 didn't get into. It was mismarked, actually.

17 THE COURT: Withdraw or simply not offer it
18 for admission, two different things. If you
19 withdraw it, I'm going to give it back to you. All
20 right.

21 ATTORNEY BUTING: Yeah, let's take it back.

22 THE COURT: 420 is withdrawn?

23 ATTORNEY FALLON: That's fine.

24 THE COURT: Are there any other exhibits
25 that need action?

1 THE CLERK: Do you want me to keep a copy
2 of it, that it was marked or doesn't it matter?
3 Normally when it's withdrawn, I always keep a copy
4 of it.

5 THE COURT: Keep a copy.

6 ATTORNEY FALLON: I was just wondering if
7 maybe tomorrow we could get together with the Clerk
8 and see if we can have an overall accounting, see
9 where we are on the exhibit score card.

10 THE COURT: At the beginning of the day or
11 the end?

12 ATTORNEY FALLON: Probably at the end.

13 THE COURT: At the end, when the jury is
14 gone. All right. We'll do that. We'll see you
15 tomorrow morning.

16 ATTORNEY FALLON: Thank you.

17 ATTORNEY BUTING: Do you have 425 up there?

18 THE CLERK: Yes. I'm going to make a copy
19 of this one that's withdrawn. And then I will give
20 it back to you.

21 ATTORNEY BUTING: Okay.

22 (Proceedings concluded.)

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1 STATE OF WISCONSIN)
)ss
2 COUNTY OF MANITOWOC)

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I, Diane Tesheneck, Official Court Reporter for Circuit Court Branch 1 and the State of Wisconsin, do hereby certify that I reported the foregoing matter and that the foregoing transcript has been carefully prepared by me with my computerized stenographic notes as taken by me in machine shorthand, and by computer-assisted transcription thereafter transcribed, and that it is a true and correct transcript of the proceedings had in said matter to the best of my knowledge and ability.

Dated this 21st day of November, 2007.

Diane Tesheneck, RPR
Official Court Reporter

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