

1 STATE OF WISCONSIN : CIRCUIT COURT : MANITOWOC COUNTY  
2 BRANCH 3

3  
4 STATE OF WISCONSIN,

5 PLAINTIFF,

JURY TRIAL  
TRIAL DAY 3

6 vs.

Case No. 06 CF 88

7 BRENDAN R. DASSEY,

8 DEFENDANT.

9

10 **DATE:** APRIL 18, 2007

11 **BEFORE:** HON. JEROME L. FOX  
12 Circuit Court Judge

13 **APPEARANCES:**

14 KENNETH R. KRATZ  
15 Special Prosecutor  
On behalf of the State of Wisconsin.

16 THOMAS J. FALLON  
17 Special Prosecutor  
On behalf of the State of Wisconsin.

18 NORMAN A. GAHN  
19 Special Prosecutor  
On behalf of the State of Wisconsin.

20 MARK R. FREMGEN  
21 Attorney at Law  
On behalf of the defendant.

22 RAYMOND L. EDELSTEIN  
23 Attorney at Law  
On behalf of the defendant.

24 BRENDAN R. DASSEY  
25 Defendant  
Appeared in person.

**COPY**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

\* \* \* \* \*

**TRANSCRIPT OF PROCEEDINGS**

Reported by Jennifer K. Hau, RPR

Official Court Reporter

**I N D E X**

**WITNESSES**

**PAGE**

**KAYLA AVERY**

Direct Examination by ATTORNEY FALLON 5-16  
Cross-Examination by ATTORNEY FREMGEN 16-22  
Redirect Examination by ATTORNEY FALLON 22

**SHERRY CULHANE**

Direct Examination by ATTORNEY GAHN 22-77  
Cross-Examination by ATTORNEY FREMGEN 77-103  
Redirect Examination by ATTORNEY GAHN 103-116  
Recross-Examination by ATTORNEY FREMGEN 117-123

**NICK STAHLKE**

Direct Examination by ATTORNEY GAHN 123-143  
Cross-Examination by ATTORNEY EDELSTEIN 143-163  
Redirect Examination by ATTORNEY GAHN 163-165  
Recross-Examination by ATTORNEY EDELSTEIN 165

**SUSAN BRANDT**

Direct Examination by ATTORNEY FALLON 166-170  
Cross-Examination by ATTORNEY FREMGEN 170-172  
Redirect Examination by ATTORNEY FALLON 172

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

C O N T ' D I N D E X

WITNESSES

PAGE

JODI STACHOWSKI

Direct Examination by ATTORNEY KRATZ	172-180
Cross-Examination by ATTORNEY FREMGEN	180

THOMAS STURDIVANT

Direct Examination by ATTORNEY FALLON	181-200
Cross-Examination by ATTORNEY FREMGEN	200-206

DR. DONALD SIMLEY, II

Direct Examination by ATTORNEY FALLON	207-232
---------------------------------------	---------

EXHIBITS

MARKED

MOVED

ADMITTED

141-161		76	77
162		232	233
163	12	16	16
164	27	76	77
165-167		165	166
168-174		200	200
175		233	233
176-182		232	233



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

(Reconvened at 9:02 a.m.)

THE COURT: Morning, ladies and gentlemen, counsel. Uh, this is State of Wisconsin vs. Brendan Dassey, 06 CF 88. Appearances, please.

ATTORNEY FALLON: Morning, Your Honor. May it please the Court, the State continues in its appearance by Special Prosecutors Ken Kratz, Tom Fallon, Norm Gahn.

ATTORNEY FREMGEN: Attorney Mark Fremgen appears with Attorney Ray Edelstein. Brendan Dassey appears in person.

THE COURT: All right. Uh, members of the prosecution, are we ready to go?

ATTORNEY FALLON: We are.

THE COURT: Okay.

ATTORNEY FALLON: State --

THE COURT: Proceed.

ATTORNEY FALLON: State will call its first witness, Kayla Avery.

THE CLERK: Please raise your right hand.

**KAYLA AVERY,**  
called as a witness herein, having been first duly sworn, was examined and testified as follows:

THE CLERK: Please be seated. Please state

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

2                   THE WITNESS: Kayla Avery, A-v-e-r-y.

3                           **DIRECT EXAMINATION**

4 BY ATTORNEY FALLON:

5 Q       Good morning. How old are you, Kayla?

6 A       Fifteen.

7 Q       All right. And do you go to school?

8 A       Yes.

9 Q       What school do you go to?

10 A       Mishicot. Mishicot High School.

11 Q       All right. And what grade are you in there?

12 A       Ninth.

13 Q       All right. And would you tell us who your mom  
14           and dad are?

15 A       Earl and Candy Avery.

16 Q       Okay. Um, are you related to Brendan Dassey?

17 A       Yes.

18 Q       And, uh, how are you related to Brendan?

19 A       Um, well, we're first -- we're first cous -- we're  
20           first cousins, and through my dad is -- my dad is  
21           Barbara's brother, and Brendan's Barbara's son.

22 Q       Okay. Very good. Now, um, while you're growing  
23           up, were you and Brendan close or good friends?

24 A       Um, kind of. Not really.

25 Q       All right. Do you like Brendan?

1 A Yes.

2 Q Okay. Do you care about him a great deal?

3 A Yes.

4 Q Okay. Um, how often would you see Brendan on a  
5 normal -- at a normal time?

6 A Um, prob -- probably once a week probably.

7 Q Okay. All right. Now, thinking about the time,  
8 from Halloween on October 31, 2005, until, say,  
9 the end of February, 2006, about four-month  
10 period, did you notice any changes in Brendan?

11 A Kind of. Yeah.

12 Q All right. Tell us about the changes that you  
13 saw?

14 A It looked like he was losing weight and he was a  
15 little bit more upset.

16 Q All right. You're -- you're -- you're going to  
17 have to put that mike a little bit closer so that  
18 everybody can hear, all right? All right. Thank  
19 you. Um, why was that different from what you  
20 had seen before that?

21 A Um, he really wasn't acting the same.

22 Q Okay. Had he -- Before that, was he more of a  
23 happy-go-lucky type of boy?

24 A Kind of. Yeah.

25 Q Was he pretty friendly to you?

1 A Yeah.

2 Q All right. And as far as you could tell, did he  
3 seem to be friendly to other people?

4 A Uh, yeah.

5 Q All right. But during this four-month period, is  
6 that what changed?

7 A Um, kind of. He was still nice to people.

8 Q All right. But was he as outgoing as he was  
9 before?

10 A Kind of. Not really.

11 Q Not really. Okay. All right. I want to direct  
12 your attention to a time in December of 2005.  
13 Did you have a conversation with Brendan about  
14 Teresa Halbach?

15 A Kind of. Yeah.

16 Q All right. Would you tell us about that  
17 conversation with Brendan?

18 A Well, um -- Well, not in December. November.

19 Q Okay. Tell us about it?

20 A In November, um, he was -- he was, um, sitting in our  
21 hallway, and, um, he was just in there. One of my  
22 friends looked out the door, because we were having a  
23 birthday party, and he came over, um, and he -- he  
24 was -- my friend just looked out the door and seen  
25 him crying, and then she came to me. And then I went

1 out there by him, and I asked him what was wrong, and  
2 all he did is shrugged his shoulders.

3 Q Okay. And then what did you ask?

4 A And then I asked him if it was about the Steven  
5 thing.

6 Q All right.

7 A And he shrugged his shoulders, and I was, like, you  
8 know you can -- you know you can talk to me, and then  
9 I just went back inside my room.

10 Q All right. And whose birthday party was this?

11 A My cousin, Ashley's.

12 Q All right. And what's Ashley's last name?

13 A Chevalier.

14 Q Okay. And where was the birthday party being  
15 held?

16 A My house.

17 Q All right. Now, when is her birthday? Is it --  
18 Is it February? Or January? Or when is her  
19 birthday?

20 A I think it's February.

21 Q All right. Now, was the party actually on her,  
22 um, birthday, or a day or two before or after?  
23 Do you remember?

24 A No.

25 Q Okay. Now, you asked Brendan about, did it have

1 something to do with this "Steven thing". Tell  
2 us about the conversation you had with Brendan  
3 regarding Steven to which you referred?  
4 A We didn't have a conversation about it.  
5 Q All right. Didn't you tell your counselors at  
6 school about a conversation you had with Brendan?  
7 A Yeah.  
8 Q All right. And you told Officers Wiegert and  
9 Fassbender about that conversation as well;  
10 right?  
11 A Yes.  
12 Q All right. Tell us what you told them?  
13 A I told them that he was crying on the steps and stuff  
14 like that.  
15 Q All right. What -- What about the conversation  
16 regarding a fire? Tell us about that?  
17 A That on, I think it was October 31, uh, we went down  
18 by my grandma's for trick or treating, and on the way  
19 back, I asked my mom if we could go down to the  
20 bonfire because I seen it, and my mom said, no.  
21 Q All right. In terms of your conversation with  
22 your counselors, the one you told Investigator  
23 Wiegert and Fassbender about -- these two guys  
24 right here -- You recognize those two guys?  
25 A (No verbal response.)

1 Q Yes?

2 A Yes.

3 Q Yes. Okay. Did you tell -- You told them about  
4 a conversation you had with Brendan about --  
5 about that bonfire and what was in the bonfire.  
6 Tell us about that?

7 A I really don't remember.

8 Q All right. Now, Kayla, didn't you tell the  
9 officers that Brendan told you he had seen body  
10 parts in a fire?

11 ATTORNEY FREMGEN: Judge, I'd object at  
12 this point. I think, first, the State should  
13 probably try to refresh recollection (inaudible.)

14 THE REPORTER: Mr. Fremgen, can you  
15 speak up, please?

16 ATTORNEY FREMGEN: Oh, I'm sorry.

17 Judge, my -- my argument is simply that I think  
18 the State should try to refresh recollection with  
19 whatever documents they're referring to, as far  
20 as the statement, before they go directly to, I  
21 think, the efforts they're going to now.

22 THE COURT: Mr. Fallon?

23 ATTORNEY FALLON: Well, it is our  
24 witness to, uh, pursue -- proceed as we feel  
25 appropriate under the circumstances. I'm asking

1 her, directly. I mean, quite frankly, if one is  
2 to impeach a witness, one must give the witness,  
3 first, an opportunity.

4 THE COURT: Yeah. I'm going to overrule  
5 the objection. You may go on.

6 ATTORNEY FALLON: All right.

7 Q (By Attorney Fallon) What did -- What did you  
8 report telling the officers that Brendan told you  
9 about the fire?

10 A I really can't remember.

11 Q All right. Did you give the officers a  
12 statement?

13 A Uh, yeah.

14 Q All right.

15 (Exhibit No. 163 marked for identification.)

16 ATTORNEY FALLON: May I approach?

17 THE COURT: You may.

18 Q (By Attorney Fallon) Kayla, I'm showing you what  
19 has been marked for identification as this  
20 Exhibit 163. Would you hold that for me, please?  
21 All right. I'm going to take my seat here and  
22 ask some questions. Do you recognize that  
23 exhibit?

24 A (No verbal response.)

25 Q Is that a yes?



1 THE COURT: You have --

2 THE WITNESS: Yes.

3 THE COURT: -- to answer out loud.

4 THE WITNESS: Yes.

5 Q (By Attorney Fallon) All right. And is that the  
6 statement that you gave to Officers, um,  
7 Fassbender and Wiegert?

8 A Yes.

9 Q All right. Would you take a moment to read that  
10 statement to yourself, please? Have you finished  
11 reading it?

12 A Yes.

13 Q I'm going to have Mr. Kratz take the statement.  
14 Okay. Does reviewing that statement help you  
15 remember?

16 A Yes.

17 Q All right. What did Brendan tell you about the  
18 fire? You'll have to pull the microphone a  
19 little closer so we can hear you.

20 A He didn't tell me anything. I -- I kind of made up  
21 the statement. And I'm sorry.

22 Q All right. What did you make up? Tell us what  
23 you said you made up?

24 A That he seen body parts in there. I didn't -- He  
25 didn't see it. I -- He didn't tell me anything like

1           that, or he didn't see Teresa's body or anything like  
2           that.

3   Q    You also told the officers that Brendan told you  
4           he saw Teresa alive and pinned up, didn't you?

5   A    Yes.

6   Q    All right. And you love Brendan; right?

7   A    Yes. Very much.

8   Q    And you wouldn't tell -- You wouldn't say  
9           anything like that to get him in trouble, would  
10          you?

11   A    No. Not really.

12   Q    All right. But yet you told the officers that  
13          those were the conversations you had with  
14          Brendan; isn't that right?

15   A    Yes.

16   Q    All right. You told -- You told the officers  
17          that Brendan told you he had seen Teresa pinned  
18          up in Steven's trailer, didn't you?

19                 ATTORNEY FREMGEN: Ob -- Object. I  
20                 don't believe that was what the statement  
21                 actually says.

22                 ATTORNEY FALLON: There's --

23                 ATTORNEY FREMGEN: And if I could be  
24                 heard.

25                 ATTORNEY FALLON: There's additional

1 statements, Counsel, as you well know.

2 ATTORNEY FREMGEN: Referring to the  
3 statement -- If we're referring to the statement  
4 that was just used to refresh recollection, I  
5 don't believe that's exactly what it says.

6 THE COURT: Well, why don't you restate the  
7 question, Mr. Fallon.

8 ATTORNEY FALLON: All right. I'll  
9 restate the question.

10 Q (By Attorney Fallon) First of all, um, Kayla, so  
11 that we're clear, the officers came and  
12 interviewed you, uh, the end of February; right?

13 A Yes.

14 Q All right. And you had a long conversation with  
15 him, your mom, and your dad; right?

16 A Yes.

17 Q Okay. And in the written statement that I just  
18 showed you, you reported that Brendan told you he  
19 had seen body parts in the fire on Halloween;  
20 right?

21 A Yes. But that's not true.

22 Q All right. And you also told the officers in a  
23 separate conversation that day that you had  
24 seen -- or that Brendan had seen Teresa alive in  
25 Steven's trailer?

1 A Yes.

2 Q All right. And that she was pinned up in a  
3 chair?

4 A Yes. But that's not true.

5 Q All right. Now, you're saying today you made  
6 that up?

7 A Yes.

8 Q All right. So you're telling us you made  
9 something up to get Brendan into trouble?

10 A Not really. I was just really confused about  
11 everything.

12 ATTORNEY FALLON: No further questions  
13 for this witness. And to the extent, solely that  
14 Exhibit 163 was referred to for refreshment and  
15 impeachment, only that portion we seek admission.

16 THE COURT: All right. Any objection to  
17 that?

18 ATTORNEY FREMGEN: With that condition,  
19 no.

20 THE COURT: All right. It's received.  
21 Cross.

22 **CROSS-EXAMINATION**

23 BY ATTORNEY FREMGEN:

24 Q You indicated that you would often see Brendan  
25 once a week?

1 A Yes.

2 Q Did you guys hang out and do stuff together?

3 A No. When I went over there, we played video games  
4 and stuff, when I went inside his room, and he would  
5 be playing them.

6 Q Would it be when your families got together you'd  
7 see them -- him then?

8 A Normally, when we went over there.

9 Q You would go over there?

10 A (No verbal response.)

11 Q Okay. Would you -- Would you also be there with  
12 Blaine, his brother?

13 A Yes.

14 Q And the other brothers? Bobby?

15 A Yes. Sometimes.

16 Q Or Bryan?

17 A Yes.

18 Q You indicated that one of the -- something that  
19 concerned you was Brendan was losing weight;  
20 right?

21 A Yes.

22 Q And he was a little more upset?

23 A Yes.

24 Q Did he sometimes walk around being upset?

25 A Kind of. Yes.

1 Q Just seemed to you that it was a little more than  
2 normal?  
3 A Yes.  
4 Q Did -- Now, did you know whether or not Brendan  
5 had a girlfriend at that time?  
6 A At the time, after he was kind of on the steps, I  
7 found out that he had a girlfriend. Yes.  
8 Q Do you know what happened between him and his  
9 girlfriend?  
10 A Um, no. I heard that they broke up, but I don't know  
11 if that was true or not.  
12 Q Don't know that, though?  
13 A Yes.  
14 Q At that birthday party, you tried to talk with  
15 Brendan; right?  
16 A Yes.  
17 Q And you sat down with Brendan on the stairs?  
18 A Yes.  
19 Q And tried to get him to open up to you?  
20 A Yes.  
21 Q But all he did was shrug his shoulders?  
22 A Yes.  
23 Q And then you just walked away then?  
24 A Yes.  
25 Q Now, Mr. Fallon was asking you to look at a -- a

1 statement that you wrote up with two, uh -- well,  
2 one investigator and -- and one special agent  
3 from the Department of Criminal Investigations.  
4 Do you remember that? You just saw it a minute  
5 ago?

6 A Yes.

7 Q You just said that you made that up?

8 A Yes.

9 Q So when you were talking to the officer -- You  
10 understand that they're police officers; right?

11 A Yes.

12 Q Okay. So you were lying to the police officer?

13 A Yes.

14 Q Why did you lie?

15 A I was confused and I didn't know what to do.

16 Q Who were you confused about?

17 A I don't know. Everything.

18 Q Did -- Now, at the time you spoke to the  
19 officers, that was in late February; is that  
20 right? Of 2006?

21 A I -- Yes, I think so.

22 Q Couple weeks before Brendan was arrested; right?

23 A Yes.

24 Q Around that time?

25 A Yes.

1 Q You'd heard some of the news that -- about what  
2 happened to Teresa Halbach?

3 A Yes.

4 Q It was -- It was kind of hard to miss some of  
5 that; right?

6 A Yes.

7 Q Did you know about that burn pit behind Steven's  
8 garage?

9 A Yes. I heard it on the news.

10 Q Read it in the news?

11 A Yes.

12 Q Did you read that they found body parts in the --  
13 the burn pit, too?

14 A Yes.

15 Q What -- When you first spoke to the officers,  
16 and -- and, again, in -- sometime in late  
17 February of 2006, did they come there to talk to  
18 you about Brendan?

19 A I think. I can't remember, but I think -- I think  
20 so.

21 Q I -- I don't want you to tell us other things  
22 that you said to the officers, okay? But could  
23 it have been they came to talk to you about  
24 Steven?

25 A Yes.



1 Q Okay. And then Brendan's name came up?

2 A Yes.

3 Q When they spoke to you, did they -- let's -- ask

4 you, specifically, about the burn pit and the

5 body parts?

6 A Yes.

7 Q So when you say that you -- you told them you saw

8 body parts, it was in response to a question they

9 asked you about that?

10 A Yes.

11 Q When you say that Teresa was pinned up in a

12 chair, where did you hear that?

13 A I don't know.

14 Q Did someone tell you that?

15 A Probably, yeah. I don't remember.

16 Q Don't remember where it came from?

17 A Yes.

18 Q But you remember the body parts and burn pit came

19 from reading the news or TV?

20 A Yes.

21 Q Now, at this point in time Steven had already

22 been arrested; right?

23 A Yes.

24 Q Okay. And he was already charged with the -- the

25 murder of Teresa Halbach; right?

1 A I think so. I don't know.

2 Q You don't remember?

3 A Yes.

4 Q This was several months after he was arrested  
5 though; right?

6 A I think so. Yes.

7 Q Thank you, Kayla.

8 THE COURT: Redirect?

9 ATTORNEY FALLON: Yes. One question.

10 **REDIRECT EXAMINATION**

11 BY ATTORNEY FALLON:

12 Q Kayla, isn't it true the officers came to talk to  
13 you because of what you told the counselors at  
14 school? They asked you about what you told the  
15 counselors?

16 A I don't know. I can't remember.

17 Q Are you confused?

18 A Right now? Yes.

19 ATTORNEY FALLON: No further questions.

20 THE COURT: All right. You may step down.  
21 Next witness, Counsel?

22 ATTORNEY GAHN: Uh, the State would call  
23 Sherry Culhane to the stand.

24 THE CLERK: Please raise your right hand.

25 **SHERRY CULHANE,**

1           called as a witness herein, having been first duly  
2           sworn, was 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: Sherry Culhane,  
6           C-u-l-h-a-n-e.

7                           **DIRECT EXAMINATION**

8 BY ATTORNEY GAHN:

9 Q       And, Ms. Culhane, what is your occupation?

10 A       I work as a forensic scientist in the Wisconsin State  
11       Crime Laboratory in Madison, Wisconsin.

12 Q       And how long have you been employed, uh, at the  
13       State Crime Lab in Madison?

14 A       Twenty-three years.

15 Q       And what are your duties and responsibilities at  
16       the Crime Lab?

17 A       I work in the DNA section of the Crime Lab, so I'm  
18       responsible for examining physical evidence, uh,  
19       usually things like clothing, bedding, objects, uh,  
20       samples that are taken from an alleged crime scene or  
21       an alleged victim, for the presence of biological  
22       material. We attempt to identify that biological  
23       material, and then, uh, develop a DNA profile from  
24       that.

25               We are also submitted DNA profiles from

1 standard samples from specific individuals, and  
2 we also develop DNA profiles from those samples.  
3 And we basically compare the two to see if an  
4 individual could or could not be the source of  
5 the questioned evidence sample.

6 Q And do you, yourself, have any additional duties  
7 at the Crime Lab?

8 A Yes, I do. I'm the technical unit leader in the  
9 section, which, uh, means that I'm also responsible  
10 for additional duties such as training new analysts  
11 in -- in our section, I'm responsible for overseeing  
12 the quality control program, um, make sure any  
13 technical issues that are resolved in this section.  
14 I'm responsible for setting up new equipment, new  
15 procedures, anything that are brought online, uh,  
16 those are all under my responsibility.

17 Q Ms. Culhane, before I ask you the next question,  
18 could you maybe pull the microphone just a little  
19 closer to you?

20 A Okay.

21 Q Thank you. Um, is your full workday devoted to,  
22 um, DNA analysis or testing?

23 A Yes, it is.

24 Q And how long have you been doing DNA testing at  
25 the Crime Lab in Madison?

1 A Um, since 1996.

2 Q And approximately how many DNA tests have you,  
3 yourself, performed or run?

4 A Uh, conservative answer for myself would be at least  
5 five thousand.

6 Q And what education do you have that qualifies you  
7 to, um, work in the area of DNA testing?

8 A I have a Bachelor of Science Degree in biology. Um,  
9 as I said, we went online in 1994 with DNA testing,  
10 and I went through a -- a -- about a year-long  
11 training program, um, in the laboratory under the  
12 direction of my supervisor.

13 Uh, the training program consisted of  
14 lectures, uh, running many, many samples through  
15 the system, um, uh, proficiency tests, competency  
16 tests, um, and since that time I've also, uh,

17 attended many schools and workshops specifically  
18 related to DNA testing or forensic applications,  
19 and also interpretations.

20 I've also taken a statistics course  
21 online and a molecular biology course and  
22 advanced chemistry class.

23 Q Do you attend meetings or seminars on DNA  
24 technology?

25 A Yes, I do.

1 Q And do you keep up-to-date and read the  
2 scientific literature on DNA technology?

3 A Yes, I do.

4 Q And why is it that you, um, attend meetings and  
5 seminars and keep up-to-date with the literature?

6 A Uh, meetings and seminars are -- are really good  
7 venue to be able to talk to other individuals who are  
8 in crime labs, who are doing the same type of  
9 testing, individuals who are testing new procedures,  
10 new types of equipment. Most of these meetings have  
11 representatives from, um, the instruments that we use  
12 or the kits that we use, and so these meetings allow  
13 us to exchange a lot of information.

14 Uh, research is being done, um, all of  
15 that information we can find in scientific  
16 journals that we have access to in the  
17 laboratory.

18 Q Have you testified in court before today?

19 A Yes, I have.

20 Q Approximately how many times?

21 A Ninety-two.

22 Q Have you ever been qualified as an expert in DNA  
23 testing?

24 A Yes.

25 Q And approximately how many times?

1 A About 32 times.

2 Q Have you ever been rejected as an expert in DNA  
3 technology?

4 A No.

5 (Exhibit No. 164 marked for identification.)

6 Q I'm going to ask Mr. Kratz to hand you what has  
7 been marked as Exhibit 164. Just ask you to  
8 identify that?

9 A This is a copy of my, uh, curriculum vitae. It has  
10 all of my qualifications, and all the classes, and,  
11 uh, educational, uh, seminars that I've attended.

12 Q Okay. And, basically, that summarizes what you  
13 talked about just up until now?

14 A Yes.

15 Q Okay. Um, what I'd like to do now is take a few  
16 moments, and I'd like you to explain to the  
17 jurors exactly what DNA, uh, stands for, and what  
18 it is, and we've, um, prepared a PowerPoint  
19 demonstration that you have seen; correct?

20 A Yes.

21 Q And would that assist you in, um, explaining DNA  
22 and its properties to the jury?

23 A Yes, it will.

24 Q Um, we put up our first slide, and you can -- Uh,  
25 and, also, do you have a, um -- a laser pointer

1 in the event that you may need one?

2 A No, I don't.

3 Q We're going to provide you with that, too, and  
4 please feel free to use that if you need to. So  
5 could you start with telling the jury, um, what  
6 DNA stands for and what it is?

7 A DNA stands for deoxyribonucleic acid, um, and,  
8 basically, it's the information storage system of the  
9 cell. Um, you can see -- Probably easier to see  
10 right here, um, this is a very small segment of DNA.  
11 It's a 3-D model of the DNA. And it illustrates the  
12 fact that DNA is made up of, um, a series of smaller  
13 units that are strung together in a specific order.  
14 That order is what determines the information and how  
15 that information is stored in the DNA.

16 Q And could you, um, explain to the jurors some of  
17 the characteristics about DNA and how it's  
18 inherited?

19 A Yes. The easiest way to think of DNA is to compare  
20 it to a blueprint. Um, just like when you build a  
21 house, all the information that you need to build a  
22 house is contained in the blueprint. All the  
23 directions, all the materials, everything you need.  
24 DNA is exactly the same, only on a cellular level.  
25 So all of the information that your body needs to



1 produce proteins, enzymes, everything to basically  
2 function, all that information is contained in your  
3 DNA.

4 Your DNA directs cellular development. ,  
5 And if you'll look at this, um, schematic here,  
6 um, the information is stored in specific regions  
7 we refer to as genes. DNA directs development of  
8 your cells all the way from the beginning of  
9 conception all the way through your adult life.

10 So things like your eye color, hair  
11 color, the shape of your face, all of those are  
12 characteristics that are determined by your  
13 genes.

14 In a forensic setting, we're more  
15 interested in the areas of DNA that are not  
16 connected to a functional gene. Um, scientists  
17 really don't know what their function is, but  
18 they're there and there's a lot of variation  
19 within the population. So in the forensic  
20 community, we're looking at regions of DNA that  
21 don't really do anything, and, um, that's where  
22 we're -- we're most interested.

23 DNA's also inherited from your  
24 biological parents. You inherit 50 percent from  
25 your mother and 50 percent from your father. And

1           you, in return, uh, pass on 50 percent of your  
2           DNA to your offspring.

3    Q       How many analysts are there at the Crime Lab in  
4           Madison that are performing DNA testing?

5    A       Currently, we have, uh, about ten. Over the course  
6           of years, we've had 10 to 12 people.

7    Q       Since you began doing DNA testing at the Madison  
8           Crime Lab, can you estimate approximately how  
9           many samples of evidence have been analyzed, uh,  
10          for DNA testing?

11   A       A conservative answer would be at least 60,000 over  
12          the course of the years.

13   Q       And do you and your laboratory undergo  
14          proficiency testing?

15   A       Yes, we do.

16   Q       And what is that?

17   A       Proficiency testing, um, in our laboratory -- We  
18          purchase proficiency tests from an outside private  
19          company. Proficiency tests are designed to mimick  
20          forensic samples. So we treat them just like we do a  
21          case. They come into the lab from this private  
22          company, and we examine them just like we would a  
23          case. The proficiency tests are meant to test the  
24          laboratory system, as well as the individual  
25          analysts.

1                   We, uh, examine these just like we do  
2                   evidence. We developed DNA profiles from them,  
3                   and we report those DNA profiles back to the  
4                   company that we purchased them from.

5   Q   And have you passed all of your proficiency  
6           tests?

7   A   Yes.

8   Q   And, um, is your -- Madison Crime Laboratory hold  
9           any certificates or accreditation?

10   A   Yes. We are an accredited laboratory system. Um, we  
11           hold a certificate of accreditation from ASCLD, which  
12           stands for American Society of Crime Lab Directors.  
13           And it is a group of individuals that come into the  
14           laboratory once every five years and audit the  
15           laboratory -- um, every section of the laboratory.  
16           Uh, they look at all of our procedures. And this,  
17           um, certificate is awarded and -- and re-evaluated  
18           once every five years.

19   Q   And what does that mean to be accredited in the  
20           forensic scientific community?

21   A   Well, as I said, it's a -- part of the process of  
22           being accredited is to be audited. And what that  
23           means is you have a group of probably 10 to 15 people  
24           who come into the lab, they look at everything from  
25           security, they check, uh, evidence handling

1 procedures, how we take in evidence, how we store the  
2 evidence.

3 Um, and then specific auditors are  
4 assigned to different sections at the laboratory.  
5 DNA usually has two to three auditors assigned to  
6 DNA. They check the physical layout of the  
7 laboratory, they check all of our validations of  
8 our equipment, all of our quality control. And,  
9 in addition to that, they pull, uh, case jackets  
10 from probably 10 to 15 different cases from each  
11 analyst, and analyze those to make sure that  
12 we're following our own protocols, and that we're  
13 making the correct interpretations.

14 It also checks, uh, educational  
15 backgrounds of all our analysts to make sure  
16 that -- that we are meeting all the requirements  
17 that are necessary, that have been put forth by,  
18 um, the DAB, which is a -- a group of individuals  
19 from the FBI that sets forth standards for these  
20 audits.

21 Q And does your laboratory only perform DNA testing  
22 for law enforcement or for the prosecution?

23 A Uh, by law, we perform testing for authorized  
24 submitters. Authorized submitters would be district  
25 attorney's offices, uh, coroner's offices, uh, police

1 agencies. Um, but we do any requests that come  
2 through them.

3 Q Are you familiar with the Innocence Project at  
4 the University of Wisconsin Law School in  
5 Madison?

6 A Yes, I am.

7 Q And what is that, um, Innocence Project, briefly?

8 A My understanding, it is -- is that it's a group of,  
9 um, law students that review post-conviction cases.  
10 So they look at cases that have already been decided  
11 in court. And they review these cases to see if  
12 they're appropriate for a new trial because of new  
13 evidence, or new technology that was not available at  
14 the time.

15 Q And do they ever request testing from your Crime  
16 Laboratory?

17 A Yes.

18 Q And as a result of cases that you've tested,  
19 post-conviction cases, have people ever been  
20 freed from prison whom --

21 A Yes.

22 Q -- have been wrongfully convicted?

23 A That's correct.

24 Q And you do that work at your Crime Lab, also?

25 A Yes.

1 Q Um, I would like to now, uh, go back to the  
2 PowerPoint and just ask -- ask you -- to you --  
3 would you describe to the jurors where DNA is  
4 found?

5 A DNA can be found in all the nucleated cells in your  
6 body. Um, for our purposes, most -- If you'll look  
7 at the slide here, most of the common types of  
8 biological materials we're dealing with are blood,  
9 semen, saliva, and hair. But any biological  
10 component of your body that has a nucleated cell has  
11 the potential for DNA.

12 In the blood, it would be white blood  
13 cells. Semen would be epithelial cells, skin  
14 cells, and sperm sells. Saliva would be skin  
15 cells. Um, all of these, um, types of biological  
16 materials have a complete copy of your DNA. So  
17 the -- the important fact to remember, especially  
18 with forensics, is that, um, these questioned  
19 biological samples that may be found on a victim,  
20 alleged victim, or at an alleged crime scene, um,  
21 have a particular DNA profile, and that profile  
22 is the same as any other, um, nucleated cell in  
23 that person's body.

24 Q Ms. Culhane, before I go any further, I'm going  
25 to ask that, um, when you point something out

1 with the laser pointer, could you use the --

2 A Sure.

3 Q -- big screen so that the defense can also see

4 what --

5 A Sure.

6 Q -- you're pointing to?

7 A I'm sorry.

8 Q Thank you, ma'am. So, basically, um, the DNA in

9 one person's body, whatever tissue it comes from,

10 is the same?

11 A Correct.

12 Q And, um, is it possible, uh, to make comparisons

13 of the DNA that you find in a person's body,

14 wherever it comes from, with, perhaps, samples

15 that are found at a crime scene?

16 A Yes, it is.

---

17 Q And what allows you to do that?

18 A Uh, we can develop the DNA profile from the

19 questioned sample, and we can also develop a DNA

20 profile from the reference sample, or a standard

21 sample, that it's from a known individual, and

22 compare those profiles to see if they are consistent

23 with one another or not.

24 Q And in order to test these biological fluids,

25 what, um, testing procedure do you follow at the

1 Crime Lab?

2 A Currently, the type of technology that we're using is  
3 referred to as DNA: STR typing. Um, and this is what  
4 most -- as far as I understand, what most crime labs  
5 in the country are using, this type of technology for  
6 typing.

7 Q And, um, basically, and -- and briefly, what is  
8 the, um, DNA: STR method of typing?

9 A STR typing is a PCR-based system that allows us to  
10 specifically amplify or make a whole lot of copies of  
11 specific regions of DNA.

12 If you look at the, uh, photograph here,  
13 there are target regions that -- that it -- are  
14 interspersed throughout your DNA. These target  
15 regions we refer to as STR or genetic markers.

16 When we develop a DNA profile, we  
17 actually look at 15 different target regions of  
18 DNA throughout the -- a person's entire DNA. So  
19 our profile is developed from 15 different target  
20 locations. We do this to the evidence sample as  
21 well as the reference sample, and we basically  
22 compare the two.

23 Q So, again, if you were to develop a -- Can you  
24 develop a DNA profile from, like, a buccal swab  
25 from an individual?



1 A Yes.

2 Q And -- and please explain to the jurors what is a  
3 buccal swab?

4 A A buccal swab refers to swabbing that we do on the  
5 inside of the cheek area. Um, some laboratories at  
6 some point have used blood samples as a standard. We  
7 currently use buccal swabs, which is swabbing of the  
8 inside of the cheek as a standard sample so that  
9 we'll know that those cells come from a particular  
10 person and we'll be able to assign that particular  
11 person, um, a profile.

12 Q And you can develop a DNA profile from that?

13 A Yes.

14 Q And if that person were to leave, shall we say,  
15 their blood at a crime scene, can you develop a  
16 DNA profile from the blood at the crime scene?

17 A Yes.

18 Q And then could you compare those two?

19 A Yes, we do.

20 Q So can you make a determination whether someone  
21 may be the source of a biological substance at a  
22 crime scene?

23 A Yes.

24 Q And is this DNA technology that you've just  
25 talked about used in other fields besides law

1 enforcement and the forensic setting?

2 A Yes.

3 Q Could you explain just some of those for the  
4 jurors?

5 A Um, the technology -- the PCR technology that this  
6 system is based on is used in the medical com --  
7 community quite frequently. It's used for a lot of  
8 diagnostic testing, um, it's used to, uh, identify  
9 individuals from mass disasters. Uh, I believe most  
10 servicemen now, uh, give a DNA sample that is kept on  
11 file. So there are lot of other applications.  
12 This -- this type of technology is used in many other  
13 applications besides forensics.

14 Q Now, in this case here, um, the case that we're  
15 trying today, did you receive items of evidence  
16 from law enforcement agencies to perform DNA  
17 testing?

18 A Yes, I did.

19 Q And when law enforcement submits items to the  
20 Crime Lab, do you generate some type of case  
21 file?

22 A Yes, I do.

23 Q And could you just explain to the jurors how  
24 you'll go about generating your case file?

25 A Any time evidence is brought into the laboratory, we

1 have, uh, individuals, referred to as evidence  
2 specialists, they take the evidence from the  
3 submitter, the police officer, or -- or agency, um,  
4 and we have a -- a computerized bar coding system in  
5 the laboratory that keeps track of all of this  
6 evidence.

7 So anytime a piece of evidence comes  
8 into the lab, we give it a yellow sticker with a  
9 bar code on it that, um, is a designation of what  
10 the -- the lab number is. So we give it a  
11 numerical number.

12 Also, each item of evidence is also  
13 given an item designation. So, for instance,  
14 your number of the case, and then you'll have  
15 items A, B, C, D, E. So all of that information  
16 is, um, given to the items when they come into  
17 the laboratory. It's put into our computer  
18 system. All of that evidence is put into  
19 storage, into our evidence storage, and remains  
20 there until the analyst needs it to actually  
21 examine the evidence.

22 All of the documentation, um, that we  
23 generate for each case is kept in a case file.  
24 So all of our information with chain of custody,  
25 who took it in, what happened to it, plugs all of

1 the notes and all of the data that we generate  
2 from our -- our analysis is kept in a case  
3 jacket. And, um, that's the -- the case file  
4 that's generated for each case.

5 Q And did you bring your case file with you today?

6 A Yes.

7 Q And do you need that to testify today?

8 A Yes.

9 Q And your file -- your case jacket, will that  
10 indicate what items of evidence you received and  
11 on what date?

12 A Yes, it will.

13 Q And will it also contain the dates that you  
14 performed your analysis?

15 A Yes.

16 Q I'm going to ask Mr. Kratz, if he would, uh,  
17 bring you a number of photographs, which I would  
18 like you first just to take a look at, and then  
19 I'll have a question for you when you've  
20 completed looking at those.

21 A Yes.

22 Q Those photographs -- Uh, do you know who took  
23 those photographs?

24 A I believe -- I believe they were taken in our  
25 laboratory.

1 Q And that was -- And those are photographs of --  
2 of Teresa Halbach's RAV 4; correct?  
3 A That's correct.  
4 Q And that was brought to your Crime Laboratory  
5 from the, uh, Avery Salvage Yard; is that  
6 correct?  
7 A Yes.  
8 Q Okay. And who is Ron Groffy?  
9 A He's the, uh -- our -- uh, one of our im -- imaging  
10 analysts, and he takes the photographs, uh, when we  
11 process vehicles or when we need evidence, uh,  
12 photographed.  
13 Q And did he take those photographs?  
14 A Yes.  
15 Q And as you look at each of those photographs, do  
16 they a -- appear to accurately depict, um, Teresa  
17 Halbach's RAV 4 as it appeared when you first saw  
18 it?  
19 A Yes, I do.  
20 Q Okay. I would like you, first, to look at  
21 Exhibit 141? And --  
22 A Yes.  
23 Q -- um, would you, um -- And is it -- The  
24 photograph that you have in your hand, is that  
25 the same photograph that we have up on the

1 screen?

2 A Yes, it is.

3 Q Okay. And would you explain what that is?

4 A This is a photograph that -- it's taken in our, uh,  
5 garage at the laboratory, and it is a picture of the,  
6 uh -- Teresa Halbach's RAV 4 as it was in our  
7 laboratory.

8 Q And when did you first see Teresa Halbach's RAV 4  
9 in your lab?

10 A Uh, November 7, 2005.

11 Q And that would have been on Monday?

12 A Yes.

13 Q Okay. And what was your involvement at this  
14 point on November 7?

15 A I was asked to, um, process the car for the presence  
16 of blood or any biological materials.

17 Q And how did you go about doing that?

18 A The first thing we do -- Anytime we're processing  
19 evidence, whether it's a -- a vehicle, or a piece of  
20 clothing, the first thing we do is a visual  
21 examination. And we, basically, just look at the  
22 item of evidence to see if there's any obvious  
23 stains. Um, we're looking for different biological  
24 materials depending on what type of case it is and  
25 what circumstances there were.

1 Q And did you find any blood stains in Teresa  
2 Halbach's RAV 4?

3 A Yes. As I was processing the car, um, again, I was  
4 just, basically, looking at the interior, and there  
5 were numerous obvious stains that were consistent  
6 with the appearance of blood stains.

7 Q And, um, did you perform any type of preliminary  
8 tests on these -- what appear to be blood stains  
9 in Teresa Halbach's car?

10 A Yes, I did.

11 Q And what preliminary tests would those be?

12 A Preliminary tests in the laboratory are tests that  
13 are not specific for a biological material, but it  
14 gives us a -- a good idea that what we're looking at  
15 is, for instance, blood or semen. These are what we  
16 refer to as presumptive tests. Um, they're not  
17 confirming for blood, and they're certainly not  
18 confirming for human blood, um, but when we get a  
19 positive reaction, we know that we're probably  
20 looking at a blood -- a blood stain and we need to  
21 take it a little further. If we get a negative  
22 reaction, then it's not blood and we're not -- we're  
23 not going any further with the analysis.

24 Q And the, um -- And once you perform a preliminary  
25 test and get a presumptive test, shall we say for

1 blood, then what would you do? What would be the  
2 next step?

3 A If I got a positive reaction, then I would sample the  
4 stain and retain that for further DNA testing. Uh,  
5 in this particular case, when I, um, got a positive  
6 preliminary test, then I sampled a portion of each  
7 one of the stains that I looked at, um, on a cotton  
8 swab. I moistened that with some sterile water, and  
9 then I, basically, just swabbed the stain and removed  
10 it, and that was retained for further DNA testing.

11 Q Just give me one moment here, Ms. Culhane. Ms.  
12 Culhane, Mr. Kratz is going to hand you a number  
13 of envelopes, and they -- each one has been  
14 marked as an exhibit, and I would like you to  
15 look at Exhibit No. 155, and could you identify  
16 that for the jurors?

17 A Yes, I can.

18 Q And what is that?

19 A This is a, um, swab that was taken, uh -- my item  
20 designation was A6, and this was a swab that was  
21 taken from the RAV 4.

22 Q And I would like you at this point -- Would you  
23 look at Exhibit 142? That would be the  
24 photograph. Okay?

25 A Yes.



1 Q And, um, can you show the jurors on, um, this big  
2 screen where it is that you collected this item  
3 A6?  
4 A A6 was collected from the, uh, front seat driver's  
5 side portion of the -- the vehicle. Um, and it was  
6 a -- a stain that I cut out of that area.  
7 Q And that was a -- a blood stain; correct?  
8 A Yes.  
9 Q You had done your preliminary test on that?  
10 A Yes.  
11 Q I would like you now to look at Exhibit 156, and  
12 could you explain to the jurors what that is?  
13 A This is my item designation A7. Um, this was  
14 collected -- These were some, uh, reddish/brown crust  
15 material that was collected from this area right here  
16 on the floor by the console.  
17 Q And, again, that appeared to be a blood stain?  
18 A Yes.  
19 Q And what was the purpose of collecting that?  
20 A Um, I did my preliminary test, and, eventually, um,  
21 developed a DNA profile from that.  
22 Q Now, you state that you give these an item  
23 designation number. Explain that a little bit to  
24 that? What you mean by your Crime Lab  
25 designation number?

1 A Okay. The car -- the vehicle, itself, was given the  
2 item designation of A. And everything that we  
3 subsequently collected from the car, was numbered one  
4 through however many samples we took. So this would  
5 be referred to as A7. "A" telling me that it came  
6 from the vehicle, and A7, uh, telling me exactly  
7 where I recovered this item from.

8 Q And I would ask you to look at Exhibit 157, and  
9 identify that for the jurors?

10 A This is my item designation A7, and this was a  
11 reddish/brown stain that was collected from the right  
12 of the ignition area in the vehicle.

13 Q Okay. Do you have Exhibit 157? Isn't that -- Is  
14 that A8?

15 A Yes.

16 Q I thought you said -- Did you say A7?

17 A I didn't mean to, if I did. I mean A8.

18 Q Okay.

19 A Yes.

20 Q So Exhibit 157?

21 A Is Item A8.

22 Q Okay. And, again, what is that?

23 A Uh, that was a reddish/brown stain that was taken  
24 right here to the right, uh, of the ignition. You  
25 can see it here on the photograph.

1 Q And, um, would you look at Exhibit 143, which is  
2 a photograph?  
3 A Yes.  
4 Q And is that -- The photograph you have in your  
5 hand, is that the photograph that's up on the  
6 large screen now?  
7 A Yes, it is.  
8 Q And, again, before you collected this blood stain  
9 from the -- by the ignition switch, you performed  
10 a preliminary test?  
11 A Yes, I did.  
12 Q It tested positive for blood?  
13 A Yes.  
14 Q And then you -- When you say, collected it, just  
15 tell the jurors how did you go about collecting  
16 it?  
17 A I took a -- a cotton swab and moistened that with  
18 some sterile water, and then I, basically, just  
19 swabbed the area of the stain. That, uh, material is  
20 then transferred to the cotton swab, and then when I  
21 take that back to my lab bench to, uh, do my testing  
22 on it, then I will cut the portion that has the  
23 stained area on it and develop a DNA profile from  
24 that.  
25 Q I would like you now to look at Exhibit 158?

1           That would be an envelope. And explain what that  
2           is?

3   A    Yes. This is my, uh, item designation A9.

4   Q    And, uh, where did you take that sample from?

5   A    This was taken from the front passenger seat, and  
6           this was a stain that was cut out of that area.

7   Q    And would you correlate that for the jurors,  
8           please, with Exhibit 144? That would be a  
9           photograph you have in front of you?

10   A    Yes. This is the same photograph that's on the  
11           screen here. A9 was taken from this area right here.  
12           It was cut out of the front passenger seat.

13   Q    I would like you to look at another envelope,  
14           which would be Exhibit 159, and tell and please  
15           explain to the jurors what that is and where you  
16           collected that?

17   A    This is my item designation A10, and this was a  
18           reddish/brown stain that was recovered from a CD  
19           case, which was on the front passenger seat, and it's  
20           right here.

21   Q    And, now, finally, would you look at Exhibit 160?  
22           That will be a envelope? And would you correlate  
23           that with the photograph, Exhibit 145, and tell  
24           the jurors where you got that from?

25   A    This is my item designation A12, and this was also a

1 reddish/brown stain that was found in this -- uh, on  
2 this metal panel here, um, between the backseat and  
3 the cargo area of the RAV 4. Uh, it was recovered  
4 from this area right here.

5 Q Now, did you perform DNA testing on each of these  
6 swabs and each of these cuttings that you've just  
7 described for the jurors?

8 A Yes, I did.

9 Q And were you able to develop a DNA profile from  
10 each of those items?

11 A Yes.

12 Q Now, did you awful -- also have a buccal swab  
13 from an individual by the name of Steven Avery?

14 A Yes, I did.

15 Q And, once again, what is a buccal swab?

16 A That is a swabbing of the inside of -- the cells on  
17 the inside of your cheek.

18 Q And is that referred to as a standard?

19 A Yes.

20 Q And why is a standard necessary in DNA testing?

21 A Because in order to compare an evidence sample, or a  
22 question sample, to someone, a person, you need a  
23 reference sample. You need to know what a particular  
24 person's, um, DNA profile is. So we use a reference  
25 standard. We know it comes from a particular person

1           and we can develop a profile from that and compare  
2           that to the evidence.

3    Q    And did you develop a DNA profile from the buccal  
4           swab of one Steven Avery?

5    A    Yes.

6    Q    And I'm going to show you, on the PowerPoint  
7           demonstration, a slide, and ask if your -- does  
8           this slide correctly display your findings of  
9           your testing of the buccal swab of Steven Avery?

10   A    Yes, it does.

11   Q    Would you explain to the jurors what -- what this  
12           slide means?

13   A    Earlier, when I was talking about the STR markers, or  
14           genetic markers, and I told you that, uh, the PCR  
15           process amplifies or makes a lot of copies of 15  
16           different markers, these series of numbers and

17           letters on this side are actually, um, designations  
18           of where those markers are found throughout the DNA.  
19           So it -- it tells me a specific location of this  
20           marker. Where it's found.

21                These numbers on this side reflect the  
22           size of that target region of DNA that we're  
23           amplifying at that particular location. So, in  
24           other words, at this location, D-3, Steven -- the  
25           sample from Steven Avery had two fragments of

1 DNA, size 16 and size 18. And the entire DNA  
2 profile -- This is what we use, these numbers and  
3 fragment sizes, that's what we use to actually  
4 compare to the evidence sample.

5 Q And the example you just gave, where Mr. Avery  
6 was a 16, comma, 18 at D-3, are there other  
7 possible numbers at that location that one could  
8 be?

9 A Yes.

10 Q Do you know how -- what the range of numbers it  
11 could be?

12 A Um, at that particular location, I believe it starts  
13 at around 11, up to, maybe, in the 20's. So there  
14 are numerous fragment sizes at that particular, uh,  
15 location.

16 Q But here, at that location, Mr. Avery happened to  
17 be a 16, comma, 18.

18 A Yes. And at each different location, there are many  
19 choices, several choices, of fragment sizes at each  
20 one of those markers.

21 Q Now, did you compare this profile that you  
22 obtained from Steven Avery's buccal swab with the  
23 DNA profiles that you developed from the blood  
24 stains in Teresa Halbach's RAV 4?

25 A Yes, I did.

1 Q And I'm going to put up another slide now and  
2 ask, uh, does this slide accurately show your  
3 findings?  
4 A Yes, it does.  
5 Q Now, in this slide we just did, um, we put up for  
6 A10 -- I'm sorry, A8, A10, and A12. And, again,  
7 A8 was a blood stain found where?  
8 A By the ignition.  
9 Q A10?  
10 A On the CD, uh, case.  
11 Q And A12?  
12 A Was found on the metal panel between the rear seat  
13 and the cargo area.  
14 Q And the DNA profile that you developed from each  
15 of those blood stains, please explain to the  
16 jurors how that profile compared to Steven Avery?  
17 A You can see by the numbers that it's -- it's  
18 consistent all the way throughout. So at each one of  
19 these markers -- Um, the evidence sample was a 16,  
20 18. Steven Avery was a 16, 18.  
21 At this marker, THO-1, um, the evidence  
22 sample was 9.3. Steven Avery was 9.3. So he's  
23 con -- These evidence samples are consistent with  
24 his profile throughout all the 15 markers.  
25 Q And is there any way in your testing process you



1 can tell whether it's a male or a female who  
2 leaves a, uh, biological substance?

3 A Yes, it is.

4 Q And how do you do that? The last marker that we  
5 used is referred to as amelogenin. And it's a  
6 gender marker. Um, if you are a female, you're  
7 only going to have an "X" chromosome. If you are  
8 a male, you're going to have an "XY" chromosome.

9 So you can see that both the evidence  
10 sample and Steven Avery both have an XY, so that  
11 tells me that's DNA from a male.

12 Q Now, you also developed a DNA profile from the  
13 other blood stains that you found in the  
14 passenger compartment; correct?

15 A Yes.

16 Q That would be A6, A7, and A9?

17 A Yes.

18 Q Okay. And did you develop similar profiles with  
19 Steven Avery as you did with A10, 8 and 12?

20 A Yes, I did.

21 Q Okay. Do you have an opinion to a reasonable  
22 degree of scientific certainty whether Steven  
23 Avery was the source of, uh, those blood stains  
24 that you found in the passenger compartment of  
25 Teresa Halbach's RAV 4?

1 A Yes, I do.

2 Q What is that opinion?

3 A Uh, it is my opinion that Steven Avery is the source  
4 of the evidence samples that -- as they're  
5 illustrated right here.

6 Q Now, I'm going to ask Mr. Kratz to bring you up,  
7 and -- what has previously been marked as Exhibit  
8 94 -- and, um, this has been described as a -- a  
9 swab which was taken from the release lever of  
10 the hood latch of Teresa Halbach's RAV 4. And  
11 did you receive that as evidence?

12 A Yes, I did.

13 Q And how can you tell that you received it?

14 A Um, again, this is an example of, uh, our be -- our  
15 system that -- our computer tracking system. This is  
16 a label with the lab number on it, and the item  
17 designation is ID. That's our item designation with  
18 a bar code that keeps track of that. These are my  
19 initials, and when I received it, and, um, a seal  
20 across the back with my initials when the evidence  
21 was opened.

22 Q And did you, um -- When you received that swab of  
23 the hood latch, what did you do with that?

24 A Uh, in this particular case, um, I did a visual exam  
25 of it. Uh, there was no visible staining that was

1           consistent with blood or anything. And so I, uh,  
2           took the swab, I cut a portion of the swab, and  
3           simply began my extraction for DNA.

4   Q   And did you assign a Crime Lab item designation  
5       to that?

6   A   Yes.

7   Q   And what was that item designation?

8   A   ID.

9   Q   And were you able to develop a DNA profile from  
10       the swab of the hood latch of Teresa Halbach's  
11       RAV 4?

12   A   Yes, I did.

13   Q   And I'm going to ask if the slide that we have  
14       put up before the jury, whether this correctly  
15       displays your findings for the DNA profile from  
16       the hood latch?

17   A   Yes, it does.

18   Q   And, again, briefly just explain it to the jurors  
19       what that is?

20   A   Again, these are the -- all the 15 different genetic  
21       markers, or STR markers, the locations throughout the  
22       DNA, and these are the size of the fragments that  
23       were developed from the evidence sample.

24               So in this case, they were fragments  
25       that were developed from Item ID, which was the

1           hood latch.

2       Q     And did you compare that DNA profile with the DNA  
3           profile that you developed from the buccal swab  
4           of Steven Avery?

5       A     Yes, I did.

6       Q     And does this slide correctly display your  
7           results?

8       A     Yes, it does. And, again, you can see that, um, the  
9           profile that was developed from the hood latch is,  
10          uh, consistent all the way throughout the markers  
11          with Steve Avery's sample.

12      Q     And do you have an opinion to a reasonable degree  
13          of scientific certainty whether Steven Avery is  
14          the source of the DNA which was found on the hood  
15          latch of Teresa Halbach's RAV 4?

16      A     Yes, I do.

17      Q     What is that opinion?

18      A     Uh, that Steven Avery is the source of the DNA that I  
19          developed from the swab of the hood latch.

20      Q     And I would like you now to see Exhibit 131,  
21          which has been previously identified as, um, the  
22          Toyota key, which was found in the trailer of  
23          Steven Avery. I'm sorry, if Mr. Wiegert could  
24          locate that for you. And that has been  
25          previously marked as Exhibit 131, and, uh, can

1           you identify that for the jurors?

2   A    Yes, I can.  Uh, this is a Toyota key, um, that I  
3       swabbed and recovered DNA from.  The key was found --  
4       This is a photograph of the key and it was found to  
5       fit the Toyota, uh, RAV 4.

6   Q    And did you, yourself, put that key in the  
7       igni -- ignition switch of the RAV 4?

8   A    Yes, I did.

9   Q    And what happened when you put it in?

10  A    Uh, when I put the key in and -- it turned completely  
11       over, but the engine, uh, did not actually start.  
12       Uh, but it did turn it over and it opened the doors  
13       of the vehicle.

14  Q    And did you perform DNA testing on, uh, that key?

15  A    Yes, I did.

16  Q    And could you explain for the jurors what you did  
17       with that key when you first received it?

18  A    Uh, when I first received it, um, I simply took the  
19       key, I did a visual examination.  Uh, there was  
20       nothing -- There were no visible stains that I could  
21       see.  So I took a swab and I swabbed the edges of the  
22       key, this portion of the key, and both sides of  
23       the -- of the key.  Um, the swab, itself, after I did  
24       that swabbing, was not discolored, so there was no  
25       indi -- no visual indication that there was any blood

1 or anything, uh, that I could see on the key. Um,  
2 and then I took that swab, and I, um, um did a DNA  
3 extraction and developed a profile from that.

4 Q And I'm going to ask you to inform the jurors  
5 whether this slide adequately or correctly  
6 displays your findings of your testing of the  
7 Toyota key?

8 A Yes, it does.

9 Q And the DNA profile that you developed from the  
10 Toyota key, did you compare that to the DNA  
11 profile of Steven Avery?

12 A Yes, I did.

13 Q And does this slide correctly display your  
14 findings?

15 A Yes, it does.

16 Q And, again, would you just explain to the jurors  
17 what this shows?

18 A Again, this is, uh, the profile from the evidence  
19 sample, which is a swabbing of the Toyota key. And  
20 it's consistent throughout with the DNA profile  
21 developed from, uh, the buccal swab of Steven Avery.

22 Q Do you have an opinion to a reasonable degree of  
23 scientific certainty whether Steven Avery is the  
24 source of the DNA that was found on the swabbing  
25 of the Toyota key?

1 A Yes.

2 Q And what is that opinion?

3 A Um, my opinion is that he is the source of the

4 swabbing -- uh, the DNA from the swabbing of the key.

5 Q Ms. Culhane, I would like to now, um, shift back

6 to the processing of the RAV 4, and you found

7 other blood stains in that RAV 4; isn't that

8 correct?

9 A Yes.

10 Q Did you also look into the rear cargo area of the

11 RAV 4?

12 A Yes, I did.

13 Q And did you find blood stains there?

14 A Yes.

15 Q There was also another item that was in the

16 passenger compartment, and that was a Wild Cherry

17 Pepsi can; is that correct?

18 A Yes.

19 Q And I'd like to go back to, um -- And can you

20 point out for the jurors where you found this

21 Wild Cherry Pepsi can?

22 A Yes. I recovered it from the console area where the

23 opening is to put a can or something. Um, and there

24 was -- the soda can was right here, and that's where

25 I recovered it from.

1 Q And I'm going to ask Mr. Kratz to bring you up  
2 Exhibit 161, and ask if you recognize that  
3 exhibit?

4 A Yes, I do. This is the Pepsi can that I recovered  
5 from the RAV 4. Um, again, it has, uh, our  
6 laboratory, um, item designation and lab number on  
7 it, and my item designation was A14.

8 Q And it -- That bag contains the actual Pepsi can?

9 A Yes, it does.

10 Q And how did you process that Pepsi can?

11 A At the time when I found, um, the can, I was, um,  
12 trying to -- I -- I, basically -- There was nothing  
13 visible on the can. There was no stains or anything  
14 like that. So I was trying to determine who may have  
15 drank out of the can. So I swabbed the opening  
16 where -- if you were drinking, where your mouth would  
17 touch, and that's -- that's what was the swabbing and  
18 that's what I processed for DNA.

19 Q I'm going to ask Mr. Kratz to hand you some  
20 additional photographs. I'd like you to take and  
21 look at those first. Those are Exhibits 146,  
22 147, 4 -- 148, 149, I believe; is that correct?

23 A Yes.

24 Q Okay. And, again, are those photographs of areas  
25 of Teresa Halbach's SUV?



1 A Yes, they are.

2 Q And, again, were those taken by Ron Groffy, your  
3 photographer at the Crime Lab?

4 A Yes.

5 Q And I'm also going to ask, um, you to identify a  
6 few other exhibits. I'm going to ask Mr. Kratz  
7 to hand you four additional envelopes. What I'd  
8 like you to do is to look at the first, um,  
9 envelope. I believe it is, um, 151?

10 A Yes.

11 Q And what is that?

12 A Um, this is a -- a sample that was recovered by me  
13 from the vehicle. Um, and it was my item designation  
14 A1.

15 Q And would you please look at Exhibit 146? It's a  
16 photograph. And, uh, is that photograph being  
17 shown on the big screen now?

18 A Yes, it is.

19 Q And your item designation, A1, can you show the  
20 jurors, uh -- First of all, that was a blood  
21 stain that you located?

22 A Yes.

23 Q Show them where you located that blood stain?

24 A Okay. This was -- It was a -- a fairly large stain  
25 right here in this area up against this wheel well.

1 Q I'm going to, uh, ask you to look, um, at another  
2 photograph, which is Exhibit 147? Which is a  
3 close-up of that area. And, again, could you  
4 just point out to the jurors where you took your  
5 DNA sample from?

6 A Right in here.

7 Q And, again, would --

8 A You can see the stain here.

9 Q And could you just describe for the jurors the  
10 size of that stain and how it appeared to you?

11 A Um, it was a fairly large stain. I don't know the  
12 exact measurements, but maybe six inches long or so.  
13 Um, and it was a fairly substantial stain, so I only  
14 collected a small portion of -- the portion that I  
15 would need for my examination.

16 Q I would now ask you to look at, please, Exhibit  
17 152, and can you describe that for the jurors?

18 What that is?

19 A This is also a -- a reddish/brown stain that I  
20 recovered from the vehicle. Um, it's my item  
21 designation A2.

22 Q And I would like you to correlate that with  
23 Exhibit 148, which would be a photograph?

24 A Yes.

25 Q And could you show the jurors where it was that

1           you located A2?

2   A    Right here along this plastic, um, threshold here

3           into the -- This is the cargo area of the RAV 4. So

4           right along this plastic piece right here.

5   Q    And did that appear to be blood to you?

6   A    Yes.

7   Q    Did you perform preliminary tests on these stains

8           also?

9   A    Yes.

10   Q   And did they show positive for blood?

11   A    Yes.

12   Q    I would ask that you now look at Exhibit 153, an

13           envelope? And, uh, at least inform the jurors

14           what that is?

15   A    This is also, um, a reddish/brown stain that was

16           recovered by myself from the, uh, cargo area of the

17           RAV 4, and my item designation was A3.

18   Q    And -- and -- and where did you locate that on?

19           On where?

20   A    That was on the, um, door. The actual door that you

21           open of the cargo area. Right here.

22   Q    Would you correlate that with, um, Exhibit 149,

23           the photograph you have?

24   A    Yes. This is the same photograph that's on the

25           screen there and my sample was taken from this area

1 right here.

2 Q And did you perform preliminary blood tests for

3 that?

4 A Yes, I did.

5 Q And that stain proved positive for blood?

6 A Yes.

7 Q Now, I'd like to go back to, um, the previous

8 slide, and I'd like to talk about, um, Exhibit

9 153, now. I'm sorry. Would you look at -- If --

10 Would -- would -- would -- This is Exhibit 148?

11 Is the photograph; correct? And I'm looking

12 for -- And Exhibit 154?

13 A Yes.

14 Q Okay. And do those correlate? Can you correlate

15 those for the jury?

16 A Yes. Um, A4 is also a reddish/brown stain that I

17 took from the rear cargo area. And Exhibit 148 is a

18 photograph, um, and I took it from the metal -- this

19 metal piece right here along the -- the opening, um,

20 in the -- this area. Approximately this area here.

21 Q And did you perform DNA testing on each of these

22 four swabs that you took from the rear cargo area

23 of the RAV 4?

24 A Yes, I did.

25 Q Now, did you also have a standard DNA sample from

1 Teresa Halbach?

2 A Yes, I did.

3 ATTORNEY GAHN: Your Honor, I had, uh,  
4 spoken with Mr. Fremgen previously, and he has  
5 agreed that he will stipulate that in the year  
6 2002, a pap smear was taken from Teresa Halbach  
7 at the Bellin Hospital in Green Bay, Wisconsin,  
8 and that that pap smear was retrieved by law  
9 enforcement officers and taken to the Crime Lab  
10 to use as a standard.

11 THE COURT: Is that correct?

12 ATTORNEY FREMGEN: Yes, Judge.

13 THE COURT: All right.

14 Q (By Attorney Gahn) And can you just, uh -- What  
15 is a pap smear?

16 A A pap smear is a medical test where, uh, cells from  
17 the cervical area of a woman are collected and those  
18 are used to make, uh, medical diagnostics.

19 Q And is it okay to use a pap smear as a standard  
20 for DNA testing?

21 A Yes. Any nucleated cell from a particular person can  
22 be used as a standard. We normally use buccal cells  
23 because it's easy to collect and convenient. In this  
24 case, that wasn't, uh, available. So the, uh, pap  
25 smear -- the cells from the pap smear were perfectly

1 fine.

2 Q And did you develop a DNA profile from the pap  
3 smear of Teresa Halbach?

4 A Yes, I did.

5 Q And I'm going to ask you to look at this slide,  
6 and, uh, does this correctly display the DNA  
7 profile that you obtained from the pap smear of  
8 Teresa Halbach?

9 A Yes, it does.

10 Q And, again, would you explain a little bit about  
11 this to the jurors?

12 A Um, again, these are the 15 markers that we're  
13 looking at. You can see this is a little different  
14 from the last profiles because this is from a female.  
15 So there's only an X chromosome and not an XY. And,  
16 also, um, the types are quite different. Some of the  
17 types are the same, but if you take the entire  
18 profile in its entirety, um, it's quite different  
19 from the, uh, profiles that we just looked at.

20 Q And did you compare this profile from the pap  
21 smear of Teresa Halbach with the DNA profiles  
22 that you developed from the rear cargo area?  
23 Namely, the blood stains in A1, A2, A3, A4, as  
24 well as the DNA profile from the Pepsi can?

25 A Yes.

1 Q And I'm going to ask you to inform the jurors  
2 whether this slide correctly displays the DNA  
3 profile that you developed from those items?  
4 A Yes, it does.  
5 Q And did you compare the DNA profile from the  
6 blood stains in the rear cargo area of Teresa  
7 Halbach's car, and from the Pepsi can, with the  
8 pap smear of Teresa Halbach?  
9 A Yes, I did.  
10 Q And I'm going to ask if this slide correctly  
11 displays your findings?  
12 A Yes. And, again, you can see that the profile from  
13 the questioned evidence here, and the profile from  
14 Teresa Halbach, is consistent throughout all the 15  
15 markers.  
16 Q And do you have an opinion to a reasonable degree  
17 of scientific certainty whether Teresa Halbach is  
18 the source of the DNA from those blood stains in  
19 the rear of -- the cargo area of the RAV 4?  
20 A Yes, I do.  
21 Q And what is that opinion?  
22 A Uh, my opinion is that the profiles from the evidence  
23 samples, um, are consistent with Teresa Halbach and  
24 that she is the source of that DNA.  
25 Q And -- and, also, do you have an opinion whether

1 she's the source of the DNA that you found on  
2 your swabbing of the Wild Cherry Pepsi can?

3 A Yes, she is.

4 Q I'm going to put a -- a slide up now. Um, and  
5 I'm also going to be asking Mr. Kratz to bring  
6 you a photograph for you to identify. And what  
7 is the exhibit number on that?

8 A One-fifty.

9 Q One-fifty? And can you, um, describe -- What  
10 does that photograph show?

11 A This is a photograph of a -- a bone fragment with  
12 some, um, burned, charred tissue attached to it.

13 ATTORNEY GAHN: And, once again, Your  
14 Honor, um, I had spoken with Mr. Fremgen earlier,  
15 and, um, we do have this as a piece of charred  
16 remains that was found in the burn pit. Um,  
17 these charred remains are with the Calumet County  
18 Sheriff's Department, and Mr. Fremgen stated that  
19 we did not have to produce this item here in  
20 court today, and that the photograph would be  
21 fine for identification.

22 THE COURT: Mr. Fremgen, is that correct?

23 ATTORNEY FREMGEN: That's correct.

24 THE COURT: All right.

25 Q (By Attorney Gahn) And, again, would you



1 describe what this item -- Did you receive this  
2 item in the Crime Lab? From the Crime Lab?

3 A Yes, I did.

4 Q And what was it that you received? Please  
5 describe what this is?

6 A Um, this is a -- a bone fragment here with a piece  
7 of, um, charred tissue attached to it. When I  
8 sampled this, I took a portion of -- of the tissue  
9 that was, uh, least -- appeared to be least burned,  
10 uh, towards the bone and that's what I used for my  
11 examination.

12 Q And did you assign a Crime Lab item designation  
13 to this?

14 A Yes, I did.

15 Q And what was that?

16 A Item BZ.

17 Q And did you conduct DNA testing on this tissue  
18 portion of this burned bone fragment?

19 A Yes, I did.

20 Q And were you able to develop a DNA profile from  
21 this piece of charred remains?

22 A Yes, I was.

23 Q And I'm going to put a slide up and ask you to  
24 explain, uh -- Firstly, does this accurately  
25 display the findings of your DNA testing on these

1 charred remains?

2 A Yes, it does.

3 Q And would you explain to the jury what your  
4 findings were for the charred remains?

5 A Um, you can see that I tested for each of the 15  
6 markers that I've been talking about. But I did not  
7 get results, um, from all 15. The markers with  
8 numbers by them are the ones that I got results for.  
9 So there were seven markers that I actually got a  
10 type from. Um, and, again, I got a -- a gender  
11 marker telling me that it was from a female.

12 Q And is this what the scientists refer to as a  
13 partial profile?

14 A Yes.

15 Q Is it unusual to get a partial profile from a  
16 sample such as this?

17 A No, it's not.

18 Q Explain to the jurors why?

19 A Uh, this sample was -- obviously been compromised  
20 and, um, exposed to heat. Uh, there are a lot of  
21 things that will, uh, work to break down or degrade  
22 DNA, and heat is one of them. Um, and, basically,  
23 what it does is just chews up the DNA.

24 So on the markers that have larger  
25 fragments, uh, you're not going to get any

1 results in most cases. These are -- The D5, D13,  
2 D7, D3, those are all smaller markers, so the  
3 fragments are smaller, and so you have a better  
4 chance of getting, uh, results from those  
5 particular markers.

6 Q Now, the prior charts that we looked at, where  
7 you showed the profile of Teresa Halbach and the  
8 DNA profiles you developed from the blood in the  
9 rear cargo area of the RAV 4, those are what you  
10 would call complete or full profiles; correct?

11 A Yes.

12 Q And this, here, is what's called a partial  
13 profile?

14 A That's correct.

15 Q Now, for the complete profiles, I asked you a  
16 question whether Teresa Halbach was the source  
17 of, um, the blood in the rear cargo area of the  
18 RAV 4; correct?

19 A Correct.

20 Q And you were able to state, yes, Teresa Halbach  
21 was the source?

22 A Correct.

23 Q Can you say that Teresa Halbach is the source of  
24 this, uh, DNA profile that you found?

25 A No.

1 Q Now, you did compare it to Teresa Halbach's pap  
2 smear; correct?

3 A Yes, I did.

4 Q And does this show your results?

5 A Yes. And, again, all of the markers that I did get  
6 results for are -- are consistent with the types of  
7 Teresa.

8 Q Now, why can't you state that Teresa is the  
9 source of this profile?

10 A When we -- Anytime we develop a DNA profile, we do a  
11 statistic analysis. And the purpose of that is for  
12 us to det -- determine how common or how rare the  
13 entire profile is in the general population. So we  
14 have statistic numbers that reflect how common or how  
15 rare each one of these types is, each -- at each one  
16 of these markers is, within the population.

17 In order to get a -- a composite number  
18 that reflects the entire profile, we multiply  
19 these numbers together and that tells us how  
20 common or how rare the entire profile is in the  
21 population.

22 As a matter of laboratory policy,  
23 anything -- any profile that is rarer than three  
24 times the world's population, which would be six  
25 trillion, we, um, refer to that as a source

1 attribution, so we're able to say, any profile  
2 that's rarer than that is consistent, and that  
3 person is the source of that profile.

4 Now, because this was a partial profile,  
5 the numbers are not that high. Um, and that's  
6 why I could not attribute it to Teresa.

7 Q And this is a laboratory policy based upon world  
8 population?

9 A Correct.

10 Q Okay. However, were you able to, uh, generate a  
11 statistic to tell how rare or how common this  
12 profile would be in the general population?

13 A Yes, I was.

14 Q And what is that statistic?

15 A Um, one person in one billion in the Caucasian  
16 population. One person in two billion in the African  
17 American population, and, also, in the Southeastern  
18 Hispanic population. And one person in three billion  
19 in the Southwestern Hispanic population.

20 Q And what does that statistic mean? What does  
21 this mean?

22 A Uh, when we -- When we calculate these statistics, we  
23 use a database of individuals that's maintained by  
24 the FBI, and it's the same database that's used in  
25 most crime labs throughout the country. And each one

1 of those DNA types is assigned a specific frequency.  
2 It tells you how -- how often that occurs in the  
3 population.

4 So, in the first one, one person in one  
5 billion, I would expect to find that partial  
6 profile from the evidence sample. I would expect  
7 to find that if -- one time in one billion  
8 instances in the Caucasian population.

9 Q So it's a very rare statistic; correct?

10 A Correct.

11 Q Are there more than a billion people in the state  
12 of Wisconsin.

13 A I don't think so.

14 Q In any event, Teresa -- the charred remains that  
15 were found in the burn pit, um, those, uh,  
16 matched Teresa Halbach at a -- a number of  
17 genetic locations?

18 A Yes.

19 Q I believe there were seven genetic locations?

20 A Correct.

21 Q And that was a complete match; correct?

22 A Correct.

23 Q And I'm going to ask you now to look at one more  
24 exhibit -- uh, two more exhibits -- and that  
25 would be, um, Exhibit -- what has previously been

1 marked as Exhibit 113, and described as a bullet  
2 fragment that was found in the garage of Steven  
3 Avery. And can you identify that exhibit for us,  
4 please?

5 A Yes. Uh, this is a bull -- bullet fragment that I  
6 examined. Um, it's my item designation FL.

7 Q And when you received that bullet fragment, how  
8 did you process that?

9 A This was a very small bullet fragment. Um, I was  
10 interested in -- in trying to determine if I could,  
11 uh, find any DNA on the bullet fragment. I visually  
12 looked at it. There were no visual stains like blood  
13 or anything that I could see.

14 So I took the bullet fragment, itself,  
15 put it into a test tube, and washed the surface  
16 of it with, um, the reagents that we use to  
17 extract DNA. So, basically, I was trying to wash  
18 off all the DNA that was actually on the surface  
19 of the bullet fragment. And I took that washing,  
20 and that's what I did -- uh, that's what I  
21 processed for DNA.

22 Q And were you able to develop a DNA profile from  
23 that washing?

24 A Yes.

25 Q And does this slide correctly display the DNA

1           profile that you developed from Item FL, the  
2           bullet, which was found in Steven Avery's garage?

3   A       Yes, it does.

4   Q       And did you compare that DNA profile to the  
5           profile of Teresa Halbach that you developed from  
6           her pap smear?

7   A       Yes, I did.

8   Q       And does this slide adequately or correctly  
9           display your findings?

10   A       Yes, it does.

11   Q       And, um, do you have an opinion to a reasonable  
12           degree of scientific certainty whether Teresa  
13           Halbach is the source of the DNA that was found  
14           on the bullet, Item FL?

15   A       Yes, I do.

16   Q       And what is that opinion?

17   A       That the profile from the bullet fragment, FL, was  
18           consistent with Teresa and, um, she is the source of  
19           the DNA that was recovered from the bullet fragment.

20           ATTORNEY GAHN: At this time I would  
21           like to move into evidence Exhibits 141 through  
22           161? Is that correct? I believe?

23           THE COURT: Yes. Her CV is in -- Her CV is  
24           in at -- at 164.

25           ATTORNEY GAHN: And -- and Exhibit 164,



1           yes.

2                   THE COURT: Counsel, any objections?

3                   ATTORNEY FREMGEN: No.

4                   THE COURT: All right. Those exhibits are  
5           received.

6                   ATTORNEY GAHN: I have no further  
7           questions.

8                   THE COURT: Uh, let's take a break. We'll  
9           take a 15-minute break at this time, ladies and  
10          gentlemen. We'll be back in 15 minutes.

11                   (Recess had at 10:33 a.m.)

12                   (Reconvened at 11:01 a.m.)

13                   THE COURT: Mr. Fremgen, cross?

14                   ATTORNEY FREMGEN: Thank you, Judge.

15                   **CROSS-EXAMINATION**

16          BY ATTORNEY FREMGEN:

17          Q       Ms. Culhane, I'm not going to ask you anything  
18                   about your qualifications. I think they seem to  
19                   be fine. Seems that you have significant  
20                   experience in DNA matching, as well as, uh,  
21                   developing profiles. Fair to state?

22          A       Um-hm. Yes.

23          Q       Now, in this case, you also had to prepare a  
24                   profile of Brendan Dassey's DNA; correct?

25          A       Correct.

1 Q And suffice it to say, same procedure you went  
2 through with Attorney Gahn and how you, uh,  
3 developed Steven Avery's profile, as well as, to  
4 some extent, Teresa Halbach's profile, the same  
5 procedure you followed with Brendan Dassey?

6 A Correct.

7 Q And other members of the family as well; correct?

8 A Yes.

9 Q You had a number of profiles to develop?

10 A Yes.

11 Q When you spoke about matching with potential  
12 biological evidence, again, we're talking about  
13 sweat, for instance?

14 A Yes.

15 Q Possibly?

16 A Correct.

17 Q Saliva?

18 A Yes.

19 Q Um, semen?

20 A Correct.

21 Q And, obviously, blood?

22 A Yes.

23 Q And, at times, you mentioned there was no blood,  
24 yet able to develop a DNA profile, and that's  
25 from some other form of -- as you put it, some

1           other form of biological transfer from the  
2           person? A cell transfer, I think, you referred  
3           to it as?

4   A       Yes. Anytime, uh -- It would have been from some  
5           type of nucleated cell that was present on that item  
6           of evidence.

7   Q       Now, obviously, the same, uh, procedures were  
8           used, then, when you developed profile on, for  
9           instance, a swab that you took from the RAV 4 to  
10          match with a known person?

11   A       Correct.

12   Q       Do you recall seeing this item before?

13   A       Yes, I do.

14   Q       And -- and I believe that would be -- Was it your  
15          designation DD?

16   A       Yes.

17   Q       And I believe it's Exhibit -- The exhibit number  
18          is on there?

19   A       One twenty-nine.

20   Q       Okay. Did you have an opportunity to not just  
21          determine whether or not you could obtain a DNA  
22          or some sort of -- of profile from some source,  
23          you actually swabbed it yourself? The gun?

24   A       Yes, I did.

25   Q       Did you swab the trigger?

1 A Yes, I swabbed the -- the trigger area and the  
2 trigger guard here, and, also, the area around the  
3 barrel. The end of the barrel.

4 Q Now, specifically, as to the end of the barrel,  
5 were you looking, also, for blood on the end of  
6 the barrel?

7 A Yes.

8 Q Did you find any blood on the end of the barrel?

9 A No.

10 Q And you did that from first visually observing  
11 the end of the barrel?

12 A Yes.

13 Q And then did you do a -- a swab to determine if,  
14 possibly, it would react to something that would  
15 be positive for blood?

16 A Yes, I did.

17 Q And that was negative.

18 A Negative. Yes.

19 Q But that doesn't end your examination; correct?

20 A Correct.

21 Q You also did a separate swab to determine if,  
22 possibly, there's some other sort of fluid on the  
23 end of the barrel that might create a profile?  
24 DNA profile?

25 A Correct.

1 Q And so you did the same thing?

2 A Yes. I swabbed the barrel area and also this trigger

3 guard.

4 Q And unable to develop any sort of DNA from that

5 firearm?

6 A No, I did not develop a profile.

7 Q Okay. And, specifically, did you provide it --

8 any profile that matches Brendan Dassey; correct?

9 A Well, I didn't develop a profile at all.

10 Q At all?

11 A Yeah.

12 Q I'm going to have Attorney Edelstein put up on

13 the screen, using an ELMO, it's, uh, Exhibit No.

14 45. Can you see that from -- Oh, you have it on

15 that screen, too. Okay. So you can see Exhibit

16 45 on the screen?

17 A Yes.

18 Q And, again, does that -- that appears to be a

19 license plate; correct?

20 A Correct.

21 Q Do you recognize that license plate as something

22 that you looked at at the Crime Lab?

23 A Yes.

24 Q And, again, did you attempt to devel -- develop

25 some sort of a DNA profile, from something that

1           might be biological, transferred onto this plate?

2    A    Yes.  When I was examining this plate -- This is the  
3           same license number that I have in my notes.  Um, I  
4           was primarily looking -- There was no visible stains  
5           that were consistent with blood or anything like  
6           that.  So I was primarily looking for DNA that might  
7           have been transferred when someone touched it.

8                        So I, uh -- For my sample, I swabbed  
9           around the, um, edge -- excuse me -- uh, the  
10          edges, um, of the item, and -- with a cotton  
11          swab -- and that's what I extracted.

12   Q    And you were unable to develop any profile;  
13          correct?

14   A    Correct.

15   Q    I'm now going to have Attorney Edelstein put on  
16          the screen for us Exhibit 107.

17                       ATTORNEY FREMGEN:  Is there a way to put  
18          it in more focus or closer up?  Ray's the  
19          technologically, uh, limited.  There you go.  
20          Okay.

21   Q    (By Attorney Fremgen)  Do you see what -- Well,  
22          do -- You -- you see the picture, obviously, on  
23          the screen?

24   A    Yes.

25   Q    In that picture, there's something that says

1           Black Jack?

2    A    Correct.

3    Q    Have you seen that before?

4    A    Yes.

5    Q    And referred to as a creeper?

6    A    Yes.

7    Q    Correct? Okay. And you actually had an

8           opportunity to -- to attempt to extract some sort

9           of, again, biolog -- determine whether there was

10          any biological, uh, fluid or something on this

11          creeper that you might be able to develop a DNA

12          profile; correct?

13   A    Uh, in this instance -- On this item of evidence, I

14          was simply looking for the presence of blood,

15          apparent blood stains. And I examined it, and, um,

16          it was negative.

17   Q    And when you do that, again, you first did a

18          visual examination?

19   A    Yes.

20   Q    And then after that, since we're -- our eyes

21          aren't always perfect, you, again, took a swab

22          of -- of somewhere on the creeper, and used a --

23          a chemical to determine the existence, if

24          possible, of blood; correct?

25   A    Yes.

1 Q Did you swab in just one spot or did you try  
2 to --  
3 A I'll have to look at my notes to see exactly.  
4 Q That's fine.  
5 A Okay. Yes. In my notes, there were numerous  
6 brownish stains, um, that were on different areas on  
7 the creeper, and I, um, uh, checked them all for the  
8 presumptive test for blood, and they were all  
9 negative.  
10 Q In your -- in your notes, or in -- in your  
11 report, you indicate two, uh, identification  
12 numbers for the creeper? A GG and GH?  
13 A Correct.  
14 Q Was it two separate pieces?  
15 A Yes. It's two different creepers.  
16 Q Two different creepers?  
17 A Yes.  
18 Q So on both, the -- neither one noted the  
19 existence of any blood?  
20 A Correct.  
21 Q Now, I'm going to have Attorney Edelstein place  
22 on the ELMO, this is exhibit -- This is  
23 photograph, I believe it's Exhibit No. 82.  
24 State's Exhibit 82. Do you recall examining a  
25 wooden headboard at the Crime Lab?



1 A Yes.

2 Q Does it appear to be the wooden headboard on this  
3 picture, Exhibit No. 82?

4 A Yes, it does.

5 Q And -- And it wasn't just the headboard you  
6 examined; correct?

7 A Um, I examined -- Some swabs were taken by someone  
8 else, and those were submitted. I examined those,  
9 and then I, in addition to that, examined the  
10 headboard.

11 Q Did you actually, again, start with determination  
12 of whether there was blood on the headboard?

13 A Yes. I did a visual examination to see if any  
14 stains, uh, were consistent with the appearance of  
15 blood, and then -- there were different types of  
16 various stains, um, which I checked with the  
17 presumptive test, and they were all negative.

18 Q So no blood on the headboard?

19 A Correct.

20 Q And on the swabs of the headboard, or spindles,  
21 that you -- that someone else had, uh, taken, but  
22 you tested?

23 A Right.

24 Q No blood?

25 A Correct.

1 Q Were you able to develop any sort of DNA -- DNA  
2 profile from the headboard or those swabs?

3 A Uh, no. I -- Um, the headboard, itself, I didn't  
4 actually take any swabs myself, because there was  
5 nothing that looked like blood. Um, the swabs from  
6 the headboard I will have to check and see if I  
7 actually extracted those. No. Those were not  
8 extracted. They were all negative, um, for any  
9 blood. So I didn't go any further with them.

10 Q Now, is there a reason why you didn't want to  
11 determine if there was any sort of biological  
12 fluid that might provide you with a profile? A  
13 DNA profile?

14 A Well, at this point I was -- I was simply focusing on  
15 the blood. Possibility of any blood. So, no, I did  
16 not. I made the decision not to go any further with  
17 that.

18 Q But on other items, you went beyond determination  
19 of blood to determine if there was some sort of  
20 other biological sample that might be able to  
21 provide you with a DNA profile; correct?

22 A Correct. And in most of those cases it was items  
23 that were thought to have been touched by someone,  
24 um, and, again, in this -- in this particular item of  
25 evidence, uh, we were focusing on the presence or

1           absence of blood.

2   Q   Did you, yourself, do the swabs of the RAV 4?

3   A   Yes.

4   Q   And that would be interior and exterior?

5   A   Yes. All the swabs except -- Did you mean -- Do you

6       mean did I collect them?

7   Q   Yes.

8   A   Yes. I collected all the swabs that I examined from

9       the RAV 4, except for the hood latch, um, which was

10      collected -- swabbed by someone else, and there were

11      also some swabs from a battery cable and some

12      interior door handles that were collected by someone

13      else.

14   Q   But regardless of who collected it, you did the

15      testing on it?

16   A   Oh, yes. Yes, I did.

17   Q   Okay. Now, when you actually collected -- Let me

18      start there first. Did you collect, um, a swab

19      from obvious places that a person might use to

20      open up the vehicle? Like, for instance, a door

21      handle?

22   A   Again, I -- I didn't swab those areas. So someone

23      else swabbed those areas. But I'm assuming that's

24      what they did, is take them from obvious areas where

25      someone would have touched.

1 Q Did each swab indicate where they came from on  
2 the vehicle?

3 A Yes.

4 Q And do you recall whether there were swabs of the  
5 cargo door handle?

6 A The back. The very back. There was a -- I did take  
7 a swab of, um -- and I believe it was my Item A23,  
8 because, um, I did -- analyst was processing that  
9 area, and saw something, and I did swab that area,  
10 and I did extract it.

11 Q Okay. You -- You did extract a sample?

12 A Yes.

13 Q And that was human or nonhuman blood?

14 A It was positive, uh, for blood, because the  
15 presumptive test was positive, but it was  
16 inconclusive because I didn't -- the profile was too  
17 partial. I could not, uh, make any kind of  
18 conclusion. So that was inconclusive.

19 Q So you were unable, then, to then go further and  
20 determine if that had any sort of a DNA profile,  
21 whether it be a partial profile or a full pro --  
22 profile?

23 A I did get a partial profile, but it was inconclusive  
24 because, uh, sometimes -- if a partial profile only  
25 shows up one or two, uh, types, then we usually

1 report that as inconclusive, because that's not  
2 really enough genetic information, um, to report  
3 that. So, in this case, um, it was inconclusive.

4 Q So on direct, for example, you had been asked by  
5 Attorney Gahn, about partial profiling --

6 A Yes.

7 Q -- or a partial profile. Excuse me.

8 A Yes.

9 Q And, uh, for instance, I believe it was one where  
10 there were seven characteristics --

11 A Yes.

12 Q -- of 15; is that right?

13 A Yes.

14 Q And you were able to come up with a partial  
15 profile, but here you're saying it was probably  
16 more like three characteristics?

17 A Yes. Right.

18 Q So because it was so little, you weren't able to  
19 come up with something that you can even give a  
20 partial profile to?

21 A Correct.

22 Q Okay. Now -- And -- and -- and the items that  
23 you were able to obtain a DNA profile within the  
24 RAV 4, were you able to match any of that DNA  
25 profile in comparison to Brendan Dassey's

1           profile?

2    A    No.  None of the samples that I, uh, were able to

3           develop a profile were consistent with his profile.

4    Q    But they were consistent with Steven Avery?

5    A    And Teresa Halbach.

6    Q    And Teresa Halbach?

7    A    Yes.

8    Q    So you were able to match it with somebody?

9    A    Correct.

10   Q    Just not Brendan Dassey?

11   A    That's correct.

12   Q    I believe you also looked at a jacket and a pair

13           of jeans; correct?

14   A    Yes, I did.

15   Q    I believe that was your designation IJ and IK?

16   A    That's correct.

17   Q    Did it indicate who those jeans were from?

18   A    Yes.  I was told they were -- they belonged to

19           Brendan Dassey.

20   Q    And were you able to determine whether there was

21           any blood on those jeans?

22   A    Yes.  They were both negative for blood.

23   Q    And the jacket as well?

24   A    Yes.

25   Q    And, again, did you go any further than to

1           determine any blood and determine some sort of  
2           other DNA that might be, uh, available from the  
3           jeans or the jacket?

4    A     No.

5    Q     Just the blood?

6    A     Correct.

7    Q     Now, did -- Again, was that your decision? Or  
8           did someone else tell you, we're just looking for  
9           blood?

10   A     Well, in --in -- It depends on the type of case. In  
11          most cases, if we're looking for something like  
12          blood, then we focus on blood. Um, a lot of times  
13          there are lots of different types of stains on  
14          clothing or bedding or whatever, um, and some of  
15          those biological materials we have presumptive tests  
16          for and some we don't. We don't test every stain  
17          that we encounter. Um, and in this case, like I  
18          said, I was focused on whether there was blood there  
19          or not. And it was negative.

20   Q     So no blood on Brendan's jeans?

21   A     Correct.

22   Q     Or on his jacket?

23   A     Correct.

24   Q     Speaking of bedding, did you have an opportunity  
25          to review any bedding that was provided to you by

1 law enforcement or other members of the Crime  
2 Lab?

3 A No.

4 Q Were you aware that bedding had been seized?

5 A I don't believe so.

6 Q So no one told you about the bedding?

7 A I don't recall, no.

8 Q And if there was any possible biological samples  
9 from the bedding, we won't know about it; right?  
10 Unless you get to look at it to determine if  
11 there's an extractable sample?

12 A Correct.

13 Q Were you provided with any shell casings to  
14 determine any sort of, uh -- whether there was  
15 any sort of biological sample that you could  
16 provide a -- or develop a profile?

17 A No, I did not look at the shell casings. That's --  
18 No, I did not.

19 Q Now, you said you didn't look at the shell  
20 casings? You were aware there were shell  
21 casings?

22 A I believe there was some submitted, but they wouldn't  
23 have come to me, so I don't really have any knowledge  
24 of them.

25 Q So, again, if they don't give them to you, you



1           can't --

2    A    Correct.

3    Q    -- tell us if there's any sort of DNA that you

4           can extract from those shell casings; is that

5           correct?

6    A    That's correct.

7    Q    Did you have an opportunity to look at a large

8           car hood? I think it's referred to as a Rambler

9           hood?

10   A    No.

11   Q    Any cardboard boxes provided to you to determine

12           whether there might be some blood or extractable

13           DNA?

14   A    No.

15   Q    Were you aware of any?

16   A    No. I don't recall.

17   Q    Okay. I believe you may have already testified

18           as to Exhibit 211. Do you recall this item?

19   A    Yes.

20   Q    The key. Uh, you had an opportunity, as you

21           testified, to develop a DNA profile from, uh --

22           from two sub -- on -- on two subjects from the

23           key; correct?

24   A    Um, I'm sorry. Could you repeat that?

25   Q    Sure. That was kind of confusing. You had an

1 opportunity to review the key; correct?

2 A Yes.

3 Q And from that key you were able to, um, obtain

4 some trace biological sample?

5 A Yes.

6 Q And from that you were able to develop a DNA

7 profile?

8 A Correct.

9 Q And I believe your testimony was that it

10 reflected that of Steven Avery?

11 A Yes.

12 Q Was there also a mix, including that of Teresa

13 Halbach, on the key?

14 A No.

15 Q Just Steven Avery?

16 A Correct.

17 Q Was Brendan Dassey's DNA on that key?

18 A No.

19 Q Was there any blood on the key?

20 A Uh, there was no visually, uh -- anything that looked

21 like blood. Uh, the swabbings that I took from the

22 key were also -- there was nothing consistent with

23 the appearance of blood. I did not do any

24 preliminary testing for blood on that.

25 Q Okay. And if I may just ask, why not?

1 A Well, because in a sample like this, when something  
2 is that small, I really, um -- the important part in  
3 most cases is whose DNA is there. And so I made the  
4 decision that I was probably working with a limited  
5 amount of sample, and I wasn't going to, uh, waste  
6 any of that on a preliminary result that really  
7 didn't give us very much information.

8 Q I'm going to show you what's been marked as  
9 Exhibit 92. And do you recognize this exhibit?

10 A Yes.

11 Q And that, I believe, has your identification  
12 number CJ2?

13 A Correct.

14 Q And that's a pair of leg irons you were asked to  
15 test to see if you could find any extractable  
16 DNA?

17 A Correct.

18 Q And were you able to do so?

19 A Yes.

20 Q And whose DNA were you able to extract from that?

21 A Uh, when I sampled this, I swabbed the inside  
22 surface, um, of the round part, and it was a mixture  
23 of DNA from more than one individual.

24 Q Were you able to make any match with any of  
25 the -- the known samples you had before you?

1 A Um, Steven Avery, based on his, uh, standard sample,  
2 he could be included in, uh, that mixture of DNA.  
3 Q And Teresa Halbach was excluded?  
4 A Correct.  
5 Q As well as Brendan Dassey?  
6 A Yes.  
7 Q So he was, specifically, excluded from that?  
8 A Correct.  
9 Q And, again, I'm going to show you what's been  
10 marked as Exhibit 9 -- 91. Thank you.  
11 A Um-hm.  
12 Q And I believe that has -- Well, first of all, do  
13 you recognize that item?  
14 A Yes, I do.  
15 Q And that has identification number CJ1 on it?  
16 A Yes.  
17 Q And that's your identification number from the  
18 Crime Lab?  
19 A Yes.  
20 Q And you had an opportunity, again, to  
21 determine -- or to swab that and determine if  
22 there was any sort of extractable DNA?  
23 A That's correct. I swabbed the inside surface just  
24 like I did with the other cuffs, um, and I got a  
25 mixture of DNA from more than one individual.

1 Q Did you have the same conclusions with CJ1 that  
2 you had with CJ2?  
3 A Yes.  
4 Q And that would be, you could include Steven Avery  
5 as possible match to the DNA?  
6 A Yes.  
7 Q And exclude Brendan Dassey?  
8 A Correct.  
9 Q And Teresa Halbach was also not -- or -- not  
10 included in that?  
11 A She was also excluded.  
12 Q Excluded?  
13 A Correct.  
14 Q Did you review any other -- Excuse me. Did you  
15 review any other leg irons such as these?  
16 A No.  
17 Q Any other handcuffs?  
18 A No.  
19 Q Just those two sets?  
20 A Correct.  
21 Q So if there were any biological samples on these,  
22 we wouldn't know, because you didn't have a  
23 chance to look at them and test them; correct?  
24 A Correct.  
25 Q Were you able to -- or -- I'm sorry. Were you

1           asked to obtain any DNA profile from any hair  
2           samples?

3    A    No.

4    Q    Would it have been your duties at the Crime Lab,  
5           if, for say, a vacuum were seized, to go through  
6           it and try to determine if there were any usable  
7           hair samples?

8    A    Uh, yes.  In -- in a hair sample, really, the only  
9           thing that you're looking at is going to be the root  
10          portion of a hair.  So I would, uh -- To see if hairs  
11          were suitable for DNA, they would have to contain a  
12          root portion.

13   Q    Would someone else first go through it to  
14          determine if that's possible before they send it  
15          to you?

16   A    No, I would do that.

17   Q    Okay.  And you don't recall, at anytime in this  
18          investigation, they asked you to go through  
19          any -- excuse me -- hair samples that might come  
20          from, say, for instance, a vacuum?

21   A    No.

22   Q    You had testified previously that you had  
23          reviewed a -- a -- a bullet fragment?  I believe  
24          it was your identification FL?

25   A    Correct.

1 Q There was also a second bullet -- bullet  
2 fragment; correct?

3 A Yes.

4 Q And you also had an opportunity to review that?

5 A Yes.

6 Q And that was, I believe, your designation FK?

7 A Yes.

8 Q Were you able to make any determination of  
9 whether -- Well, first of all, were you able to  
10 determine if there was blood on FK?

11 A Um, again, I treated that exactly like I did FL.  
12 There was no visual, uh, indication of blood, so I  
13 did not, um, do any preliminary test on anything.  
14 Um, I simply washed that fragment -- bullet fragment,  
15 as well, and treated it just like FL.

16 Q And were you able to extract some -- any sort of  
17 a DNA sample for purposes com -- of a comparison?

18 A No, I was not able to develop a profile.

19 Q Now, you weren't the actual technician, or the  
20 crime, uh, scene person, who was at the Steven  
21 Avery trailer swabbing potential stains, etc.;  
22 correct?

23 A That's correct. Excuse me.

24 Q Did you observe photographs while -- of items  
25 that had been -- photographs of the trailer or

1 items that they suspected might be, um, blood or  
2 some other sort of biological sample?

3 A No, I don't believe so.

4 Q So when you would get a swab, for instance, it  
5 would just say where it came from?

6 A Yes.

7 Q And you recall that there had been some swabs of  
8 stains of suspected blood from Steven Avery's --  
9 Avery's bathroom floor, vanity, and sink?

10 A Yes.

11 Q And you had an opportunity to test all those  
12 stains; correct?

13 A Yes.

14 Q And you were able to -- Well -- well, first of  
15 all, it was -- Was it positive for blood?

16 A Um, I tested, um, several different swabs from those  
17 areas. I tested, um, three from the vanity, one from  
18 a toilet seat, and one from a sink. Um, one of those  
19 swabs from the vanity was positive for blood, and one  
20 from the sink was positive for blood.

21 Q And you were able, then, to -- to develop a DNA  
22 profile of that blood sample? Or that --

23 A Yes. Yes.

24 Q Which one?

25 A Both of those samples, um -- Oh, I'm sorry. One of



1           those samples from the sink was consistent with  
2           Steven Avery. The other, I did not develop a  
3           profile.

4   Q    Okay. None were consistent with Teresa Halbach?

5   A    Correct.

6   Q    And none were consistent with Brendan Dassey?

7   A    That's correct.

8   Q    Do you recall, again, having the opportunity to  
9           test a swab of what appeared to be, or may have  
10          been labeled as, a suspected blood found --  
11          suspected blood found by the molding of the  
12          bathroom or bedroom door?

13   A    Yes.

14   Q    And, again, you followed the same procedure you  
15          just explained?

16   A    Yes.

17   Q    Were you able to test it positive for blood?

18   A    That's correct.

19   Q    And, again, were you able to develop a profile as  
20          to the DNA of that blood?

21   A    Yes.

22   Q    And that DNA was?

23   A    Consistent with Steven Avery.

24   Q    And, again, excluding Teresa Halbach?

25   A    Yes.

1 Q And excluding Brendan Dassey?

2 A Yes.

3 Q Some items were sent to the Crime Lab? Number of

4 knives. Were you able to, um -- Did you see

5 those knives?

6 A Yes. Excuse me. Yes.

7 Q And -- and, again, did you go through the same

8 process to make a visual ob -- observation to

9 determine if there was any blood on the knives?

10 A Yes.

11 Q Um, did you also do the same testing you

12 explained earlier about determining if there was

13 positive for -- for blood by using a -- a -- a

14 swab?

15 A On some of the knives, yes. I did -- uh, if there

16 was nothing visual to look at, no visual-type stain,

17 then I just did random swabbings, um, on the blade

18 portion to test for blood.

19 Q Did you, also, then, test, thereafter, to

20 determine if there was anything that you could

21 extract from it that would develop into a DNA

22 profile?

23 A No.

24 Q And why wouldn't -- Why didn't you decide to go

25 that far?

1 A Well, because, again, um, in a lot of the -- a lot of  
2 cases, especially with a case of this magnitude, we  
3 have to make decisions along the way. Um, what  
4 samples to take forward and what -- and when to, um,  
5 stop. And in this case, I was focused on if it was  
6 blood. It was not, so I chose to stop there.

7 Q At anytime do you recall independently, or if you  
8 need to review your notes, any item that was  
9 positive for some sort of a extractable fluid,  
10 such as blood, sweat, saliva, that in -- under  
11 comparison, matched with Brendan Dassey?

12 A No.

13 Q The answer is, there weren't any?

14 A No. There were -- Of all of the samples that I  
15 extracted evidence samples and developed a profile  
16 were -- from, none were consistent with Brendan  
17 Dassey.

18 Q Thank you.

19 ATTORNEY FREMGEN: Nothing else.

20 THE COURT: Any redirect?

21 ATTORNEY GAHN: Yes, Your Honor. Few --

22 THE COURT: Go ahead.

23 ATTORNEY GAHN: -- questions.

24 **REDIRECT EXAMINATION**

25 BY ATTORNEY GAHN:

1 Q Ms. Culhane, do you know how many total items of  
2 evidence, approximately, the Madison Crime Lab  
3 received in this case from law enforcement?  
4 A I believe there was a -- about 350 submissions.  
5 Q And that was just in this one case?  
6 A Correct.  
7 Q Is that the largest number of submissions that  
8 Crime Lab has ever received?  
9 A I believe so. Yes.  
10 Q And how many of those submissions -- Do you know  
11 how many of them came to your unit? The DNA  
12 unit?  
13 A About 180.  
14 Q So law enforcement submitted about 180 samples  
15 for potential DNA testing?  
16 A Yes.  
17 Q Did you examine in some form or another all of  
18 those submissions?  
19 A Yes.  
20 Q Would you explain to the jury, what is the range  
21 of tests or examinations you do for an item of  
22 evidence?  
23 A Well, again, a lot depends on the type of case it is  
24 and the request that -- that may be made.  
25 Um, in a lot of these particular items

1 of evidence, I was looking for a transfer of  
2 blood. Okay? Blood was found in the RAV 4. Um,  
3 this was a homicide case. So, obviously, blood  
4 would be a potential -- a very important  
5 potential biological material. So I was focusing  
6 on the presence or absence of blood in most of  
7 these, um, pieces of evidence.

8           However, in some cases, it was more --  
9 the information or the question we were trying to  
10 answer was more, who touched this item or who may  
11 have touched this item? Um, and in those  
12 instances, blood wasn't necessarily the -- the  
13 primary focus. The primary focus was, was there  
14 DNA on that -- that evidence and who may it have  
15 belonged to.

16           So those kind of decisions are made  
17 routinely by all analysts as you go through the  
18 evidence, based on what the piece of evidence is,  
19 what type of case it is, and what information you  
20 may have at the time.

21           And, of course, during the course of  
22 the -- the investigation, a request can be made  
23 from anyone to go back and look at other items of  
24 evidence or, um, examine for different biological  
25 fluids, or whatever. At some point a request can

1           always be made, uh, to go back.

2       Q     Of those 180 samples that were submitted to the  
3           DNA analysis unit, do you know about how many  
4           tested positive for blood?

5       A     Forty-one.

6       Q     And did I ask you, this 180 that were submitted  
7           to you, is that the largest amount of submissions  
8           for one case that your unit has ever received?

9       A     It's the most I've ever received. I'm -- I'm not  
10          sure about the unit.

11      Q     But you said that 41 tested positive for blood?

12      A     Correct.

13      Q     And then did you carry each of those on for DNA  
14          testing further?

15      A     I attempted, uh, some type of further testing on  
16          them. In some cases, the -- even though the test may  
17          indicate there's -- You know, if -- if the  
18          preliminary test may be positive for blood, when we  
19          finally extract it, part of our procedure in the  
20          extraction is to quantitate or to find out how much  
21          DNA you actually have in your samples.

22                   And in some of these samples, the level  
23          of DNA, or the amount of DNA there, was below the  
24          limits of detection for our system. In other  
25          words, there wasn't enough there to go any

1 further with.

2 Q And even if there -- Let's say there -- your  
3 system can say, well, there is enough to go  
4 forward, and you do go forward with other steps  
5 of the tests, are there other limitations that  
6 you still may not develop a profile?

7 A In some cases, it may depend on the sample. If  
8 there's, uh, degradation, if there is, um, uh -- You  
9 may have -- Your quantitation part of the -- part of  
10 the procedure may tell you you have enough DNA, but  
11 when you actually amplify or you try to make copies  
12 of those, uh, target portions of DNA, um, you may --  
13 just may not develop a profile. And in that case,  
14 um, because of the condition of the sample, or  
15 whatever, there's just no profile there to be  
16 developed.

17 Q So as opposed to what we may see on *CSI*, and *Law*  
18 *and Order*, and other shows, there are detection  
19 limits built into the system, itself. Is that  
20 fair to say?

21 A Yes, there are.

22 Q And I want to talk a little bit about the  
23 different samples that have come up now. You  
24 found complete DNA profiles from blood swabbings  
25 in the car; correct?

1 A Yes.

2 Q You found Steven Avery's from blood?

3 A Correct.

4 Q You found Teresa Halbach's from considerable

5 blood stains in the rear cargo area; correct?

6 A Yes.

7 Q And you could carry the system through to get a

8 complete, full DNA profile?

9 A Yes.

10 Q Now, we talked a little bit, or I think defense

11 counsel has asked about, um, what's referred to

12 as touch DNA?

13 A Yes.

14 Q Understand what I'm talking about? Or what we're

15 talking about when you --

16 A Yes.

17 Q -- say touch DNA?

18 A Yes.

19 Q Could you talk about the limitations or the

20 sensitivity of the system, and the differences

21 between having a blood standard and what you

22 think may be touch DNA? Could you explain that

23 to them?

24 A Most of the time when you have a blood sample, you

25 have a -- a -- a large, large amount of DNA to work



1 with. Our systems are very sensitive, um, and we  
2 get -- we can get very good results on most samples.  
3 However, uh, there is a limitation to the system.

4 When you're talking about a blood  
5 sample, you're talking about a lot of cells, in  
6 most cases, are present in that -- in that  
7 sample. If you have enough blood to see a  
8 reddish/brown stain, you've got a lot of cells.

9 When you're talking about a touched  
10 item, you're not necessarily, um, targeting a  
11 specific stain. If I were to touch this, um, all  
12 I can do is swab the area that I touched, and  
13 what I'm looking for is a transfer of epithelial  
14 or skin cells that may have been transferred from  
15 my hand to the item.

16 Um, so it's not quite the same thing as  
17 actually looking at a -- at a blood or a semen  
18 stain where there's plenty -- in most cases,  
19 plenty of DNA, um, to sample. When you're  
20 looking at a touched item, you're looking at very  
21 small amounts of DNA.

22 And, also, if you're looking at a  
23 touched item that, um, is an item that could have  
24 been touched by more than one individual, in some  
25 cases you're going to get mixtures of DNA. Some

1 cases you won't. Some cases you're going to get  
2 DNA from the last person who touched it.

3 A lot of that depends on the person,  
4 themselves. Most of us, when we touch items of  
5 evidence, we leave, um, some of our DNA behind.  
6 but some people leave more than others. Some  
7 people naturally shed more cells than others. So  
8 if you're a person who sheds a lot of cells, when  
9 you touch something, you are probably going to  
10 leave behind more DNA than someone who does not  
11 naturally shed that many cells.

12 So when we're looking at touched items,  
13 all of these variables and all these factors come  
14 into play, and all of this determines whether  
15 you're going to get a usable profile from a  
16 sample or not.

17 Q And when you talk about someone being a good  
18 shedder or a poor shedder, does the surface  
19 that's touched have any impact on whether you'll  
20 find a -- sufficient DNA to develop a profile?

21 A Yes. If you're touching something rough, uh, like a  
22 piece of wood, maybe, or, um, I don't know, a rough  
23 surface, you're probably going to leave more cells  
24 than if you're touching a smooth surface, probably.  
25 And, again, these are generalizations. These are not

1 rules, and these are not always exactly the same.

2 Um, smooth surfaces, sometimes there's  
3 not as much, uh, DNA left behind, but, again,  
4 that's not to say that you can't get a profile  
5 from a smooth surface. They're just  
6 generalizations.

7 Q An example would be -- And I believe Mr. Fremgen  
8 handed you the .22 caliber rifle; correct?

9 A Yes.

10 Q And you swabbed the barrel? Well, you looked for  
11 blood and did not find any; correct?

12 A Yes.

13 Q And then you swabbed the trigger guard?

14 A Yes.

15 Q But, according to your notes, as I recall them,  
16 you developed some DNA; correct? Some DNA  
17 markers?

18 A I -- Yes. I developed one marker.

19 Q And I think you referred to it as res -- uh,  
20 finding some trace DNA being present?

21 A Correct.

22 Q So, if there, is it a limitation of the system to  
23 develop the full profile? Or could it be that  
24 whoever touched it just did not leave enough or  
25 the surface wasn't sufficient to gather enough?

1 A It's probably a combination of all three. I --  
2 There's no way to tell exactly why. Um, the bottom  
3 line is the person who touched it may not have shed  
4 enough DNA, um, the DNA, itself, may be degraded, not  
5 of -- of good enough quality to get a full profile.  
6 So it's probably a combination of all those factors.

7 Q And that would be the same for license plates?  
8 The same factors would, uh, determine whether DNA  
9 was left on license plates if they were touched  
10 by someone?

11 A Yes, that's correct.

12 Q And that, of course, is also going to be assuming  
13 someone's not wearing gloves, or using something  
14 to put in between the item and their hands, or  
15 whatever?

16 A Right. I'm -- I'm making the assumption that you're  
17 actually touching it with your skin. Your bare skin.

18 Q And, um, Mr. Fremgen asked about the key. And  
19 you found Steven Avery's profile on that key;  
20 correct?

21 A Yes.

22 Q Have there been any studies done, or any  
23 literature that talks about this, um, somewhat --  
24 I think you stated that you generally will find  
25 the profile of the last person who touched it; is

1           that correct? Did you state that?

2    A    Yes.

3    Q    Could you explain that to the jurors more?

4    A    Well, again, there have been studies done about, uh,  
5           transfer and -- and how much -- how much you have to  
6           handle something, um, what -- what factors are  
7           involved in transferring DNA by touched items. And,  
8           again, these are not -- these are generalizations.

9                   And in a lot of cases it has been found  
10          that transfer of DNA happens instantaneously, um,  
11          and it's usually either the last person that  
12          touched the item or you're going to get a mixture  
13          of DNA. And, again, this is simply a  
14          generalization. Um, you may get mixtures of DNA  
15          from several different people who have touched  
16          it, or you may just get a single source DNA.

17   Q    And I believe, also, Mr. Fremgen asked you  
18          whether there was any blood on the pants of  
19          Brendan Dassey that were submitted. Do you  
20          remember that?

21   A    Yes.

22   Q    And I believe your -- And what -- what was your  
23          answer to that question?

24   A    There was no blood found.

25   Q    Um, do you recall what you put in your notes when

1           you examined the pants of Brendan Dassey?

2   A       Uh, yes, I can refer to those notes.  Um, in my notes

3           I describe the size, um, what brand they were.  Um,

4           my notes read that they're fairly clean.  Large areas

5           of whitish stain.  Looks like staining from bleach.

6           No stains consistent with the appearance of blood.

7           There was one small brown stain on the leg of the

8           jeans, and that was negative for blood.

9   Q       I've put up what has been previously marked as

10           Exhibit 54, and are these the jeans of, uh,

11           Brendan Dassey, do you recall, that you examined?

12   A       I believe so.

13   Q       And you note in your notes that there appear to

14           be bleach stains; correct?

15   A       Yes.

16   Q       And what, um -- What does bleach do to DNA?

17   A       Um, bleach, basically, chews up DNA and destroys it.

18           We use bleach in the laboratory, a five percent

19           solution of bleach, to clean our bench tops, to clean

20           all of our scissors and forceps, um, to make sure

21           that we don't have any DNA that's -- that's left on

22           our -- our bench tops, uh, or pipets, or any of the

23           instrumentation that we use.

24   Q       And, I'm sorry, you use bleach to clean your

25           instruments, you stated?

1 A Yes.

2 Q And the reason being because it, basically, kills  
3 the DNA?

4 A Yes.

5 Q And, um, if these -- If pants have been washed a  
6 number of times or, uh -- what is that going to  
7 do to potential DNA if you've had a number of  
8 washings of pants?

9 A Well, in most cases, DNA is -- is -- if it's going --  
10 if it's in a -- a material like blood, or semen, or a  
11 biological fluid, it's going to be soluble in water.  
12 So the more times you wash it, uh, depending on how  
13 thorough you wash it, what type of -- you know,  
14 whether you wash it with bleach, whether you wash  
15 it -- what type of detergent you use, um, eventually  
16 it's going to destroy the DNA, or at least wash it  
17 from the garment where we would not be able to detect  
18 it.

19 Q And so cleaning materials, like bleach, or wiping  
20 surfaces clean, that all, also, would have an  
21 impact on whether you will find DNA on a  
22 particular item to test?

23 A Yes.

24 Q And is there anything in the literature that, uh,  
25 discusses what the absence of DNA at a crime

1 scene means?

2 A Um, most of the references that you see in the  
3 literature, the absence of DNA's, basically,  
4 inconclusive. The presence of DNA, obviously, uh,  
5 point to some sort of physical contact.

6 Uh, the absence of DNA, because there's  
7 so many variables, it either -- there was no  
8 contact, it wasn't there in the first place, or  
9 it's been destroyed by some environmental factor,  
10 or it's just in a level that's too low to detect.  
11 So, basically, the absence is an inconclusive,  
12 uh, conclusion.

13 Q And all the other variables kick in, too, whether  
14 someone's a good shedder or bad shedder; correct?

15 A Yes. Correct.

16 Q The surface area that perhaps the biological  
17 substance is left upon; correct?

18 A Yes.

19 Q Whether someone's cleaned it up or not?

20 A Correct.

21 Q So the absence of DNA at a crime scene does not  
22 mean someone was not there?

23 A Well, the absence just means that there's no DNA that  
24 we can detect.

25 Q Thank you. That's all I have.



1 THE COURT: Any recross?

2 ATTORNEY FREMGEN: A few, Judge.

3 **RECROSS-EXAMINATION**

4 BY ATTORNEY FREMGEN:

5 Q Uh, one of the comments, I think, Mr. Gahn was  
6 asking was about blood and comment about touching  
7 items versus, um, a blood stain, for instance.  
8 It's easier to see blood; correct?

9 A Yes.

10 Q Would you agree it's easier to develop DNA  
11 profile from blood than from possibly a touched  
12 transfer of DNA?

13 A Well, it depends on how much blood is there. But if  
14 you have a -- a visible blood stain, a fairly visible  
15 blood stain, with a lot of material to work with, um,  
16 you'll probably be able easily to develop a DNA  
17 profile. It's -- it's hard to compare the two,  
18 because there's no visual, um, measure between the  
19 two. There may be a touched item that you have with  
20 lots and lots of DNA on it. There may not. But you  
21 can't really see that. There also may be touched  
22 items with very little DNA that you can't really see.

23 Q One you can see you think you could more easily  
24 extract DNA from something that you can't see?

25 A Um, I suppose I would agree with that.

1 Q Well, one of the comments you made on redirect  
2 was there are more cells available in a blood --  
3 A Well, if you have a fairly large blood stain, again,  
4 you're talking about a -- a -- I was referring to the  
5 stains, primarily, that I recovered from the RAV 4.  
6 If you have a very light blood stain, and you don't  
7 have very much -- I mean, it's a very weak blood  
8 stain -- stain, you may not have that many cells in  
9 that as well.

10 Q But the fact that -- you just, I think, mentioned  
11 it -- the fact that it may be -- it may not be  
12 blood, doesn't mean you can't extract the DNA  
13 sample from that item? It just depends on  
14 whether or not the -- the -- you know, whether or  
15 not there was a transfer of some sort of  
16 biological fluid or cell from a touch, for  
17 instance, that you can actually be able to, uh,  
18 extract and develop into a profile?

19 A Correct.

20 Q Okay. So, for instance, you had mentioned the  
21 bullet fragment FL. You weren't able to discern,  
22 um, blood on the bullet?

23 A Not visually, no.

24 Q Visually.

25 A Right.

1 Q And -- But you were able -- you said you -- I  
2 think you said you washed the bullet?

3 A Yes.

4 Q And able to extract DNA from that, that matched  
5 Teresa Halbach?

6 A Correct.

7 Q You tried the same with the bullet FK, and unable  
8 to do so?

9 A Correct.

10 Q And that would be the same with such things as  
11 shell casings, for instance? You could probably  
12 wash those to extract, potentially, a DNA sample  
13 or something that might be able to develop into a  
14 profile?

15 A Correct.

16 Q But -- But, again, you didn't do that in this  
17 case?

18 A That's correct.

19 Q So I guess the issue is, if you don't try, you  
20 won't know; right? If you don't try to extract  
21 DNA from something, you don't know if it's there?

22 A That's correct.

23 Q In regards to the -- the jeans, question was  
24 raised about there -- you -- you noticed some  
25 white specks and a light, um, kind of a brushed

1 area that appeared to be bleach?

2 A Yes.

3 Q Now, if the entire pair of jeans had been soaked

4 in bleach, you probably expect a little more

5 white, uh, I guess, bleaching stain, than what

6 you saw; correct?

7 A I don't really recall. All I recall is that the

8 stains looked like they were consistent with stains

9 that would have been left from bleach. I don't

10 really recall how much bleaching there was.

11 Q And when you were looking for blood, you were

12 looking, again, visually, first?

13 A Yes.

14 Q And did you then swab the entire, even cuffs, to

15 decide -- to determine whether or not there might

16 be more -- I won't -- I don't want to call it

17 invisible, but blood that you just can't detect

18 with the naked eye?

19 A No. I -- There was one small brownish stain on the

20 bottom leg of the jeans that was negative.

21 Q So other than that detectable colored stain --

22 A Yes.

23 Q -- you didn't swab for any other areas?

24 A No.

25 Q Now, you mentioned that there were about 350

1           submissions to the Crime Lab in this --

2    A     Yes.

3    Q     -- case? And about 180-plus just to your lab?

4    A     Just to the DNA section.

5    Q     Just to the DNA section?

6    A     Yes.

7    Q     Now, you mentioned this is a homicide case, so,

8           obviously, I take it, that it had a more priority

9           than some other cases you were handling?

10   A     Yes.

11   Q     And some of the comments you made in questions to

12           myself, and I think redirect to Attorney Gahn,

13           were you had to make decisions what you were

14           going to test further to see if there was a D --

15           potential extractable DNA sample; correct?

16   A     Yes.

17   Q     Now, you didn't just decide, we're just too busy.

18           Just plain busy. We can't do it. That wasn't

19           your reason; right?

20   A     No.

21   Q     Correct? And you didn't do it because it's too

22           hard?

23   A     No.

24   Q     Why didn't you do it?

25   A     Well, again, because we're -- what we're doing was,

1 as an analyst, it's my job to take all the  
2 information I have on a case and to decide what  
3 evidence is going to be -- I feel is going to be  
4 probative. Again, at some point during the -- my  
5 analysis, and after my reports are written, um, if  
6 there was more evidence that was felt to be probative  
7 by either the submitter or defense counsel, then  
8 those requests could be made at that time to further  
9 do more testing.

10 Q You said that this is a homicide case? You're  
11 also aware there were allegations of sexual  
12 assault?

13 A Yes.

14 Q And would you agree with me that in those types  
15 of investigations testing the bedding is often a  
16 very common investigate -- or a common way of  
17 determining if there's any extractable DNA?

18 A Yes, it can be.

19 Q Okay. And, again, you weren't asked to look at  
20 any bedding?

21 A That's correct.

22 Q No one sent it to you?

23 A No, it was not submitted.

24 Q And you didn't test anything like that?

25 A That's correct.

1 Q Thank you.

2 THE COURT: All right. You may step down.

3 Unless the State has a five-minute witness here,

4 we're going to adjourn and -- and reconvene at 1:00.

5 ATTORNEY FALLON: Can you make that

6 about 1:10?

7 THE COURT: One-ten.

8 ATTORNEY FALLON: Thank you.

9 (Recess had at 11:54 a.m.)

10 (Reconvened at 1:15 p.m.)

11 THE COURT: Good afternoon. Counsel, your

12 first witness?

13 ATTORNEY GAHN: Yes, Your Honor. The

14 State would call Nick Stahlke to the stand.

15 THE CLERK: Please raise your right hand.

16 **NICK STAHLKE,**

17 called as a witness herein, having been first duly

18 sworn, was examined and testified as follows:

19 THE CLERK: Please be seated. Please state

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

21 THE WITNESS: Nick Stahlke, S-t-a-h-l-k-e.

22 **DIRECT EXAMINATION**

23 BY ATTORNEY GAHN:

24 Q Mr. Stahlke, where are you employed?

25 A Wisconsin State Crime Laboratory in Madison.

1 Q And what is your position there?

2 A I'm a forensic science training coordinator.

3 Q And what is your formal, um, educational

4 background?

5 A I have a Bachelor's Degree in chemistry and medical

6 technology.

7 Q And would you please, uh, summarize your current

8 duties and responsibilities at the State Crime

9 Lab?

10 A As a forensic science training coordinator, I'm

11 responsible for coordinating the teams of individuals

12 that go out and process crime scenes, and I'm also

13 responsible for the training of those teams to

14 respond to those cases.

15 Q And, um, how long have you been at the Wisconsin

16 State Crime Laboratory?

17 A Fifteen years.

18 Q And during those 15 years, did -- was there any

19 time period that you were involved in the

20 interpretation of blood stain patterns?

21 A Actually, the entire time that I've been at the State

22 Crime Lab in -- in Madison I've been involved in

23 blood stain pattern interpretation.

24 Q Have you attended any specialized schools for

25 blood stain pattern interpretation?



1 A Yes, I have.

2 Q And would you just describe some of, uh, the

3 schooling you've had for the --

4 A In -- in 1988, I attended a 40-hour course in basic

5 blood stain pattern interpretation. In '99, I also

6 attended a advanced, uh, course in crime scene

7 processing, which had a component of blood stain

8 patterning interpretation. And I've also been to or

9 attended workshops involving the examination of

10 clothing with stains.

11 Q And could you, uh -- What skills and experience,

12 uh, do you have in blood pattern analysis?

13 A Well, I've been, uh, examining scenes and clothing

14 for the past 19 years. I had, uh, five-and-a-half

15 years at the State Crime Lab in Idaho prior to my,

16 uh, being employed with the state of Wisconsin. So

17 for the past 19 years I've examined, uh, scenes and

18 see whether or not there's any, uh, information that

19 we can -- that we can, uh, gain from interpreting

20 those stains at crime scenes.

21 And then any, uh -- any clothing that

22 has been submitted to the Crime Lab that has

23 blood stains on them to determine whether or not

24 there's any additional information that can be

25 gained from an interpretation of those stains.

1 Q And have you given lectures or taught on this  
2 subject that's related to blood stain pattern  
3 analysis?  
4 A Yes, I have.  
5 Q And, um, you stated you've been involved for 19  
6 years with blood stain pattern analysis?  
7 A That's correct.  
8 Q Have you ever testified in a court of law in, um,  
9 Wisconsin as an expert in interpreting blood  
10 stain patterns?  
11 A Yes, I have.  
12 Q And how many times?  
13 A Approximately ten times in interpretation of stains.  
14 Q And have you ever been rejected as an expert in  
15 this area?  
16 A No, I have not.  
17 Q Um, I'd like you just to take a moment and --  
18 Well, first, I'm going to ask Mr. Kratz to hand  
19 you what's been marked as Exhibit 165, and if you  
20 would please identify that for us? And what --  
21 what is that document, sir?  
22 A This is my curriculum vitae.  
23 Q And is that, basically, a summary of your  
24 training, education, and experience in blood  
25 pattern analysis?

1 A Yes, it is.

2 Q Thank you. Now, I would ask you to, um, just  
3 explain for the jurors the types of  
4 determinations that can be made from blood stain  
5 patterns?

6 A Interpretation of stains -- blood stain -- blood  
7 stains, can help in determining the victim's  
8 placement, the suspect's placement, whether or not  
9 the victim has moved since bloodshed has occurred or  
10 it began, or it can also give some indication of  
11 whether or not the suspect has -- that -- that  
12 there's been any movement from the suspect.

13 It is a, uh -- It also can give us in  
14 some indication of, uh, the types of weapons that  
15 may have been used, or the instruments that  
16 use -- were used in the -- in the assault, uh,  
17 and it's uh -- it can give me -- give us some  
18 indication of the manner in which those, um,  
19 blows or -- or the types of what -- how the blood  
20 actually had -- has been deposited.

21 Uh, one -- one of the valuable things  
22 between -- of blood stain pattern interpretation  
23 is trying to determine the difference between --  
24 or disting -- to distinguish the difference  
25 between a suicide and a homicide. Um --

1 Q Are there different types of blood stain  
2 patterns?

3 A Yes, there is.

4 Q And what -- And what are they, briefly, for the  
5 jury?

6 A Basically, there's three categories of stains. You  
7 have passive stains, uh, projected stains, and  
8 contact stains.

9 Q I'm going to, um, put up on the screen an exhibit  
10 that has already been introduced into evidence.  
11 It's Exhibit 141. And this is a photograph, um,  
12 which you'll see in just a moment, of, uh, Teresa  
13 Halbach's, um, 1999 RAV 4. Do you recognize this  
14 vehicle?

15 A Yes, I do.

16 Q And when did you first see this vehicle,  
17 Mr. Stahlke?

18 A It would have been on a Monday, November 7 in 2005.

19 Q And where was the vehicle at that time?

20 A This is in the center bay of our garage at the State  
21 Crime Laboratory in Madison.

22 Q And did you have an occasion to examine the  
23 interior of this vehicle for any type of blood  
24 stains?

25 A Yes, I did.

1 Q And exactly what -- what did your examination  
2 consist of, initially?

3 A Basically, the examination of a -- of a case for  
4 blood stains is to a visual examination, and in this  
5 particular case I observed blood stains in the front  
6 passenger compartment of this RAV 4.

7 Q And what type of blood stains did you observe in  
8 this RAV 4 in the passenger compartment?

9 A In the front passenger compartment, uh, I saw a  
10 contact transfer stains. And I said that as a -- one  
11 of the categories of contact transfer stains is those  
12 stains that, um, have a bloody object that has come  
13 in contact with the nonbloody surface.

14 Q I'm going to, um, now show you what has already  
15 been marked as Exhibit 142, and I -- also  
16 identified by, uh, Sherry Culhane as a photograph  
17 of Teresa Halbach's vehicle from the Crime Lab.  
18 And do you recognize this photograph?

19 A Yes, I do.

20 Q Mr. Stahlke, is the laser pointer up there?

21 A I do not see one.

22 Q Okay. We're going to look for that, uh, now.  
23 Um, but, uh, what does this, um, photograph  
24 depict?

25 A Well, this is the driver's compartment. Front -- or

1           the seat with the door open.

2   Q       And did you observe any type of, um, individual

3           contact transfer stains, uh, in this area?

4   A       Yes, I did.

5   Q       Okay. I'd like you to just to point out to the

6           jurors where you found these, uh, stains?

7   A       Right here on this front driver's seat right here.

8   Q       And how did you describe that? As what type of

9           stain?

10  A       That would be a contact transfer stain.

11  Q       And what do you mean by a contact transfer stain?

12  A       Be the type of stain that's deposited when a bloody

13           source has come in contact with a nonstained surface.

14  Q       And I'm going to just show you now what has been

15           previously marked as Exhibit 144. And this is a

16           photograph, also, of Teresa Halbach's RAV 4. Can

17           you describe or show any other contact pattern

18           stains that you observed in the vehicle for the

19           jury?

20  A       This image is of the passenger's front compartment,

21           or passenger seat, with the front door open, and, uh,

22           I also saw contact transfer stains right on the front

23           edge, or on the left edge, of that, uh, front

24           bucket -- bench seat or bottom of the seat. There's

25           also stains on this, uh, plastic CD holder.

1 Q And, again, what type of stains did you find on  
2 that? On those -- In those two locations?

3 A Again, these are all contact transfer stains.

4 Q Are these stains consistent with being left by a  
5 person who would have a bloody hand, shall we  
6 say?

7 A Yes.

8 Q I'm going to now show you what has been marked as  
9 Exhibit 143 and ask you to describe if you  
10 observed any contact blood stains in this  
11 photograph?

12 A Yes, I did.

13 Q Point those out to the -- point it out to the  
14 jury, please?

15 A Right here. Right below -- Here's the ignition to  
16 the, uh, RAV 4 right here, and this is just down and  
17 to the right of the ignition.

18 Q And, again, that is the type of stain that is  
19 left by something that has blood on it, coming in  
20 contact, and leaving the stain?

21 A That's correct.

22 Q I'm going to now show you what has been  
23 previously marked as Exhibit 89, and identified  
24 as a cut. Uh, photograph of a cut to the middle  
25 right finger of Steven Avery. Do you see that?

1 Have you take a look at that, please? Seen that  
2 before; correct?

3 A Yes, I have.

4 Q Is that cut that you observed to Steven Avery's  
5 hands, is that the type of bloody object that  
6 could leave the blood pattern that you observed  
7 by the ignition switch of Teresa Halbach's car?

8 A This type of cut would be a candidate for the type  
9 of -- of bloody source that could have, uh, left that  
10 blood stain or that contact transfer stain.

11 Q I'm going to show you now and what has been  
12 previously marked as Exhibit 145, and ask if you  
13 can identify that photograph for us?

14 A Yes, I can.

15 Q And is there a blood stain in that photograph  
16 that you observed?

17 A Yes. This is actually a photograph of the right rear  
18 passenger side door, and there's a -- a stain right  
19 here that is considered -- I consider a passive drop.

20 Q And when you say "a passive drop" -- here we have  
21 zoomed in on it -- what do you mean by a passive  
22 drop?

23 A This is the type of stain that, um, if you have a --  
24 a bloody object, and there's enough blood on that  
25 object, uh, that it will drip or fall to the ground,



1           uh, when gravity is the only thing that is  
2           influencing, uh, that particular blood stain or blood  
3           droplet that hits the -- the -- that impacts that  
4           surface.

5       Q     And, again, could a passive drop, such as this,  
6           be left by someone who has a cut to their hand?

7       A     Yes, it could.

8       Q     Based upon the -- the combination of blood stain  
9           patterns that you observed in the passenger  
10          compartment and here at the rear, uh, passenger  
11          compartment, uh, do you have an opinion to a  
12          reasonable degree of scientific certainty whether  
13          these combinations of blood stain patterns were  
14          left by someone who was actively bleeding?

15      A     Yes, I do.

16      Q     And what is that opinion?

17      A     That that is, in -- indeed, the -- uh, what probably  
18          happened. A individual that is, uh -- has a -- a --  
19          a wound of some sort, uh, and taken all these things  
20          into combination or consideration, that, uh, they  
21          were left by somebody that was actively bleeding.

22      Q     Now, did you also examine the rear cargo area of  
23          Teresa Halbach's car?

24      A     Yes, I did.

25      Q     Okay. And I'm going to show you what we have

1           previously marked as Exhibit 146 and ask if you  
2           recognize that area?

3   A    Yes. This is an image of the rear cargo area of  
4           the -- the RAV 4 that I examined on the -- on  
5           November 7.

6   Q    And did you observe any blood stain patterns in  
7           this area, of, uh, Teresa Halbach's car?

8   A    Yes, I did.

9   Q    And would you point those out for the jury?

10   A   Right along this right -- the molding, plastic  
11           molding, just behind the right rear passenger side  
12           seat are a series of stains.

13   Q    We're going to zoom in here a little bit for you,  
14           um, Mr. Stahlke, and, again, describe for the  
15           jurors what -- what actually you're observing  
16           here?

17   A    These -- All these stains, uh, fall in the category  
18           of a contact transfer in which a bloody object has  
19           come in contact or -- with a, uh, nonbloodied stain  
20           surface. And in this particular case, we've got some  
21           characteristics within that stain that are unique.

22                These stains right here have a, uh  
23           elliptical pattern. In other words, they -- they  
24           look like they're, um, half circles, and  
25           they're -- they have the appearance of -- if you

1           would take spaghetti, and put spaghetti sauce on,  
2           and, um, then flip it out on a table top or  
3           something on that order, or on the edge of your  
4           plate, you could see that there's strands of --  
5           of -- and then take those -- spaghetti out of  
6           that -- out of those -- off that surface, it  
7           would leave a -- the surf -- the, um -- the  
8           characteristics of these particular stains. And  
9           they're characteristic of, and typical of, bloody  
10          hair that has come in contact with that surface.

11       Q     Is that, uh, in your field, sort of a -- a  
12              classic pattern that you see left by bloody hair?

13       A     When I see a -- a stain like this, this is definitely  
14              a classic stain, and it indicates a strong likelihood  
15              that that is head hair that has been -- that has been  
16              bloodied, and then that has come in contact  
17              transferring that -- that blood to that surface.

18       Q     Did you observe any other type of blood stain  
19              patterns in this area of Teresa Halbach's  
20              vehicle?

21       A     Well, there's additional contact stains or transfer  
22              stains here. Uh, and those are, in general, in a --  
23              in description because they're -- they're just a  
24              bloody object that's come in contact.

25                        There's also some light transfer stains

1 on the carpeting, which are consistent with a  
2 swipe pattern. Now, a swipe pattern is a, uh --  
3 an object that has blood on its surface, and  
4 it's -- indicates movement, and it transfers,  
5 then, that blood from the bloody object onto a  
6 nonstained surface. But showing -- but it also  
7 indicates movement, so we call that a swipe  
8 pattern.

9 Q I'm going to show you what has been marked as  
10 Exhibit 148. And I believe Ms. Culhane described  
11 this as the rear panel area of the RAV 4; is that  
12 correct?

13 A Well, this would be the threshold.

14 Q Threshold or rear area of the cargo --

15 A Correct. It's a -- it's -- it's just below this  
16 picture would be where the -- the, uh, bumper of that  
17 vehicle would be. So this is the threshold of the  
18 rear door.

19 Q Did you observe any blood stain patterns in this  
20 area?

21 A Yes. As you can see, there's some stains here, here,  
22 um, some stains here as well, and along here. Some  
23 of them are more difficult to see than others.

24 Q And how would you describe those stains that you  
25 observed on the threshold of the door?

1 A Well, they've got, um -- These are -- Some of them  
2 are contact transfer stains like I described earlier,  
3 others are impact stains. And they're -- There's one  
4 here that might be, uh -- might be considered a --  
5 that's considered a swipe pattern there as well.

6 Q And, again, what does a swipe pattern indicate to  
7 you?

8 A Movement.

9 Q It --

10 A It's the transfer of a -- of blood from a -- a moving  
11 object that has blood, uh, on it, and, uh, it's a  
12 trans -- it's -- has contact with a nonstain surface,  
13 leaving that blood behind, and it also indicates that  
14 there's been movement.

15 Q Based upon your observation of the combination of  
16 bloody stain patterns you've observed here on the  
17 threshold, and, also, those wavy patterns that  
18 you observed up in the -- the inside panel of the  
19 rear cargo area, are these consistent with a body  
20 that has bloody hair being moved into the rear  
21 cargo area?

22 A I would say it's very consistent with that, yes.

23 Q Did you also examine the, um, interior door of  
24 the RAV 4?

25 A Yes, I did.

1 Q I'm going to show you now what -- what has been  
2 marked as Exhibit 149, and ask you to point out  
3 to the jurors any observations you made of this  
4 examination?

5 A This is the rear cargo door. It's hinged on one side  
6 and it opens like any other door entrance to a  
7 vehicle, but it's larger, and it covers the whole  
8 rear end of this RAV 4, and it opens to the right.

9 This is the interior of that particular  
10 door. On this door were numerous impact stains.  
11 Some of these stains, then, had associated flow  
12 patterns to them.

13 Q I'm going to zoom in here on some of these stains  
14 and ask you to just point out to the jury, um,  
15 the stains, again, that you observed?

16 A Okay. Some of the stains right here. You see these?  
17 They're -- These are more circular in nature. Here,  
18 here, here. These here. This one.

19 Q And what does that mean to you when you say  
20 they're circular in nature? Or they appear that  
21 way on the door?

22 A It means that blood has been flung off of a bloody  
23 object and then impacts that surface. And if they're  
24 perfectly circful (phonetic) -- circular, that means,  
25 then, that they impacted that circuit -- surface at a

1           90-degree angle.

2                   Now, if there's any elliptical pattern  
3           to that, then they impacted at an angle. In this  
4           particular case, these are near circular.

5           However, some of them are more -- are somewhat  
6           elliptical in that they may have fallen. So  
7           it -- it's indicative of blood being flung or  
8           thrown from a moving object.

9   Q       Now, I think you also stated that you saw some  
10       associated flow patterns?

11   A       That's correct.

12   Q       And, again, please point those to the jury and  
13       explain what you mean by that?

14   A       Right here, you can see that there's, um, some --  
15       flow or some stains that -- that have, uh, not only  
16       impacted the surface, but then, also, uh, flowed down  
17       toward the ground. Well, these flow patterns, uh,  
18       are then acted on by gravity alone after they've  
19       impacted the surface of this interior of the door.

20   Q       And seeing this type of pattern, what does that  
21       indicate to you?

22   A       Well, the flow patterns after an impact stain would  
23       indicate that it's a fairly large amount of blood  
24       that's -- that's impacted that surface, and it -- it  
25       just didn't stick on that particular surface, it had

1 enough, then, that there was gravity acted on it, and  
2 pulled it down toward the ground.

3 Uh, with all these stains, these stains  
4 are indicative of -- of a -- a bloody object that  
5 has been -- is flung around and then causing that  
6 blood to, uh, release from that bloody object and  
7 striking the surface of that interior side of the  
8 door.

9 Q I'm going to show you what has been marked as  
10 Exhibit 166, and ask you to identify this? What  
11 is that, sir?

12 A This is the entire, uh -- an overall shot of the, uh,  
13 rear cargo area of that RAV 4.

14 Q And did you do -- make any measurements in this  
15 area?

16 A Yes, I did.

17 Q And what area did you measure?

18 A I measured the opening of the cargo area.

19 Q And, um, would a slender 5'6 woman fit in the  
20 back of that RAV 4?

21 A Yes.

22 Q And based upon all the blood patterns that you  
23 observed in the rear cargo area of that, um,  
24 RAV 4, um, do you have an opinion to a reasonable  
25 degree of scientific certainty whether the



1 patterns you observed by the interior panel on  
2 the threshold, and on the interior door, itself,  
3 are consistent with a body with a bloody head  
4 being loaded into the rear cargo area?

5 A Yes, I do.

6 Q And what's that opinion?

7 A That that is, indeed, what may have happened. A  
8 bloody -- a body that has bloody head hair was, uh,  
9 loaded in, uh -- into this rear cargo -- cargo area  
10 and placed, uh, just behind the right rear seat of  
11 this, uh -- of the seating area in this car. This  
12 Toyota RAV 4.

13 Q And, finally, Mr. Stahlke, I just have, uh, one  
14 other issue to discuss with you. I'm going to  
15 hand you what's been marked as Exhibit 167, and  
16 ask you if you would, um, identify this  
17 photograph for the jurors? And we'll also put it  
18 up on the big screen. Uh, I want to ask you, did  
19 the time come when you were asked to check the  
20 odometer on this vehicle?

21 A Yes, there was.

22 Q And -- and, um, what happened when you attempted  
23 to check the odometer?

24 A I believe it was the second day. It would have been  
25 the 8th of November, then, that, uh, we got a call

1            requesting that we check the odometer reading on this  
2            vehicle. Uh, when, uh, we attempted to, uh -- It's a  
3            digital dashboard. So when we went to open or turn  
4            the key, there was -- there was no electronics, uh,  
5            to this particular dashboard. So we couldn't get the  
6            reading.

7            Q        So what did you do?

8            A        We, uh, opened up the -- the hood of the, uh -- to  
9            the engine compartment, and, uh, to checks -- I was  
10           thinking that the battery was probably dead.

11          Q        And what did you find when you opened up the hood  
12           and looked under the hood?

13          A        Well, it's -- like indicated in this particular, uh,  
14           photograph, Exhibit 167, the battery cables were  
15           disconnected.

16          Q        And that's how you found the vehicle on -- when  
17           you saw it on November 7 of 2005 in your, um, bay  
18           at the Crime Lab?

19          A        Yes. And I believe that actually it was November 8,  
20           the second day that we were doing examinations  
21           that -- on that vehicle. Uh, it hadn't been checked  
22           prior to this, so this is the way it would have come  
23           into the laboratory.

24          Q        And when you opened up the hood of the vehicle,  
25           um, were you wearing gloves?

1 A Yes, I was.

2 Q And what type of gloves were you wearing?

3 A Nitron.

4 Q And -- And what are those? Why -- why are those  
5 and why do you wear them?

6 A Oh. They're -- they're like a, uh -- a surgeon's  
7 gloves. We put them on so we're not transferring any  
8 of our DNA onto a, uh, object or piece of evidence,  
9 and we're not, also, uh, receiving any evidence --  
10 evidence from the object, themselves. So we're  
11 protecting the surface of anything that we touch as  
12 far as evidentiary value.

13 Q Thank you, sir.

14 ATTORNEY GAHN: That's all I have, Your  
15 Honor.

16 THE COURT: Cross?

17 ATTORNEY EDELSTEIN: Thank you, Your  
18 Honor.

19 **CROSS-EXAMINATION**

20 BY ATTORNEY EDELSTEIN:

21 Q Mr. Stahlke, what, precisely, if any, is actually  
22 your area of specialty in the lab?

23 A Uh, I've got -- I don't have a specific specialty any  
24 longer. I --

25 Q Go ahead.

1 A I have -- I'm the training -- training -- forensic  
2 science training coordinator, so I have many job  
3 duties.

4 Q Well, given the fact that it's a lab, I would  
5 expect that that would encompass overseeing the  
6 training of a multitude of, um, disciplines  
7 within the lab? Is that a fair statement?

8 A Well, in my particular area, it would be more for  
9 those people that are involved in field response.  
10 Not any specific discipline.

11 Q Okay. All right. But you have to agree,  
12 obviously, that field response encompasses a  
13 multitude of disciplines; correct?

14 A Well, you hope to have some, uh, knowledge in all  
15 areas, yes.

16 Q Could we call you, then, um, a jack-of-all-  
17 trades in the forensic business?

18 ATTORNEY GAHN: Objection, Your Honor.  
19 I'm sorry. Objection to the form of that  
20 question.

21 THE COURT: Overruled.

22 THE WITNESS: Well, I would -- I would  
23 probably be more considered a criminalist, and  
24 that's an individual that has, uh, general --  
25 general skills or knowledge in multiple areas.

1 Q All right. So you don't have a specific  
2 specialty?  
3 A It's not in my title, no.  
4 Q Whether it's in your title or not, by way of  
5 practice -- Well, let me ask you this: Besides  
6 blood spatter interpretation, what other areas,  
7 if any, have you testified to as an expert and in  
8 courts in Wisconsin?  
9 A Controlled substances.  
10 Q Are we talking -- Okay. Let me just -- So I'm  
11 clear, are you talking about running gas  
12 chromatograph to determine what a substance might  
13 be?  
14 A Correct.  
15 Q Okay.  
16 A That's one. We have a -- With all the other  
17 presumptive tests as well.  
18 Q Right.  
19 A Sure.  
20 Q Drug -- And drug tests.  
21 A Drug testing --  
22 Q Okay.  
23 A -- right. Controlled substances. Um, and  
24 document -- questioned documents.  
25 Q Anything else?

1 A Crime scenes and blood spatter.

2 Q Well, crime scenes are pretty broad; right?

3 A Correct.

4 Q Okay. Blood spatter's pretty specific?

5 A That's true.

6 Q As they would call it a sub-discipline of crime  
7 scene investigation?

8 A That's true.

9 Q All right. Now, I take it during your  
10 undergraduate studies that you said -- I think  
11 you said that was, uh -- you had -- was it a B.S.  
12 in chemistry?

13 A B.S in medical technology with a minor in chemistry.

14 Q Okay. And you've been at the Wisconsin Lab for  
15 15 years; right?

16 A Approximately. It will be June, actually, when it's  
17 15 years.

18 Q Okay. And in that time you -- I believe you  
19 testified on direct you've testified as an expert  
20 ten times over the course of the 15 years in --  
21 involving blood spatter?

22 A That's correct.

23 Q Okay. So less than once a year?

24 A For blood stain cases, that would be -- if you'd take  
25 the average, yes.

1 Q All right. When you first began your testimony  
2 and you were describing different types of  
3 stains, I believe you said there's three?  
4 Passive, projected, and contact? Is that your  
5 understanding?

6 A These are the three categories of types of stains,  
7 yes. So -- And then each category, uh, has other  
8 stains, more specific characteristics.

9 Q Okay. And where would impact stains come in?

10 A The projected stains.

11 Q All right. If an individual is struck with  
12 different types of instruments, you've learned  
13 over the course of your experience and training  
14 that, uh, different types of patterns emerge;  
15 right?

16 A There is a likelihood, or a possibility, I guess,  
17 that that could have -- you could see those  
18 differences, yes.

19 Q Well, don't you base much of your interpretation  
20 and conclusions -- For example, State asked you  
21 here a few minutes ago, um, do you have an  
22 opinion about whether, uh, a body was placed in  
23 the back of the RAV 4? And you -- you based --  
24 You said, yes, and you based your opinion upon  
25 the -- the stains that you observed; right?

1 A Wasn't your question about whether or not we could  
2 distinguish the types of weapons that were used?

3 Q Well, I'm getting to that. But you -- you  
4 answered that, and I assume that the answer that,  
5 yes, a body was placed back there, was based upon  
6 the interpretation of those patterns and stains  
7 that you observed?

8 A That has nothing to do with weapons.

9 Q I understand that. You would expect, for  
10 example, if a firearm were used, a different type  
11 of pattern, um, than you would if someone cut  
12 themselves with a -- with a knife?

13 A If I'm looking at stains that were generated from a  
14 firearm or -- and comparing them to stains that were  
15 generated from a passive drop or bleeding from a -- a  
16 cut or a wound to the finger, yes, I would see  
17 differences.

18 Q That wasn't my question. My ques -- Let -- let's  
19 use this as a hypothetical.

20 A Please repeat your question.

21 Q Okay. I'll do my best. Would you expect a  
22 difference in patterning from a gunshot wound as  
23 opposed to a stab wound?

24 A And I would describe that as differences in their  
25 characteristics.



1 Q Pard me?

2 A Yes.

3 Q In the back of the RAV 4, the blood that you

4 described that you saw over toward the speaker

5 area, not on the back, but on the side where you

6 talked about the spa -- you used your spaghetti

7 example?

8 A Correct.

9 Q Okay. I'm assuming that's where you concluded

10 that it would be consistent with the hair being

11 placed; right?

12 A That's correct.

13 Q Toward the -- Well, let me ask you this: The --

14 What were the dimensions -- the inside

15 dimensions -- of the back of the RAV 4?

16 A I have a width, is all. I don't have the -- the

17 depth of that particular cargo area.

18 Q So I take it, then, you -- you don't have an

19 opinion? Or you do have an opinion as to how a

20 body with bloody hair was placed -- located

21 within the back of the RAV 4? Do you have an

22 opinion?

23 A Yes, I do.

24 Q Other than where the head was located?

25 A I have an opinion. My opinion was that a -- an

1 individual that's 5'6 would fit in the storage area  
2 of that RAV 4.

3 Q Well, probably not a total length, though; right?

4 A No.

5 Q Okay. But you don't -- you don't have an opinion  
6 as to -- If that's where the head was, do you  
7 have an opinion where the feet were?

8 A No. I haven't -- Common sense would say that the  
9 feet were at the other end. Head at the top, feet at  
10 the other end.

11 Q And somewhere in between there --

12 A Would be the torso.

13 Q Exactly. And as a mat -- and -- and the -- from  
14 your examination, am I correct in stating that  
15 you found absolutely no evidence by way of blood  
16 pattern evidence to suggest an active wound in  
17 the torso area of this body?

18 A Repeat that question.

19 Q Am I correct in stating that you found absolutely  
20 no evidence, given how you believed the body was  
21 placed in the back of the RAV 4, for you to  
22 conclude that there was a wound in the torso area  
23 of the body?

24 A There is no direct evidence from the stains that  
25 were -- uh, that I examined in that particular, uh,

1 cargo area of this RAV 4 that would indicate the  
2 position of those -- or location of any wounds other  
3 than the ones that were indicative to bloody hair,  
4 which would then indicate that that bloody hair is  
5 head hair, and that there was a blood source or a --  
6 you would then assume a wound to the head.

7 Q And I assume your answer would be the same that  
8 you found no indirect evidence, because you said  
9 there was no direct evidence that you noticed?  
10 And there was no indirect? I guess I'm ask --  
11 Distinguish for me, if --

12 A I can --

13 Q -- you can, the difference between direct and  
14 indirect?

15 A I can tell you that those stains that were on the  
16 threshold area, the stains that were on the inner  
17 front panel of the rear door, I cannot, uh,  
18 distinguish the location from -- on a body that those  
19 stains could have originated from. They could have  
20 been from anywhere on the body. Any bloody source  
21 could have caused those stains when blood was flung  
22 from any part of the body.

23 The only ones that I can positively  
24 identify, or distinguish, from any other part of  
25 the body would be the -- the stains that were

1 textbook stains for, uh, bloody head hair that  
2 were transferred to the area just behind the rear  
3 of the passenger seat.

4 Q Okay. Let me ask you this, then, Mr. Stahlke:  
5 Given your experience, the assumptions you've  
6 made about the location of the body, assume that  
7 this body had at least one, and perhaps two,  
8 stabbing wounds to the torso area, would you not  
9 expect to find some pooled -- some blood in the  
10 area between where you believe the head was and  
11 where the feet were?

12 A Well, that's a fair question, and I saw some -- some  
13 swipe patterns between the -- the area -- or the  
14 threshold of the door, or the vehicle, and that  
15 rear -- rear passenger seat. Now --

16 ATTORNEY EDELSTEIN: Your Honor, if the  
17 Court please --

18 A -- outside of that --

19 ATTORNEY EDELSTEIN: Would -- would  
20 the -- I hate to interrupt the witness, Your  
21 Honor, but I would ask that the witness be  
22 directed to answer the question. I didn't ask  
23 about sweat.

24 THE COURT: It's about swiped.

25 ATTORNEY EDELSTEIN: Oh, I'm sorry.

1 THE COURT: He's talking about swipe.

2 ATTORNEY EDELSTEIN: I -- Go ahead.

3 THE COURT: I think that's part of the  
4 answer. So why don't you finish your answer,  
5 please.

6 THE WITNESS: Thank you. Those are the  
7 only stains that I saw between -- on that  
8 carpeted area in that cargo area. I would expect  
9 that if we had an individual that had multiple  
10 wounds, especially to the torso area, that you  
11 would see additional staining.

12 Now, the lack of stains would -- may  
13 indicate that you have some, uh, surface or some  
14 object that was underneath, between the -- the  
15 blood source and that carpeted area, which then  
16 was removed with the body, let's say, and would  
17 prevent any blood, then, from transferring onto  
18 that carpeted area.

19 Q Well, Mr. Stahlke, in connection with your, um,  
20 duties as the, uh, training coordinator for the  
21 response teams -- Let -- Let -- Just let me ask  
22 you this: Given what you know about this, when  
23 that RAV 4 got to the lab, there's no reason for  
24 you to even remotely suggest that there was  
25 anything other than what appeared as the -- at

1 the carpet level, in between, prior to it coming  
2 to the lab, is there?

3 A I -- No. We just examine and -- and make note of  
4 those observations. This was just your -- your  
5 speculation, or your -- your probing that I came up  
6 with that hypothesis.

7 Q Okay. But there was nothing to suggest that that  
8 hypothesis has any basis, in fact, in this  
9 particular incident as far as that vehicle goes?

10 A I have no, um, reason to believe that. No.

11 Q All right. As far as the timing of when stains  
12 that you discover appeared, you conducted no  
13 examination to determine the relationship, for  
14 example, between the stain present by the  
15 ignition switch in relation to the stain you  
16 observed in -- on the back door inside panel?

17 A No, I cannot determine a timeline from comparing two  
18 stains in this particular case.

19 Q Or in any case?

20 A In some cases you can get a feeling for the age of a  
21 stain.

22 Q Okay. But, certainly, not any degree of, uh,  
23 expertise that you'd be able to render an opinion  
24 on that?

25 A At least not with, uh -- within a short time frame,

1 no.

2 Q If someone's -- Have you had occasion to be  
3 involved in the examination of scenes where an  
4 individual has had their throat cut?

5 A Yes, I have.

6 Q Can you describe for the benefit of this jury  
7 what sort of pattern is likely to result when  
8 that occurs?

9 A Well, there's obviously a lot of blood, and depending  
10 on the variables involved, uh, you can have a -- a  
11 large amount spread over a -- a great -- a large  
12 area, or you can have it confined to a small space.  
13 But in either case, you'll have a -- a large amount  
14 of blood directly below, uh, the area where that  
15 throat was cut.

16 Q So if an individual, for example, had their  
17 throat cut while they were on a bed, you would  
18 expect to find a great deal of blood in that  
19 area; would you not?

20 A Well, yes. Especially if the body -- if the person  
21 is still alive at that point.

22 Q All right.

23 A If they -- If they're already dead, of course, then  
24 there's not going to be, uh, as much blood flow  
25 because there's no -- there's no heart -- or blood

1           pressure. Uh, there would be draining blood.  
2           However, you -- you'd still see some blood from a  
3           thro -- cut throat.

4   Q       In this particular case, um, did you ever go to  
5           what you understood to be the Avery property?

6   A       No, I did not.

7   Q       So you never were asked to go inside of a garage  
8           to do any examination for blood pattern evidence?

9   A       I was not involved in any of scene work there, no.

10  Q       If an individual is struck from a projectile from  
11           a firearm, there are distinctive patterns that  
12           emerge; is that correct?

13  A       If you have the classic gunshot, uh, wound, high  
14           velocity spatter from a gunshot wound, uh, there are  
15           some, uh, stains that are indicative of -- of that  
16           type of wounding, yes.

17  Q       Is it a fair statement that the patterning that  
18           emerges as a result of a gunshot wound, as  
19           compared to a stabbing-type wound, would tend to,  
20           and typically, uh, cover, or be able to -- it  
21           would -- it would spread out a little further is  
22           what I'm trying to say?

23  A       A gunshot wound?

24  Q       Right.

25  A       Not necessarily.



1 Q All right. Are there any differences between the  
2 patterns that emerge from a gunshot wound to a  
3 head as opposed to, for example, an arm?

4 A Yes, there are some indications, uh, that you can  
5 gather from that, that would be different.

6 Q But it is fair to say that there are patterns,  
7 which you understand through your training and  
8 experience, that when you look at, you can  
9 conclude this was as a result of a gunshot wound?

10 A Yes. If those patterns are present, uh, those  
11 patterns will give you some indication of the -- or  
12 may give you some indication -- of the type of weapon  
13 that was used, uh, to -- to create them.

14 Q When you say "type of weapon" are you able to  
15 distinguish, for example, between a small caliber  
16 rifle, say a .22 caliber, and, say, a  
17 .30 caliber?

18 A Typically, the larger the caliber, the greater the,  
19 uh, amount of stains that are going to be present or  
20 created.

21 Q You talked about the gravity effect of the -- on  
22 blood on the back door inside panel. Blood does  
23 not flow, necessarily, at a uniform rate, does  
24 it?

25 A I believe that it would -- it would flow at a uniform

1 rate on the same or similar surface.

2 Q On the same what?

3 A Same or similar surface.

4 Q You're --

5 A So if -- if you put blood -- throw blood onto a glass

6 surface, it will flow at the same rate.

7 Q Irregardless of the source of the blood?

8 A Irregardless of the source? No. It would still be

9 the same substance that is striking the surface.

10 You're talking about a large enough amount to

11 cause -- cause the flow?

12 Q Well, you described on the back panel the flow

13 pattern? What you called elliptical; right?

14 A Um-hmm.

15 Q Okay. Of some blood that hit that back panel and

16 that basically dripped down a little bit. My

17 question is, is there a uniform flow rate for

18 human blood?

19 A I don't know that there is actually a uniform flow

20 rate, but through my experimentation and testing,

21 blood is blood. If you throw it on a similar

22 surface, it's going to flow at the same rate.

23 Q When you examined the -- Well, strike that.

24 Other than the photographs that we've all had a

25 chance to look at here today, and I'm talking

1           about the area in the back of the RAV 4 where you  
2           believe there was -- there was hair, um, other  
3           than the photographs, did you bring with you, um,  
4           any portion of that plastic molding -- that  
5           molded area -- with so the jury could see it  
6           today?

7    A     No, I did not.

8    Q     And I take it you did not see any evidence  
9           whatsoever -- Well, let me ask you: When you  
10          examine those type of patterns, um, and you know  
11          that it's been caused by hair, are you able to  
12          tell anything about that other than the fact that  
13          you believe it was hair?

14   A     Well, sometimes you can get a -- an -- a feeling for  
15          the -- if there was some direction. Uh, other  
16          than -- other than the contact that I saw that was  
17          indicative of a transfer of -- of blood from bloody  
18          head hair, no, there was no other indication in that  
19          stain that I could gather --

20   Q     So --

21   A     -- any additional information on.

22   Q     So you would have no opinion as to whether or not  
23          the -- How did -- I -- I want to use the same  
24          term you did. Did you call it swiping? Or  
25          wiping?

1 A Swipe. Well, there's swipes and wipes. One's with  
2 blood and one's without blood.

3 Q Okay. The -- the portion that you talked about  
4 with the -- the blood evident, though, that was  
5 the swipe with the hair?

6 A Excuse me. Say that again?

7 Q I'm just talking about the hair, okay?

8 A The -- the hair transfer stain?

9 Q Right.

10 A Okay.

11 Q Okay. Was that -- do you -- you use the term  
12 "swipe" for that?

13 A No, I did not.

14 Q What term did you use?

15 A That was a contact transfer.

16 Q All right. As to that particular contact  
17 transfer, were you able to make -- or did you  
18 make any additional findings regarding, um, for  
19 example, the length of the hair?

20 A No, I did not.

21 Q Did you discern from your visual observations any  
22 differences in the pattern that would set --  
23 suggest that it was anything other than uniform  
24 length?

25 A No, I never saw anything that would indicate.

1 Q Would you be able to determine that based upon  
2 your experience, training, and education?

3 A Unlikely. Because, typically, bloody head hair,  
4 uh -- it will leave a -- a textbook stain. However,  
5 it won't, necessarily, tell me the entire length of  
6 that -- of the hair that was on that person's head.  
7 It could maybe give me an indicator of the total  
8 length, but then that's, uh, a stretch, too, because  
9 we don't know, uh, if it's just a portion of that  
10 hair that contacted the surface, and if it -- if --  
11 it could be long strands and we only get a small  
12 portion that contacted the surface. So, it would --  
13 we'd be guessing if we wanted to come up with an  
14 entire length of that hair.

15 Q Do you understand what I mean by the -- Does the  
16 term "blowback" have any significance to you in  
17 your experience with, uh, blood spatter  
18 examination?

19 A Yes, it does.

20 Q Okay. Is it fair to say that you performed no  
21 tests, no examinations, in the lab to determine  
22 whether or not there was any blowback evident in  
23 this particular case?

24 A I did not.

25 Q You weren't asked to?

1 A No.

2 Q Okay. And just so everybody's aware, can you

3 explain very briefly what blowback really means?

4 A Blowback is generally related to a -- a firearm, or a

5 gunshot wound, and when a projectile leaves the end

6 of the, uh, the barrel and strikes a -- a surface

7 causing, um, some blood spatter, there is a -- some

8 energy that returns back toward the gun, and that

9 would be considered blowback.

10 Now, you can also view it as general

11 terminology, too. Anything that, uh, comes back

12 from a -- a particular wound is maybe considered,

13 as a general term, as blowback.

14 Q Right. But it -- it's not uncommon, though, in,

15 uh, a case -- an investigation involving, uh,

16 homicide, and there's a firearm involved, to

17 request that type of examination on a suspected

18 weapon? Is that a fair statement?

19 A I think that's -- that's been requested before, yes.

20 Q Fairly regularly where there's a gun involved?

21 In your experience.

22 A I -- You know, it -- it's not your, um -- your fairly

23 regular question -- or um, request, but it definitely

24 has -- does -- is requested.

25 Q And I take it you've done those type of

1 examinations previously in your career?

2 A I have examined, um, guns or firearms for the  
3 presence of it, yes.

4 Q But in this case nobody asked you to do that?

5 A I did not see the weapon, no.

6 Q Okay. All right. Thank you.

7 ATTORNEY EDELSTEIN: Pass the witness.

8 ATTORNEY GAHN: Just a couple questions,  
9 Your Honor.

10 **REDIRECT EXAMINATION**

11 BY ATTORNEY GAHN:

12 Q Mr. Stahlke, the blood patterns, or the blood  
13 stains, that you observed in the threshold area  
14 of the, uh, cargo -- of the rear cargo area of  
15 Teresa Halbach's car, or on the bumper, um, you  
16 would not be able to tell whether those blood  
17 stains came from the head area of Teresa or any  
18 other part of her torso?

19 A That's correct.

20 Q And, um, when you talked about, um, blood from a,  
21 um -- a cut to the neck, or a -- a throat being  
22 cut, the amount of blood would determine how  
23 large the cut is? How deep it is; correct?

24 A Well, it -- it can be the size of the wound and it  
25 could also be a matter of time.

1 Q I mean, if an artery or aorta or something is  
2 hit, you will, but if there is -- I mean,  
3 someone -- you can cut your throat shaving and  
4 you're not going to have a lot of blood?

5 A No.

6 Q You can have a superficial cut to the neck and  
7 there's not going to be a lot of blood?

8 A Correct.

9 Q And the same thing from your analysis, or crime  
10 scenes, a single stab wound to the torso, say the  
11 stomach area, or even the chest area, may be all  
12 internal bleeding as opposed to any external  
13 bleeding; is that fair to say?

14 A Well, that's true. And it -- There's other variables  
15 as well. It could be you could have clothing on, or  
16 something on that order, and it can trap the blood  
17 that's -- had been, uh, leaking out of that, or  
18 projected out of that, particular wound as well.

19 Q And -- and, finally, with, um, regard to blood  
20 stain patterns, um, and how they're left, blood  
21 stain patterns also can be, uh, cleaned up, can't  
22 they, afterwards, and there wouldn't be any  
23 patterns available?

24 A That's true.

25 Q Correct? And someone could use bleach to clean



1 up blood, uh, stains?

2 A Yes.

3 Q And that could destroy, um, any, uh, future  
4 finding of the biological substance, or DNA, or  
5 whatever it may be? Is that fair to say?

6 A That's fair to say.

7 Q Thank you. That's all I have.

8 THE COURT: Any recross?

9 ATTORNEY EDELSTEIN: Just one.

10 **RECROSS-EXAMINATION**

11 BY ATTORNEY EDELSTEIN:

12 Q There's absolutely nothing that you saw on the  
13 back of that RAV 4 suggested use of bleach;  
14 correct or incorrect?

15 A I do not have any -- any information of that. No. I  
16 didn't see anything that would indicate that. No.

17 ATTORNEY EDELSTEIN: That's all.

18 THE COURT: All right. You may step down.

19 ATTORNEY FALLON: State would call Susan  
20 Brandt. Hold on. Excuse me.

21 ATTORNEY GAHN: Your Honor, I would  
22 offer, um, the exhibits, um -- just one second --  
23 165, 166 and 167 into evidence.

24 THE COURT: Any objection?

25 ATTORNEY FREMGEN: No.

1 THE COURT: Received.

2 THE CLERK: Please raise your right hand.

3 **SUSAN BRANDT,**

4 called as a witness herein, having been first duly  
5 sworn, was examined and testified as follows:

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

8 THE WITNESS: Susan Brandt, B-r-a-n-d-t.

9 **DIRECT EXAMINATION**

10 BY ATTORNEY FALLON:

11 Q What do you do for a living at this time?

12 A I'm a stay-at-home mom.

13 Q All right. And, um, how many children do you  
14 have?

15 A Three.

16 Q All right. What is your, um, educational  
17 training?

18 A I have a Bachelor's in psychology and a Master's in  
19 counselor education.

20 Q All right. And when did you receive your  
21 Bachelor's Degree?

22 A I graduated, um, December of 2002.

23 Q And from which institution?

24 A The University of Wisconsin-Platteville.

25 Q And your Masters Degree, uh, when did you receive

1           that?

2    A    I graduated May of 2006.

3    Q    All right. And from which institution?

4    A    The University of Wisconsin-Platteville also.

5    Q    Directing your attention to a time period of

6           January, 2006 until May of 2006, while you were a

7           student, did you have any internship or

8           employment associated with your pursuit of your

9           Master's Degree?

10   A    Yes.

11   Q    And where were you employed?

12   A    I was an intern at Mishicot Middle School and

13           Mishicot High School.

14   Q    All right. Tell us about your internship

15           arrangement at the, uh, middle school?

16   A    I had worked with, um, Karen Baumgartner in the

17           middle school guidance office in the morning, and in

18           the afternoon I worked with Amber Fox-Brewer in the

19           afternoon.

20   Q    And that was at the high school?

21   A    At the high school.

22   Q    All right. And were you, um, at the schools on a

23           daily basis in your internship capacity?

24   A    Yes. I worked, um, Monday through Thursday, and I

25           had Fridays off.

1 Q Um, directing your attention to January of 2006,  
2 early January, did you have occasion to have  
3 contact with a student by the name of Kayla  
4 Avery?  
5 A Yes.  
6 Q Um, would you describe for us, um, first and  
7 foremost, um, how that contact occurred?  
8 A Kayla came into the counseling office and asked to  
9 speak to a counselor.  
10 Q All right. And, um, who was present when she  
11 came in and asked to speak with a counselor?  
12 A It was myself and Karen Baumgartner.  
13 Q Tell us what happened?  
14 A Kayla came in, um, to the office, and, um, she was  
15 asked by Ms. Baumgarner -- Ms. Baumgartner if she  
16 minded that I was there, and Kayla said, no. And she  
17 said she was there because she was feeling scared.  
18 Q All right. Let me stop you there, first, and ask  
19 who else, if anyone, was present for this  
20 conversation?  
21 A No one else.  
22 Q All right. So there's just the three of you?  
23 A Correct.  
24 Q All right. And did Kayla reveal to the two of  
25 you why she was feeling scared and why she wanted

1           to talk?

2    A    Yes.

3    Q    And what did she tell you?

4    A    She told us that she was scared, um, because her

5           uncle, Steven Avery, had asked one of her cousins to

6           help move a body.

7    Q    All right. What else, if anything, did she tell

8           you about that?

9    A    She also said she was scared about going to the shop,

10           um, and she, specifically, asked if blood can come up

11           through concrete.

12   Q    All right. Now, was -- Did she identify which of

13           her cousins may have been asked by her uncle,

14           Steven Avery, to move this body?

15   A    No.

16   Q    All right. Describe for us, if you will, Kayla's

17           demeanor, her affect, during these revelations?

18   A    She -- She was scared.

19   Q    All right. Did she seem at all confused?

20   A    No.

21   Q    Was this the first time you, um, ever, uh, had

22           contact with Kayla?

23   A    Yes.

24   Q    All right. Um, your best estimate, approximately

25           how long did this conversation take?

1 A My best guess would be 15 or 20 minutes.

2 Q All right. How was Kayla's demeanor at the  
3 conclusion of this discussion?

4 A I think she still felt scared, but maybe a little bit  
5 more relieved.

6 Q All right. Did she, at the end of the  
7 conversation, um, seem confused by anything that  
8 she was telling you?

9 A No.

10 ATTORNEY FALLON: I'll pass the witness.

11 THE COURT: Cross.

12 **CROSS-EXAMINATION**

13 BY ATTORNEY FREMGEN:

14 Q You said this was the first time you've met  
15 Kayla?

16 A Yes, that's correct.

17 Q So you had no perspective as to what her normal  
18 demeanor is?

19 A No.

20 Q Don't know if she's normally a scared girl?

21 A No.

22 Q You had, uh, no way of telling whether she was  
23 telling you the truth; correct?

24 A Correct.

25 ATTORNEY FALLON: Objection. Improper

1 question. Commenting on the veracity.

2 THE COURT: I -- You're correct. Uh, the  
3 objection's sustained. Credibility is solely to be  
4 judged by -- by this jury.

5 ATTORNEY FALLON: Move to strike.

6 THE COURT: Motion granted. Question is  
7 struck.

8 Q (By Attorney Fremgen) You don't have any --  
9 Again, because this is the first time you met  
10 her, you don't know her reputation for telling  
11 the truth; correct?

12 A Correct.

13 Q Now, you indicated that you had both, uh, a -- a  
14 Bachelor's Degree and -- were -- did you have a  
15 Master's at this point?

16 A No.

17 Q Were you working on it? This was the internship  
18 portion of the Master's?

19 A Correct.

20 Q And you've taken a number of classes in child  
21 development?

22 A Yes.

23 Q Number of classes, uh, or courses of study that  
24 deal with, um, children in general?

25 A Yes.

1 Q It -- Is it fair to state in your studies that,  
2 uh, one -- maybe not a common -- theme with  
3 children is that they sometime -- sometimes are  
4 looking for attention; is that correct?

5 A Sometimes.

6 Q Okay. And they do things that sometimes it's  
7 just intended to draw attention to themselves?

8 A Correct.

9 ATTORNEY FREMGEN: I have nothing else.

10 THE COURT: Any redirect, Counsel?

11 **REDIRECT EXAMINATION**

12 BY ATTORNEY FALLON:

13 Q Was there any point during this meeting that you  
14 thought she was just there to get some attention?

15 A No.

16 ATTORNEY FALLON: That's it.

17 THE COURT: All right. The witness may  
18 step down.

19 ATTORNEY KRATZ: State would call Jodi  
20 Stachowski to the stand.

21 THE CLERK: Please raise your right  
22 hand.

23 **JODI STACHOWSKI,**  
24 called as a witness herein, having been first duly  
25 sworn, was examined and testified as follows:



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

3 THE WITNESS: Jodi Stachowski,  
4 S-t-a-c-h-o-w-s-k-i.

5 **DIRECT EXAMINATION**

6 BY ATTORNEY KRATZ:

7 Q Ms. Stachowski, you'll have to speak right into  
8 the microphone so that we can all hear what  
9 you're saying. Ms. Stachowski, in, um -- during  
10 the year 2005, and up to and including Halloween  
11 of 2005, were you involved in a, uh, relationship  
12 with an individual?

13 A Yes, I was.

14 Q Who was that relationship with?

15 A Steven Avery.

16 Q And what, in fact, was your relationship with  
17 Mr. Avery during that year?

18 A I was his fiancé.

19 Q Ms. Stachowski, I'm going to direct your  
20 attention to October 31 of 2005, uh, ask if you'd  
21 tell the jury, please, where you were physically,  
22 uh, located that day, if you recall?

23 A I was in the Manitowoc County Jail.

24 Q And can you tell the jurors, please, why it was  
25 that you were in jail at that time?

1 A For a fifth drunk driving.

2 Q All right. During your stay at the Manitowoc

3 County Jail, uh, which included, uh, Halloween of

4 2005, did you have occasion to remain in contact

5 with your then fiancé, Steven Avery?

6 A Yes, I did.

7 Q When was it, Ms. Stachowski, that you went into

8 jail? That is, when was it that you had to

9 report to jail, if you can remember?

10 A I believe it was in August.

11 Q All right. And how long of a stay? That is, how

12 long were you scheduled to be in jail from

13 August, '05?

14 A Seven months.

15 Q Between August, then, and October 31 of '05, uh,

16 how regularly would you remain in contact with

17 Mr. Avery?

18 A I talked to him once a day.

19 Q Were there any occasions, Ms. Stachowski, when

20 you would talk to Mr. Avery on more than one

21 occasion during a particular day?

22 A Yeah.

23 Q All right. And how would those conversations

24 occur? In other words, were they in person or

25 were they on the telephone?

1 A On the telephone.

2 Q Could you tell the jurors, please, how those  
3 phone calls would be placed? That is, would you  
4 place the calls to Mr. Avery or would he call  
5 you?

6 A I had to call him collect.

7 Q Let me ask you, Ms. Stachowski, do you remember  
8 October 31 of 2005? And, specifically, do you  
9 remember placing any calls to your fiancé, Steven  
10 Avery?

11 A Yes.

12 Q On October 31, 2005, on how many occasions did  
13 you talk to Mr. Avery?

14 A I called Steven twice that day.

15 Q And could you tell the jurors about what times  
16 those two calls were placed?

17 A The first one was about 5:30, and then the second one  
18 about 9:30.

19 Q All right. Are those estimates, Ms. Stachowski?

20 A As close as I can remember, yes.

21 Q How long would those phone calls last?

22 A Fifteen minutes.

23 Q And how do you know they lasted 15 minutes? In  
24 other words, was there something with the jail  
25 that --

1 A Yeah. They just disconnected after 15 minutes.

2 Q All right. Ms. Stachowski, the last area of --

3 of inquiry I have for you for this trial is the,

4 um, arrangement or setup of Mr. Avery's, um,

5 trailer. First of all, are you familiar with,

6 uh, Mr. Avery's, um, residence? With his

7 trailer?

8 A Yes.

9 Q Did you live in that trailer prior to you having

10 to go to jail in August of '05?

11 A Yes, I did.

12 Q And at the time that you lived there, did you and

13 Mr. Avery share the same bedroom?

14 A Yes.

15 Q Describe, if you will, um, the kind of furniture

16 that Mr. Avery had, or that you and Mr. Avery

17 shared, in his bedroom? Uh, that is, prior to

18 you going into jail.

19 A There was the bed, a filing cabinet, a desk, a

20 bookcase, dresser, and a TV.

21 Q All right. Do you remember, Ms. Stachowski,

22 prior to your going into the jail, if Mr. Avery

23 had any, uh, gun racks or firearms on the wall?

24 A There was a gun rack with two guns on the wall.

25 Q Do you know what kind of guns those were? If you

1           don't, that's fine. I'm just --

2   A       No.

3   Q       -- just asking. All right. I'm going to show

4           you what has been received as Exhibit No. 73.

5           This is a computer-generated diagram. Um, first

6           of all, at least from the standpoint of having a

7           bed, uh, a desk, a bookcase, uh, and a

8           nightstand, or filing cabinet, and a dresser,

9           assuming that's what that is down there, uh, is

10          that the same kind of furniture that Mr. Avery

11          and you had in that bedroom before you went into

12          jail?

13   A       Yes.

14   Q       Now, before you went into jail, looking at

15          Exhibit No. 73, was the room set up or configured

16          that way?

17   A       No, it wasn't.

18   Q       Could you tell the jurors, please, how it was

19          different? What -- First of all, where was the

20          bed when -- uh, when you went into jail? How was

21          it situated?

22   A       In the corner underneath the two windows. When you

23          first walk in the door, you'd walk straight into the

24          bed.

25   Q       All right. And so if I'm taking a laser pointer,

1           uh, and pointing, um, what would be to the, uh,  
2           top right, or towards the bottom left, uh, is it  
3           a fair characterization that the bed was facing  
4           this way?

5       A     Yes.

6       Q     Which, uh, side, or which wall was the headboard  
7           on?

8       A     The headboard was on the farthest wall, the small  
9           window.

10      Q     And I'm pointing, uh, to, uh, the wall, which  
11           would be the east wall, of the trailer. Um, is  
12           that the wall that the headboard was on?

13      A     Yes.

14      Q     The headboard was here and the bed was, uh,  
15           along, um, that way; is that -- is that correct?

16      A     That's correct.

17      Q     Okay. Now, was the bed all the way against this  
18           right-hand or, uh, south wall, or was it away  
19           from the wall?

20      A     It was against the wall.

21      Q     So it was abutted all the way up against --

22      A     Yeah.

23      Q     -- the wall? The, um -- This bookcase, um, that  
24           we see, uh, depicted in Exhibit No., uh, 73, can  
25           you tell us where that was located while you were

1           there?

2   A    That was located on the wall where the bed is

3           underneath the guns.

4   Q    All right.  And where was the nightstand?

5   A    Next to the bed.

6   Q    Um --

7   A    Like right there.  Yeah.

8   Q    Would be right next to the door?

9   A    Yep.

10   Q   So the nightstand would be here, and the bed

11           would -- would -- would be this way right next to

12           it; is that right?

13   A    Yes.

14   Q    All right.  A -- assuming that this dresser --

15           and I can show you another version if I need

16           to -- but assuming the dresser is kind of

17           kitty-corner, uh, in the, uh, southwest corner of

18           the bedroom, would that have been in about the

19           same place?

20   A    Yes.

21   Q    I'm going to show you one more photo just to kind

22           of orient us.  This is Exhibit No. 75.  I think

23           you've told us that the bed was along, uh, this

24           wall with the headboard underneath, uh, the east

25           window; is that correct?

1 A That's correct.

2 Q As you looked down this hallway, then -- This is  
3 a hallway; is that right?

4 A Yes.

5 Q As you looked down this hallway, uh, and through  
6 the open doorway, uh, would you be able, then, to  
7 see the bed?

8 A Yes, you would.

9 Q All right.

10 ATTORNEY KRATZ: That's all the  
11 questions today for Ms. Stachowski, then, Judge.  
12 Thank you.

13 THE COURT: Counsel? Cross?

14 ATTORNEY FREMGEN: I guess I just have  
15 one -- Excuse me. I just have one question.

16 **CROSS-EXAMINATION**

17 BY ATTORNEY FREMGEN:

18 Q Your testimony is essentially that the  
19 configuration of the bedroom in August is  
20 different than the picture here?

21 A Yes.

22 ATTORNEY FREMGEN: Nothing else.

23 THE COURT: All right. You may step down.

24 ATTORNEY KRATZ: This might be a good  
25 time for our afternoon break, Judge.



1 THE COURT: All right. We'll take 15  
2 minutes. We'll be back at approximately quarter --  
3 well, ten -- ten of three.

4 (Recess had at 2:33 p.m.)

5 (Reconvened at 2:54 p.m.)

6 THE COURT: Your next witness, Counsel?

7 ATTORNEY FALLON: State would call  
8 Mr. Tom Sturdivant.

9 **THOMAS STURDIVANT,**  
10 called as a witness herein, having been first duly  
11 sworn, was examined and testified as follows:

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

14 THE WITNESS: Special Agent Thomas Allen  
15 Sturdivant. It's S-t-u-r-d-i-v-a-n-t.

16 **DIRECT EXAMINATION**

17 BY ATTORNEY FALLON:

18 Q What do you do for a living?

19 A I'm a special agent with the Wisconsin Department of  
20 Justice, Division of Criminal Investigation,  
21 Narcotics Bureau.

22 Q How long have you been employed for the Wisconsin  
23 Department of Justice?

24 A Since 1998.

25 Q Prior to that time, did you hold any other law

1 enforcement, um, positions?

2 A I did. I worked for the, uh, Maine State Police in  
3 the state of Maine.

4 Q And how long did you work for the Maine State  
5 Police?

6 A Approximately 11 years.

7 Q Uh, you indicated your current assignment is the  
8 Narcotics Bureau for the Division of Criminal  
9 Investigation. Prior to that assignment, did you  
10 have any other assignment?

11 A Yes. I worked in both the Financial Crimes Bureau,  
12 as well as the Arson Bureau.

13 Q And how much time did you spend in the Arson  
14 Bureau?

15 A Approximately two years.

16 Q During what time frame would that have been  
17 roughly?

18 A Uh, that would be roughly between 2003 and 2005.

19 Q All right. Now, Mr. Sturdivant, I'd like to  
20 direct your attention to, uh, Tuesday afternoon,  
21 November 8, 2005. At that particular time were  
22 you currently in the employ of the Department of  
23 Justice?

24 A I was.

25 Q All right. Uh, on that particular day were you

1           asked to assist in execution of a search warrant  
2           at the Avery Salvage Yard?

3   A     I was.

4   Q     And where is that salvage yard located,  
5           generally? Which county?

6   A     Uh, Manitowoc County.

7   Q     All right. What, um, in particular, on that day,  
8           were you asked to do?

9   A     I was asked to do a couple of things. One was to  
10          execute a search warrant at the Avery business. The  
11          junkyard business. And, secondly, I was asked to go  
12          out and take a look at so-called hot spots. These  
13          were just areas that were identified by the state  
14          troopers as having some, um -- some -- some areas of  
15          interest. Perhaps they might have been ashen sites,  
16          they might have been a motor vehicle, they might have  
17          been a variety of other things.

18   Q     All right. And in terms of, um, one of these  
19          spots, was there a time where you were asked --  
20          or your attention was directed to an area behind  
21          the garage identified as Steven Avery's garage?

22   A     Yes. Uh, sometime after 1:30, I was asked to go over  
23          and take a look at some of these so-called places  
24          that -- of interest, and one happened to be a -- a --  
25          behind the Steven Avery garage, and, uh, Manitowoc

1 officer, Jason Jost, was standing over what, uh, in  
2 my opinion, was a -- a piece of charred, uh, bone  
3 matter, which was about, uh, um, six or eight feet  
4 from the pile of dirt behind the garage.

5 Q All right. And how was your attention directed  
6 to that area?

7 A I think at some point, um, we were asked to go out --  
8 uh, prior to 1:30 -- go out and take a look at some  
9 of these places of interest. And as I walked over  
10 there, myself and Special Agent Deb Straus were  
11 basically summoned by, uh, Deputy Jost to come over  
12 and take a look at an item that he was standing, uh,  
13 near.

14 Q All right. And when your attention was directed  
15 to that area, what did you, um -- what did you  
16 do?

17 A Well, the first thing I did is when I walked over  
18 and -- and -- by the deputy, he pointed out this  
19 piece of material that was lying on the ground, which  
20 appeared to be about, uh -- about one inch in  
21 length -- one -- one inch by one inch, which appeared  
22 to me, again, to be a piece of charred bone matter.

23 Q All right. Um, and to begin with, I'd like to,  
24 uh -- the skee (phonetic) the screen to, uh,  
25 project, uh, Exhibit 132, um, first, and then,

1           uh, we're going to have two more photographs  
2           marked.

3                   Um, your attention is directed either to  
4           the screen in front of you or the one to your  
5           immediate left. Um, do you recognize that  
6           particular area? Exhibit 132?

7   A    I do.

8   Q    All right. Tell us about that. What is depicted  
9           there?

10   A   What is depicted here is a -- What is depicted here  
11           is a pile of gravel, which I estimated to be  
12           approximately 30 feet by 30 feet, um, which gradually  
13           rises to approximately two feet in height, and it's  
14           sand and gravel piled up on the natural landscape.  
15           And this was directly behind the -- Steven Avery's --  
16           the, uh, detached two-car garage.

17                   And in the center of this pit -- And in  
18           the center of this, uh, 30-foot by 30-foot pile  
19           of gravel here was what I considered a -- or I --  
20           I refer to it as a burn pit, which is about six  
21           feet wide, and it appeared to me as though  
22           somebody had come in with a six-foot scoop and  
23           scooped out six feet of this gravel. This  
24           wasn't -- The -- This pile of gravel wasn't  
25           natural to the landscape. It had been placed on

1 top of the grass behind Steven Avery's garage.

2 Q All right.

3 A And the piece of bone fragment that I initially --

4 Q We'll get to that in just a minute. I think we

5 have, uh, two more other photographs in front of

6 you that might be illustrative. Um, what are the

7 exhibit numbers on those photographs, please?

8 A The first one I looked at was Exhibit 0-4-1-8-0-7.

9 I'm sorry, 06 CF 88. Exhibit 168.

10 Q Exhibit 168?

11 A Yes.

12 Q Thank you. All right. And, um, we're going to

13 have that projected in just a moment. All right.

14 Now, um, the exhibit which is depicted on the

15 screen now, is that 168?

16 A Yes, it is.

17 Q All right. Now, um, is that a fair and accurate

18 portrayal of this burn area at the time you first

19 set eyes on it?

20 A Yes, it is.

21 Q All right. We note that there is a, uh -- a

22 German or Belgian Shepherd appearing there?

23 A Yes.

24 Q Uh, was that dog present when you first

25 discovered the area?

1 A Yes, it was.

2 Q Uh, tell us about that particular dog, if you  
3 would?

4 A This was a large German Shepherd-type dog that was  
5 a -- very aggressive, and would actually lunge at  
6 people as they walked towards this mound of dirt.  
7 The doghouse was positioned on top of the dirt and  
8 the dog could reach, um, around the mound of dirt.  
9 Um, and, again, it was -- it was barking, it would  
10 lunge at people, and -- and I was also told that the  
11 dog might have bit a, uh, trooper.

12 ATTORNEY EDELSTEIN: Um, that -- that's  
13 hearsay. Ask that it be stricken.

14 ATTORNEY FALLON: It's not a matter,  
15 uh --

16 THE COURT: It will -- It will --  
17 Objection's sustained. Strike that last remark  
18 about the dog biting.

19 ATTORNEY FALLON: All right.

20 Q (By Attorney Fallon) Now, I note that there is a  
21 red, um, box-like, or shed, um, item which  
22 appears on the left-hand side of the photograph.  
23 What is that?

24 A That is the doghouse.

25 Q All right. Now, um, you have one other

1 photograph in front of you. Let's talk a little  
2 bit about that.

3 A Okay.

4 Q Which photograph -- What exhibit number is that?

5 A That's Exhibit 169.

6 Q All right. And what is depicted in Exhibit 169?

7 A Depicted in this photo are a number of things. The,  
8 uh, swirl from the, uh, steel belt from the tires.

9 Q Let's use your, um, pointer, if you would, and --

10 A Sure.

11 Q -- identify for us what you believe is  
12 steel-belted wiring?

13 A This is -- This is what I believe to be steel-belted  
14 wiring from steel-belted tires. Another tire. Uh,  
15 this is a burned out, uh -- the burned out --  
16 completely consumed, um, uh, seat from a, uh -- what  
17 I thought might be a bench seat from a van. Um,  
18 also, in here, was, uh, what I believed to be bone  
19 fragment intertwined within the steel-belted, uh,  
20 tire, um, stuff here.

21 Q All right. All right. Let's take these a little  
22 bit, um, at a time. What was the first thing  
23 about this area that drew your attention to this,  
24 um, pit area as being, perhaps, somewhat  
25 significant? Or at least interesting?



1 A Well, the first thing that drew my attention to this  
2 burn pit was the bone fragment that was approximately  
3 eight feet away from the burn pit. As you're looking  
4 at this photo, that piece of bone fragment was about  
5 eight feet out this way.

6 Q All right. We're going to switch back to  
7 Exhibit -- I believe it was 168?

8 A Okay.

9 Q And, um, does that help you assist, perhaps, in  
10 placing the area where the fragment is?

11 A Yes, it does. The bone fragment's located, I  
12 estimated, about eight feet away from the -- the burn  
13 pit.

14 Q All right. Upon discovering that fragment, what  
15 did you do?

16 A I -- I looked at the fragment. I did not touch it.  
17 And I was curious about this pit, so I walked over  
18 towards the burn pit, looked at the burn pit, and  
19 noticed what I believed to be other or additional  
20 burned or charred bone matter within this pile of  
21 debris and around the burn pit.

22 Also, there was what I believed to be  
23 bone fragment intertwined in the steel belts --  
24 the steel -- of the steel-belted, uh, material  
25 here. And the other thing I did is I -- I had a

1           twig, I moved -- there were leaves in this --  
2           there's some leaves here, and I moved a couple  
3           leaves, and noticed what I thought to be was, uh,  
4           skull matter or skull bone fragments, um, within  
5           the -- the, uh, debris pile.

6   Q   All right. Now, there -- Yeah. There appear to  
7           be other implements, um, near the, uh, burn pile.  
8           Um, could you identify those for us?

9   A   Yes. I noticed a shovel, which was of a spade  
10           design. I also noted a hammer, um, a rake. There  
11           was a rake here as well. A screwdriver, um, and some  
12           other things, uh, within the burn area.

13   Q   All right. Upon making, um -- We're going to  
14           have a few exhibits brought in for you to  
15           examine. I'm having Investigator Wiegert hand  
16           you what is marked as Exhibit 170. Do you  
17           recognize that item?

18   A   Yes, I do.

19   Q   And what is Exhibit No. 170?

20   A   This is the rake that was, uh, at the -- the burn  
21           site.

22   Q   All right. And that is the one. All right. And  
23           if we could have the officer show you 171? While  
24           Investigator Wiegert is, um, taking that out,  
25           just so the record is clear, would you describe

1 the condition of the rake first?

2 A It's, um -- It's a handled rake, um, certainly  
3 partially burned. Um, the handle is partially -- or  
4 the, uh, rake, itself, is somewhat oxidized or  
5 rusted, and it's got leaves, and, um, metal, uh,  
6 perhaps steel belt, um, stuck in some of the, uh --  
7 the rake blades.

8 Q From your time in the, uh, Arson Bureau, you --  
9 are you familiar with the phrase, "alligatoring  
10 effect"?

11 A In terms of the burn?

12 Q Yes.

13 A Uh, to -- to a certain extent.

14 Q All right. Well, do you see any particular type  
15 of -- What -- What's the degree of burning on  
16 that, um -- that rake?

17 A Well, the burning is -- is -- is at the bottom, and  
18 working its way towards the top, meaning that more  
19 heat was applied to the bottom of this than the top.  
20 Therefore, you've got more charring and more burning  
21 from the bottom up.

22 Q All right. What do you call, in your experience,  
23 the -- that ridge-like effect on the wood that  
24 you're holding?

25 A The, um -- the specific name, um, escapes me but --

1 Q Okay.

2 A -- um -- But, you know, the heat -- By looking at

3 this, you can tell that it burned more from the

4 bottom than from the top, and it was used -- or

5 that -- in the fire at the bottom.

6 Q All right.

7 A So --

8 Q And the handle of that rake is made out of what

9 substance, just --

10 A Wood.

11 Q -- so --

12 A Wood.

13 Q Very good. All right. Would you take it -- a

14 look at Exhibit 171, please? Do you recognize

15 Exhibit 171?

16 A Yes, I do. Um, this is the spade that was at the

17 scene, um, as depicted in the photo as well, um, that

18 I observed, uh, near the burn pit, um, on November 8.

19 Q All right. And if you would, what is the handle

20 of the spade made out of?

21 A This would be a, uh -- a wood as well.

22 Q All right. And describe the condition of, first

23 of all, the spade, itself? The shovel portion of

24 the --

25 A The -- the -- the bottom of the shovel, the metal

1 part is what I would refer to as a spade, and it does  
2 show some signs of, also, being exposed to fire, um,  
3 with some of the charring, um, at the bottom of the  
4 blade, towards the blade, itself.

5 Q All right. Does the blade appear to be somewhat  
6 oxidized?

7 A Yes, it does.

8 Q Is that an unusual occurrence for metal being  
9 exposed to fire?

10 A No.

11 Q All right. Very good. I'll have Investigator  
12 Wiegert take that from you. Now, after you made  
13 the discovery of the bone fragment, which was  
14 about eight feet in front of the area that you've  
15 described, and then you said -- you indicated you  
16 used, perhaps, a twig or something to move some  
17 leaves to get a closer look at some of the other  
18 items directly in the -- the darkened area, which  
19 is depicted in, uh, Exhibit 168, um, which is  
20 portrayed on the screen, I believe?

21 A Yes.

22 Q All right. After you made these discoveries,  
23 what did you do?

24 A After -- after the bones, or bone matter, or charred  
25 matter, was discovered, at that point we made several

1 phone calls. We attempted to, um, contact some of  
2 the arson folks and have them come over. They were  
3 busy with other issues. We also contacted the Crime  
4 Lab folks, and because they were busy processing  
5 other, uh, scenes, it was probably, uh, an  
6 hour-and-a-half or so before the Crime Lab actually  
7 arrived at the burn pit.

8 Q All right. And who, in fact, arrived at the burn  
9 pit to assist you?

10 A The, uh -- The Crime Lab personnel were, um, John  
11 Ertl, uh, Chuck Cates, and Guang Zhang. Um --

12 Q All right. Prior to their arrival, did you  
13 attempt any processing of the pit yourself?

14 A Absolutely not.

15 Q All right. Um, when they arrived, tell us how  
16 the pit was processed?

17 A When the Crime Lab arrived at the scene, um, John  
18 Ertl and others, as -- as well as myself and Deputy  
19 Jost, assisted with erecting a sifting apparatus.  
20 And this is just not something one person can erect.  
21 It's a large, um, tripod-type to -- um, piece of  
22 equipment, and so it took a -- a couple of us, uh, to  
23 erect this thing. It's, again, a large tripod. It  
24 probably stands eight feet off the ground.

25 And from that, um, after -- after

1        putting up the tripod, we then attached sifting  
2        devices, which were probably two feet in width  
3        and maybe four feet in length, and, uh, begun to  
4        sift through that debris pile.

5        Q     All right. And, um, how did this sifting  
6        actually mechanically occur?

7        A     John Ertl, and some of the other Crime Lab folks,  
8        actually scooped up that debris material with a -- I  
9        believe a flat shovel, if I'm -- if my memory serves  
10       me correctly, placed that onto those sifting screens,  
11       which were, again, I think, two feet wide by four  
12       feet in length. There may have been more than one  
13       sifter. And as the debris is placed on top of what  
14       we sorted, and we picked out things that we felt were  
15       either bone fragments, teeth, um, metal grommets,  
16       zipper, uh, a, uh, piece of a metal belt buckle, and,  
17       um, so as we sifted through that, we took those  
18       things out that we thought might be bone matter and  
19       other things that might be of importance, and then  
20       placed those items into a box, um, that, uh, was  
21       turned -- or -- or -- that the Crime Lab took with  
22       them after we completed sifting that pile of debris,  
23       which is right there.

24       Q     All right. I'm showing -- I'm having  
25       Mr. Fassbender, um, show you Exhibit 172. If you

1           would take a moment to examine that exhibit? Do  
2           you recognize Exhibit 172?

3   A       Yes. This is -- This is the, uh, zipper that we  
4           picked out of the -- the debris that we were sifting  
5           through --

6   Q       All right.

7   A       -- from this pile.

8   Q       All right. Are there any particular markings or  
9           anything on that zipper?

10   A       Yes, there are.

11   Q       And would you tell us what they are, please?

12   A       They are in capital Y-K-K.

13   Q       All right. Very good. Thank you. Approximately  
14           how long did, um, the sifting process take that  
15           you engaged in?

16   A       I think -- I would -- I would just have to guess, was  
17           roughly two hours, and that included the time that we  
18           actually set up the apparatus, the sifting, and we  
19           sifted rapidly due to -- due to, uh, darkness.

20   Q       All right. And you indicated the presence of  
21           other, uh, implements or items, uh, in the  
22           general area of the pit?

23   A       Yes.

24   Q       I'd like you to, first of all, if you can recall,  
25           what was -- what implements, if any, were



1           actually found in the darkened area, which looks  
2           like the burn part? If you could recall what --  
3           what was found in that part?

4   A    I believe there was a screwdriver, hammer, um, of  
5           course, this, um, steel-belt wiring, a hacksaw blade,  
6           and I believe that was it to the best of my  
7           recollection.

8   Q    I'm having Investigator Fassbender show you  
9           Exhibit 173. Uh, is there, uh, an item depicted  
10          in there?

11   A    Yes. It's --

12   Q    Is that --

13   A    It's a screwdriver.

14   Q    We'll have that projected in just a moment. That  
15          is the screwdriver that you were, um, just  
16          speaking of?

17   A    Yes.

18   Q    Uh, the photograph also appears to depict some  
19          circular wire material?

20   A    Yes. In -- in -- in my opinion, this was more steel  
21          belt -- steel-belt wiring.

22   Q    All right. Very good.

23   A    And that was Exhibit 173.

24   Q    As, um, five o'clock drew near, what did you do?

25   A    As -- As darkness was nearing, um, we sifted what we

1       could, um, and I felt it was important to pick  
2       this--- these items up and get them to the Crime Lab,  
3       because at this point in time we don't know if Teresa  
4       Halbach is alive or dead. So it was important, with  
5       the impending darkness, to sift through this stuff,  
6       do it fairly quickly, be thorough, pick out what we  
7       could, and then get that to the Crime Lab so the  
8       Crime Lab could analyze that and make some sort of  
9       determination.

10               So after -- after we sifted through the  
11       remaining debris -- And we sifted this on top of  
12       a tarp that I think was six feet by eight feet.  
13       So the stuff that we sifted through we collected,  
14       we double- and triple-bagged that debris that was  
15       depicted in the picture, and placed that into the  
16       Calumet County, uh, evidence van, if you will.

17       So --

18   Q   All right. And how was the pit preserved, if at  
19       all, when you were done?

20   A   The pit -- Uh, we placed a tarp over the pit so that  
21       if this, in fact, turned out to be Teresa, that we  
22       would then go back and more closely examine that pit  
23       and, um -- a little closer.

24   Q   We're going to have you identify one more  
25       exhibit. Uh, Investigator Wiegert, um, prepared

1 the exhibit for your examination. This may  
2 require you to step off of the stand. I'm not  
3 sure how -- what your view will be. Just bear  
4 with us one moment. Um, Mr. Sturdivant, would  
5 you step forward? Um, I'll share my microphone  
6 with you so everyone can hear.

7 A Um-hmm.

8 Q Uh, we've had now produced, um, an exhibit marked  
9 174. And do you recognize it?

10 A I -- I don't know that I need it. I do. And then  
11 maybe we put up photo 169 or --

12 Q Sure.

13 A -- and I can just point that out to you.

14 Q Yep.

15 A This is a -- in my opinion, just a -- a burned out,  
16 um, bench seat frame from a motor vehicle that is  
17 clearly completely consumed. That was to the -- if  
18 you -- as you're facing this pit, if it's directly in  
19 front of us, this -- this seat, or bench seat, was  
20 immediate to the right, or the edge of it, towards  
21 the -- the burn pit.

22 Q All right. And just so it's clear, Exhibit 174,  
23 is this the seat which you observed at the scene  
24 and which is depicted in Exhibit 169?

25 A Yes, it is.

1 Q All right. You may have your seat. Thank you.  
2 Does it appear to be in substantially the same  
3 condition as it was when, um, you first observed  
4 it?

5 A It does.

6 ATTORNEY FALLON: Your Honor, at this  
7 time I would, um, move into evidence Exhibits 168  
8 through 174. Upon their receipt, uh, would  
9 tender the witness for cross-examination.

10 THE COURT: Any objection, Counsel?

11 ATTORNEY FREMGEN: No objection.

12 THE COURT: Uh, items 168 through 174 are  
13 received. And you may cross.

14 ATTORNEY FREMGEN: Thank you.

15 **CROSS-EXAMINATION**

16 BY ATTORNEY FREMGEN:

17 Q If I could just use those photographs? Thank  
18 you.

19 A You're welcome.

20 Q While I'm doing this, if I could ask you a couple  
21 of questions. Maybe a silly question, but I  
22 don't un -- I don't know the answer to this. As  
23 you looked at each item, you put on a pair of  
24 gloves; correct?

25 A Yes, I did.

1 Q Why do you do that?

2 A Well, because there's -- For one, there's, um, soot

3 on the items. And, two, to keep my hands clean.

4 And, secondly, just because it's something you

5 typically do when you're processing evidence.

6 Q So you -- It's just a normal occurrence for you

7 in your -- probably from being a -- a crime scene

8 tech for so long that you just, second nature,

9 grabbed some gloves?

10 A Yes.

11 Q I'm not a crime scene tech so that's why I --

12 (inaudible.)

13 A I'm not a crime -- crime scene technician, either.

14 Q Okay. This is, uh, Exhibit 169? The picture?

15 A Yes, sir.

16 Q And this, I believe you testified to, was

17 essentially the van seat with some steel-belted

18 tire wiring wadded up; correct?

19 A Yes, sir.

20 Q And just behind that is a tire; correct?

21 A Yes.

22 Q Obviously, that tire doesn't look burned --

23 A No.

24 Q -- correct? Is this the way the scene looked

25 when you got to this fire pit area?

1 A I do not recall some of these red flags being in  
2 the -- in the crime scene.

3 Q The van seat, itself, though, was not on the  
4 actual ashened area of the pit? It was off to  
5 the side like this?

6 A The van -- The van seat was close to the edge of the  
7 burn pit, and this -- there -- we don't have -- this  
8 isn't a complete photo, so I'm not certain how close  
9 that is to the pit.

10 Q So did someone move the van seat to where it's at  
11 now?

12 A It's hard to depict from this photo exactly where the  
13 burn pit is, but the seat was located -- that's  
14 your -- that's a -- that's -- that's a fairly  
15 accurate representation of where that seat was.

16 Q Okay. I -- I guess I was under the impression  
17 from your previous answer that that -- you said  
18 that the van seat, itself, was somewhere in this  
19 area when you first arrived?

20 A Maybe we can get a better photo, but the van seat was  
21 to the immediate right of the burn pit.

22 Q Okay. I'll show you Ex -- Exhibit 168 again.  
23 The large -- larger picture of the burn pit?

24 A Yes. The seat would have been right here, right  
25 beside the pile of steel-belted wire.

1 Q Do you know who moved it?

2 A I do not.

3 Q Was it, uh, some other -- some other officer or

4 someone else that was at the scene before you?

5 A I assume that was moved after the scene. Probably

6 taken into evidence.

7 Q Agent, I'm going to show you what's been marked

8 Exhibit 175. Can you describe what that picture

9 or photograph shows? And then I'll put it on

10 the --

11 ATTORNEY KRATZ: If you just hit one,

12 it's all cued up.

13 ATTORNEY FREMGEN: Great.

14 Q (By Attorney Fremgen) Now, using this

15 photograph, can you better --

16 A Yes.

17 Q -- describe --

18 A Um-hmm.

19 Q Okay.

20 A All right. This -- This is the burn pit, and this is

21 a seat to the right of the burn pit.

22 Q Okay. But as far as you know, the seat, itself,

23 had not been on the -- the burn pit area where --

24 the sunken area when you arri -- rived. It was

25 where it is --

1 A It was --  
2 Q -- now in the picture?  
3 A Right. It was not -- The burn -- The -- The seat was  
4 not on top of the debris pile. It was to the right.  
5 Q Okay. Now, you indicated you found some  
6 smallen (phonetic) -- what you believed to be  
7 smallen pieces of bone in the -- that large wad  
8 of steel belts?  
9 A Yes.  
10 Q Did you find any in the van seat?  
11 A No. The, uh -- The bone material was intertwined in  
12 all this steel belt.  
13 Q You -- you mentioned that what drew your  
14 attention to this area in particular was having  
15 seen a small bone fragment about eight feet from  
16 the front end of the bone -- of the burn pit?  
17 A Yes, sir.  
18 Q And about how big a bone fragment was it?  
19 A As I estimated, it was about one inch by one inch.  
20 Just a small bone fragment.  
21 Q Could you tell by looking at that bone fragment  
22 whether it was human or animal?  
23 A I could not.  
24 Q Do you have expertise in bone fragments? Being  
25 able to distinguish between human and the -- and



1           the animal?

2   A    I do not, sir.

3   Q    When you refer to a skull bone fragment in the

4           burn pit, you don't have an expertise that it's

5           distinguished between skull fragments and other

6           fragments?

7   A    No, sir.

8   Q    You were just assuming?

9   A    Wasn't assumption. I think what -- what I -- I

10          testified to is I thought that it was important that

11          we pick these bones up and have them analyzed to

12          determine whether or not they were human bones and

13          Teresa Halbach's.

14   Q    Okay. But, I mean, at the time you arrived --

15          arrived at the scene, you didn't know what they

16          were?

17   A    I did not, sir. No.

18   Q    But they at least provided you with some sort of

19          ev -- potential evidential value that you wanted

20          to protect it or preserve it?

21   A    That's correct.

22   Q    In Exhibit 173 -- I'll put that back up on the

23          ELMO -- you were describing the screwdriver in

24          the middle of this pit area; correct?

25   A    Yes, sir.

1 Q And, actually, I -- I think I might have  
2 misspoke. It's actually on the outer edge of the  
3 pit area?

4 A Well, I believe the screwdriver was -- I consider the  
5 pit the concave area, or that area that had that  
6 six-foot rectangular area that was scooped out.

7 Q The screwdriver, did it -- was it burned?

8 A I believe it just had -- you can see soot on the  
9 handle. Did not see any indication where it's burned  
10 here.

11 Q Nothing on the, uh -- the metal portion?

12 A No.

13 Q Didn't have that same look, for instance, as the  
14 spade of -- of -- of the shovel?

15 A No. This is, uh, the way it appears.

16 Q Okay.

17 ATTORNEY FREMGEN: Thank you, Your  
18 Honor. I have nothing else.

19 THE COURT: Any redirect?

20 ATTORNEY FALLON: None.

21 THE COURT: You may step down.

22 THE WITNESS: Thank you.

23 THE COURT: You're welcome.

24 ATTORNEY FALLON: We have one last  
25 witness.

1 THE COURT: All right.

2 ATTORNEY FALLON: State would call, um,  
3 Don Simley to the stand.

4 THE COURT: Why don't you just remain  
5 standing there and take the oath, please.

6 DONALD SIMLEY,  
7 called as a witness herein, having been first duly  
8 sworn, was examined and testified as follows:

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

11 THE WITNESS: My name is a Donald O.  
12 Simley, S-i-m-l-e-y. It's the 2nd.

13 DIRECT EXAMINATION

14 BY ATTORNEY FALLON:

15 Q What do you do for a living?

16 A I'm a general dentist in Madison, Wisconsin.

17 Q And how long have you been employed in that  
18 capacity?

19 A I graduated from Marquette University in 1976, and  
20 have been there ever since.

21 Q Uh, what type of dentistry, um, do you practice?

22 A Uh, general dentistry is a family dentistry where I  
23 take care of patients and their general oral health.  
24 I also am a consultant in forensic dentistry.

25 Q All right. And, um, what is forensic dentistry?

1 A Forensic dentistry can, basically, be defined as the  
2 application of the science of dentistry to the field  
3 of law. I'm sorry. Slow down? The application of  
4 science of dentistry to the field of law.

5 Uh, there are a number of different  
6 areas that can be involved in forensic dentistry.  
7 Uh, routine dental identifications are the most  
8 commonly involved where individuals that are --  
9 are not viewable or visually identifiable need to  
10 be identified. Um, mass disaster involvement,  
11 uh, just dental identifications taken to a -- a  
12 higher number. Uh, child abuse cases. Uh, bite  
13 mark evidence, uh, dental malpractice and  
14 negligence in trauma of injury that are involved  
15 in litigation.

16 Q All right. And how is it that you are involved  
17 in this case, Doctor?

18 A Uh, received a phone call from, uh, Special Agent  
19 Duranda Freymiller, on November 9 of 2005.

20 Q What were you asked to do?

21 A She asked me to assist in the identification of -- of  
22 an individual that was recovered in Manitowoc County.

23 Q All right. And, um -- And why are you here  
24 today?

25 A Uh, to render my opinion after analysis of the

1           remains and to give my opinion.

2   Q   All right. Well, before we get to the opinion,  
3       uh, and your findings in this case, um, if you  
4       would tell us a little bit about yourself. First  
5       of all, tell us, uh, where you received your  
6       undergraduate degree?

7   A   I graduated, uh, from Elmhurst College in 1960 --  
8       '72, I'm sorry. Uh, received a B.S. Degree there.  
9       And then in 1976 I graduated from Marquette  
10      University, School of Dentistry.

11   Q   And if you would tell us a little bit about, um,  
12      your forensic dental experience? What are some  
13      of the types of things that you did?

14   A   Um, well, I've been in -- involved in forensic  
15      dentistry since 1981. Um, most of the cases I -- I  
16      do are -- are dental identification cases. Again,  
17      bite mark evidence, um, child abuse cases. Uh, been  
18      involved in 435 cases, approximately. Uh, that does  
19      not include work where I was involved in the World  
20      Trade Center and down in Katrina. Um --

21   Q   We'll touch -- touch base with them in just a  
22      moment.

23   A   Okay.

24   Q   Um, just so that we're clear, tell the jury what  
25      a dental identification is? What does it mean?

1 A Dental identification is -- it's a means of positive  
2 identification. If -- if an individual is, uh,  
3 decomposed, or skeletonized, or burned beyond  
4 recognition, uh, if there's been disfigurement to the  
5 face, uh, where a visual identification is not  
6 applicable, or fingerprint, uh, identification is not  
7 available, uh, sometimes you resort to dental  
8 identifications, which is usually easier, quicker,  
9 cheaper than -- than DNA.

10 Q All right. And, um, have you been called upon,  
11 um, to, uh, render expert opinion on dental  
12 identification in the past?

13 A Yes, sir, I have.

14 Q Uh, any estimate as to approximately how many  
15 times you've been asked to express an opinion?

16 A Meaning in-court testimony?

17 Q Regarding an -- a dental identification, yes.

18 A I've testified, I believe, 32 times. Most of those  
19 were involved with dental identifications. Um,  
20 probably three-quarters of them. The other ones were  
21 in bite mark cases, and I think there's only one that  
22 was involved in an injury case. Personal injury  
23 case.

24 Q All right. Tell -- You mentioned something  
25 about, uh, disaster response experience. You

1        mentioned something about the World Trade Center  
2        and Katrina. How were you involved in those  
3        types of responses?

4        A    I'm a member of a -- a national disaster team. It's  
5        part of what they call NDMS, or the National Disaster  
6        Medical System, which currently operates underneath  
7        the Health and Human Services. And it was under  
8        Health and Human Services at September 11. And then  
9        they restructured things. And then Katrina, they  
10       were actually underneath, uh, Department of Homeland  
11       Security and FEMA. And now we're back with Health  
12       and Human Services.

13                    And I've been involved with this NDMS,  
14       and they have a DMORT team, and DMORT stands for  
15       Disaster Mortuary Operational Response Team. And  
16       I've been involved with the DMORT team for a  
17       number of years, but I've only actually been  
18       deployed or activated twice. And once was for  
19       the World Trade Center and then once was for  
20       Katrina.

21       Q    And your role in those responses was what?

22       A    Two assist and help in the identification of the  
23       individuals.

24       Q    All right. Are you familiar with, uh, a -- a  
25       standing or a title called board certification?

1 A Yes, sir.

2 Q Tell us what that is?

3 A Um, to be board certified, uh, would indicate that  
4 you have a -- I'd say a higher degree of experience,  
5 or expertise, um, or training in the area of, in this  
6 particular case, forensic dentistry.

7 Uh, it means taking a -- a -- an  
8 examination. In my particular case, to be  
9 qualified, you have to submit an application. I  
10 believe the application that I submitted, uh, and  
11 I was board certified in 1993, was -- consisted  
12 of two, three-ring binders that were full of  
13 documentation of, uh, cases that I've been  
14 involved with, uh, court testimony, uh,  
15 documentation of affiliations with certain  
16 agencies, continuing education.

17 And then if you're deemed to be board  
18 eligible to take the examination, the examination  
19 is a -- it's a two-day written/oral examination  
20 that you have to take to pass.

21 Q All right. And so I take it, then, from your  
22 comments, you are a board certified forensic  
23 dentist?

24 A Yes, sir.

25 Q All right. Uh, how many board certified forensic



1 dentists are there in Wisconsin, for instance?

2 A There are only two of us in Wisconsin.

3 Q All right. And in terms of, um, generally, in  
4 North America, United States, and Canada, in  
5 particular, do you have any idea approximately  
6 how many board certified dentists there are?

7 A There are approximately a hundred board certified  
8 forensic dentists in -- in North America.

9 Q Do you belong to any professional organizations?  
10 Uh, you mentioned the National Disaster Medical  
11 System. Are there any other organizations that  
12 you, um, you are a member of that assist you in  
13 your forensic work?

14 A Uh, there are a number of different organizations  
15 that I -- I belong to. I'm not so sure that they  
16 assist me, although you -- I shouldn't say that  
17 either, because they -- they do assist me in the fact  
18 that you gain, uh, continuing education and  
19 additional learning experiences from these  
20 organizations.

21 Uh, the American Society of Forensic  
22 Odontology is kind of an entry level  
23 organization, but it's one of the biggest  
24 forensic organizations in the country and the  
25 world.

1                   The, um, American Academy of Forensic  
2                   Sciences, uh, is probably one of the premier  
3                   organizations in the United States.

4                   Um, I'm also a member of the Wisconsin  
5                   Association for Identification. Uh, the  
6                   Wisconsin Coroners and Medical Examiners  
7                   Association.

8                   Um, and then the board affiliation with  
9                   the American Board of Forensic Odontology. And  
10                  odontology is just a fancy name for dentistry.

11       Q       All right. And, um, drawing your attention just  
12               ver -- very briefly to Exhibit 182, um, do you  
13               recognize Exhibit 182?

14       A       Yes, sir, I do.

15       Q       What is Exhibit 182?

16       A       Uh, this is a copy of my CV, or curriculum vitae.

17       Q       All right. And is that an accurate summary of  
18               your educational and professional experience as  
19               it relates to the field of forensic dentistry?

20       A       Yes, sir, it is.

21       Q       All right. Now, to this case. When was it that  
22               you first became involved in the case, Doctor?

23       A       That would have been on November 9 of 2005.

24       Q       All right. And what were you asked to do?

25       A       Well, Special Agent Freymiller had asked me to assist

1           in the identification, and then Assistant, uh,  
2           District Attorney Jeff Froehlich, uh, had called and,  
3           um, wanted to know, number one, I -- that I'd already  
4           looked at some of the remains on that date, and  
5           wanted to know if they were human or nonhuman, and  
6           then he also wanted to know a little bit about my --  
7           my background and -- and my qualifications.

8   Q       All right. Uh, did it come to pass that you were  
9           asked to examine, um, items to determine whether  
10          or not they involved, uh, your field of forensic  
11          dentistry?

12   A       Yes, sir.

13   Q       And approximately how many items were you asked  
14          to examine and -- and attempt identification of?

15   A       There were six times that I received evidence. A  
16          total number of pieces of -- of potential evidence  
17          were 52, uh, potential items of evidence.

18   Q       All right. And tell us about those items? What  
19          did they consist of?

20   A       When I say potential, because, initially, it's --  
21          it's -- it's difficult to identify, uh, some burned  
22          and fragmented dental structures. Um, so potential,  
23          meaning that some of the items that were recovered  
24          were not dental structures, but it wasn't initially  
25          known then, or they wanted to be verified.

1                   Um, there were, I believe, 24, uh,  
2           dental structures, root fragments, um, crown  
3           fragments. There was not one whole tooth that I  
4           was able to examine. There were three bone  
5           fragments. There were 24 pieces of wood that,  
6           again, looked like dental structures. And one  
7           piece of plastic.

8   Q    Is it at all unusual to have, for instance, a --  
9           a piece of wood, um, mistaken for a tooth?

10   A   No, sir. It's, uh, quite common. It's -- it's easy  
11           for anybody else to misidentify them, or to exclude  
12           them, or -- or not identify them as tooth structures.  
13           In -- in fact, sometimes I can't even identify them  
14           without taking x-rays of -- because they look totally  
15           different radiographically or on the x-rays.

16   Q    And is that, um, particularly more problematic  
17           when they've been consumed in a fire?

18   A    Yes, sir.

19   Q    All right. Um, having said that, would you tell  
20           us or describe for us the condition of -- of, uh,  
21           these -- the 24 tooth fragments and the three  
22           bone fragments that you examined?

23   A    They were all burned. They were all charred. Uh,  
24           they were very, very brittle. Um, again, they didn't  
25           look like normal tooth like we would normally see,

1 and, essentially, the crowns were all gone. What we  
2 were looking at was just the root structure, which  
3 was, um, part of the tooth that's buried in the bone.

4 There was one portion of a crown, um,  
5 but that portion of the crown was from a -- a  
6 cuspid or an eyetooth and was not able to be  
7 identified.

8 Q All right. In terms of the condition of these  
9 fragments, how did they compare to other  
10 fragments that you've been asked to examine in  
11 attempt at identification of in the past?

12 A Since 1981, I've examined a number of -- of  
13 individuals who've been burned, and, uh, these were  
14 probably among the worst that I've examined.

15 Q Are you familiar with a phrase that some dentists  
16 use called fracture matching?

17 A Yes, sir.

18 Q Um, what is fracture matching?

19 A When you fracture match something, you can put two  
20 pieces back together. And if I can say that they  
21 came from a common source, that they were at one time  
22 one piece, you can fracture match them back together.

23 Q Did you attempt any fracture matching in this  
24 case?

25 A Yes, sir, I did.

1 Q All right. Tell us about that?

2 A There were two root fragments that I was able to  
3 fracture match back together. Actually, I should say  
4 four. There were two that were very critical, but  
5 there were two other ones that ended up being  
6 academic.

7 Um, the two critical ones were -- were  
8 root fragments from, uh, the lower right second  
9 molar, which would be Tooth No. 31, which we call  
10 it, and that particular tooth, the crown, again,  
11 was -- was destroyed, but there were two roots  
12 associated with that tooth, and they were  
13 separate, but I could put those back together,  
14 and I could see that they had initially come --  
15 at one time been together. And then to fracture  
16 match them, I put them back together and then I  
17 applied a little cyanoacrylate, or Super Glue so  
18 that they stick together.

19 Q All right. And is that a common approach?

20 A Yes, sir.

21 Q And what is the benefit of fracture matching?

22 A Well, there's a couple benefits, really. Number one,  
23 if you've got 52 pieces of potential evidence, if you  
24 can combine that down so that there's a little bit  
25 less, that's a -- a small advantage, not a big one.

1                   The big one is -- is that these pieces  
2                   of -- of dental remains are extremely brittle  
3                   when they're burned and they're charred. And  
4                   these pieces of -- of -- of dental structures  
5                   could be very easily crushed with finger  
6                   pressure. If they're dropped, they could be  
7                   broken. And if that happens, that pot --  
8                   potential piece of evidence is -- is lost. It's  
9                   gone forever.

10                   So by Super Gluing them, and -- and  
11                   fracture matching, and putting them back  
12                   together, and reinforcing them with the  
13                   cyanoacrylate, you can preserve, you can protect,  
14                   and -- and maintain that evidence better.

15   Q   All right. And, um, in this particular case, uh,  
16           were you -- uh, did you attempt to make a  
17           comparison?

18   A   Yes, sir, I did.

19   Q   All right. And that would assume, then, that you  
20           had something to compare or standards to compare  
21           the fracture matched tooth with something else?

22   A   That's correct.

23   Q   Um, and tell us, what did you have at your  
24           disposal to assist in this comparison?

25   A   Well, there were a number of different x-rays that I

1 had of -- of Teresa Halbach, and all the x-rays were  
2 labeled with -- with Teresa's name. On November 10,  
3 uh, Special Agent Jim Holmes brought to my office  
4 dental records for Teresa.

5 And those records consisted of a panorex  
6 x-ray from August 30 of 2001. Um, a panorex  
7 x-ray is an x-ray that goes around the outside of  
8 the mouth and picks up everything from ear to  
9 ear. Uh, oral surgeons love them. A lot of  
10 general dentists love them. Pediatric dentists  
11 love them. Because it -- it picks up everything.

12 He also brought over 16 bitewing x-rays.  
13 And a bitewing x-ray, as I'm sure you're familiar  
14 with, is you go in to see your family dentist,  
15 and they have you bite down on the film, and  
16 shoot the x-ray in from the side, and it picks up  
17 the most amount of tooth structure with the least  
18 amount of x-rays. And, usually, you're looking  
19 for decay. You can look at the bone support  
20 there, too.

21 There were 16 bitewing x-rays varying in  
22 ages from 1998 to 2004. At that particular time,  
23 though, I knew that we needed -- additional  
24 x-rays would be more beneficial. And what I was  
25 looking for, specifically, is what they call a



1 periapical x-ray.

2 Q Uh, what was that again?

3 A A periapical x-ray.

4 Q Could you, uh, spell that for us? Um --

5 A P-e-r-i-a-p-i-c-a-l.

6 Q What -- what is that?

7 A A periapical x-ray, it -- it's just -- it's just like  
8 the bitewing x-ray. The same size. But it's  
9 positioned down lower on the tooth so it will pick up  
10 one or two teeth in its entirety, and it will pick up  
11 the whole root structure. Whereas, on a bitewing  
12 x-ray, you're picking up top and bottom teeth, and  
13 you kind of cut off the ends of the roots, uh,  
14 because they're not designed to pick up the whole  
15 root structure.

16 And I was looking -- Since we had the  
17 entire root from this Tooth No. 31 that we were  
18 looking at, um, I was looking for periapical  
19 x-rays, of which Teresa's dentist did not have  
20 any of these x-rays, but he said he did have some  
21 additional x-rays from 1997. Um, it was  
22 August 25 of 1997. And he said those x-rays were  
23 positioned just a little bit lower and they  
24 showed a little bit more root structure. So he  
25 forwarded those to me so I had those to look at

1           also.

2       Q     With the assistance of the 1997, um, x-ray, were  
3           you able to make a comparison?

4       A     Yes, sir, I was.

5       Q     All right. And before we do that, um, just so  
6           that we know, um, in dental circles, you number  
7           your teeth, so --

8       A     Yes.

9       Q     -- tell -- tell us what Tooth No. 31 is?

10      A     All the teeth have specific numbers. They have what  
11           they call a universal numbering system. So if I talk  
12           about Tooth No. 1, uh, any dentist in the country  
13           will know that I'm talking about the upper right  
14           third molar. The wisdom tooth.

15                 If I'm talking about Teeth No. 8 and 9,  
16           they'll know I'm talking about the two central  
17           incisors right underneath the nose. The big  
18           front teeth.

19                 Uh, No. 19 is a lower left first molar,  
20           and Tooth No. 31 is a lower right second  
21           permanent molar.

22      Q     All right.

23      A     So just a -- a way of -- for us to more easily, um,  
24           identify a particular tooth by number.

25      Q     All right. I'm going to have, um, an exhibit

1 marked and shown to you. I'm having Agent, uh,  
2 Fassbender show you Exhibit 162. If you'd take a  
3 moment to examine it? Do you recognize Exhibit  
4 162?

5 A Yes, sir, I do.

6 Q And what is Exhibit 162?

7 A These are the remains that I received on, uh,  
8 November 11, 2005 from Special Agent Jim Holmes.

9 Q All right. And, um, what remains are depicted in  
10 Exhibit 162?

11 A There were two bone fragments. Um, one of what they  
12 call the coronoid process, which is just an upper  
13 part of the lower jaw, which was academic in  
14 recovery. There was another, uh, bone fragment,  
15 which was from the lower right mandible, or lower  
16 jaw. And then there were three root fragments.

17 Q All right. Now, is exhibit -- Excuse me. Does  
18 Exhibit, um, 162, uh, contain these -- this Tooth  
19 No. 31 that you used in your comparison?

20 A Yes, sir, it does.

21 Q All right. All right. Um, I believe that, um,  
22 we have prepared a, um, PowerPoint presentation  
23 to assist in, um, your explanation of your  
24 findings; is that correct?

25 A That's correct.

1 Q All right. And would the use of the PowerPoint  
2 assist you in further, um, demonstrating what  
3 your findings were?

4 A I think it would be beneficial for the jurors,  
5 please.

6 Q All right. While we're working on, um, getting  
7 that up and running, um, explain why you were  
8 able to do a comparison involving Tooth No. 31?

9 A Well, Tooth No. 31 was really the one that was best  
10 preserved. It had the most physical evidence that  
11 was there with the two root structures. Uh, again,  
12 there were no crowns that were remaining. Uh,  
13 fillings that Teresa had in her teeth were gone. Uh,  
14 they were destroyed in the fire. Uh, all the crown  
15 structure that was easily identifiable was gone.

16 Uh, some of the root fragments that were  
17 recovered, uh, of those 24 initial root  
18 fragments -- I mean, there were some that I  
19 couldn't identify. I mean, they were burned  
20 badly enough, and they had just por -- portions  
21 of roots that, um -- I mean, I tried to identify  
22 each tooth as to, you know, if it was a molar, or  
23 bicuspid, a cuspid, an incisor, or what type of  
24 tooth it was, and there were some that I couldn't  
25 identify. Uh, so that was the best physical

1 piece of evidence that we had for examination.

2 And, also, then, you have an, uh -- a  
3 dental record from Teresa, um, that you can  
4 compare. So you need decent postmortem evidence  
5 and you need decent, uh, antemortem evidence,  
6 also.

7 Q All right. I'm going to have some photographs  
8 presented to you in -- in conjunction with, um,  
9 PowerPoint. What is, um -- First of all, um, you  
10 have a photograph there, which was, uh, depicted  
11 in the photograph? The top one?

12 A This top one is, um, what's on the screen. You want  
13 the number you mean?

14 Q Yes, please. The exhibit number?

15 A Exhibit No. 176.

16 Q Very good. And that is what is depicted on the  
17 screen?

18 A Yes, sir.

19 Q All right. What does, uh, Tooth No. 31, buccal,  
20 b-u-c-c-a-l, what -- what does that signify?

21 A Buccal means cheek side. So, uh, there are actually  
22 five aspects to a tooth that we can examine. And the  
23 buccal aspect is the cheek side. The lingual, which  
24 we'll see in a second, is the tongue side. The  
25 occlusal portion is the top of the tooth. And then

1 two additional sides would be the mesial, towards the  
2 front of the mouth, and distal, towards the back of  
3 the mouth.

4 So this just happens to depict the --  
5 the buccal aspect. And what we're looking at  
6 is -- If you compare this grainy aspect here,  
7 that surface is very rough, um, and usually the  
8 cheek side aspect of a dental fragment is usually  
9 going to be burned more than the tongue side  
10 aspect, because on the tongue side aspect, the  
11 tongue actually pushes up against the tooth and  
12 the jaw fragment to -- to further preserve and  
13 protect that particular fragment.

14 Whereas, once the cheek gets burned  
15 through, uh, the outside or the cheek side aspect  
16 of that tooth is going to take a bigger hit in  
17 there. Um --

18 Q How much of that is the actual tooth, itself,  
19 which is depicted, if you could help us out?

20 A Right -- This is the back root, and this is the front  
21 root. This would have been the socket where the  
22 first molar, Tooth No. 30, would have been, and this  
23 is a socket where the second bicuspid would have  
24 been.

25 So we're actually seeing a section from

1 the second bicuspid back to -- And this is  
2 actually where a wisdom tooth might have been if  
3 one had been present.

4 Q All right. And, um, what is the next, um, um,  
5 photograph you have there?

6 A The next photograph is not here.

7 Q All right. All right. And, um, what is  
8 depicted, then, on the --

9 A This --

10 Q -- um, PowerPoint?

11 A This PowerPoint -- This shows the lingual aspect, or  
12 the tongue side aspect. And, again, you can see --  
13 you compare that surface of the bone compared to the  
14 cheek side aspect, it's very smooth. It was  
15 protected. It was -- it was further insulated in  
16 there. And this is just a portion of Tooth No. 31.  
17 Uh, that's all that was left of the crown portion of  
18 the tooth.

19 Q All right. Next one? And, uh, what are we  
20 looking at here on the -- the photograph? This  
21 should be Exhibit 177, I believe?

22 A That's correct, 177. Uh, this is from the occlusal  
23 or from the biting surface. And this just shows the  
24 top of the tooth. And the way it was fractured  
25 matched, that fracture was down -- looks like it

1 comes across here and comes up here. So this root  
2 and this root were two separate entities, uh, when I  
3 received them, and then I fracture matched them back  
4 together.

5 Q All right. So are you telling us that what we're  
6 looking at here is actually the root and not so  
7 much -- the -- the top of the root and not really  
8 the crown or the top that -- the part where we  
9 chew with?

10 A Correct. That part that you chew with, the part  
11 that's normally above the gum, is -- is, for all  
12 practical purposes, 99.9 percent gone.

13 Q All right. All right. And what is, uh, depicted  
14 here now?

15 A Uh, this is Exhibit 178.

16 Q All right.

17 A Uh, this was the panorex x-ray from 2001, uh, that I  
18 received from Special Agent Jim Holmes. Again, the  
19 panorex x-ray goes around the outside of the mouth,  
20 picks up everything from ear to ear. Um, so it shows  
21 all of the teeth, and it shows the wisdom teeth that  
22 Teresa had at this particular time. The tooth that  
23 we're looking at is on the lower right second molar,  
24 and that's Tooth No. 31.

25 Q What are we looking at here?



1 A Uh, this would be Exhibit 179. And this is just a  
2 cropped picture of that panorex. So it's just --  
3 That area that we're looking at on Tooth No. 31 kind  
4 of zoomed in on that particular tooth.

5 Q Okay.

6 A That is Tooth No. 31. I had other fragments in there  
7 at one time, uh, trying to see if that particular  
8 fragment was part of Tooth No. 30, and that it was  
9 not. Um, so what we're looking at, again, this is  
10 the postmort x-ray of the fragment of Tooth No. 31.

11 Q All right.

12 A And then this is just a cropped picture of Tooth No.  
13 31, and that is -- looks like Exhibit 180.

14 Q All right. And what does, um, postmortem x-ray  
15 mean?

16 A Postmortem is just after death.

17 Q All right. And so is that the -- is that an  
18 x-ray of what you previously showed?

19 A Correct. The initial photographs, uh, of -- of Tooth  
20 No. 31 with the buccal, lingual and occlusal views.  
21 Uh, that's an x-ray of that fragment, yes.

22 Q So that's that tooth there. Now, is that, um,  
23 x-ray taken after it's fracture matched?

24 A Correct.

25 Q Okay. All right. And what are we looking at

1           here? We have a split screen; panorex and  
2           postmortem?

3    A    This is Exhibit 181. And this is just a side-by-side  
4           comparison of the panorex at the cropped Tooth No.  
5           31, and then the postmortem Tooth No. 31. And just  
6           some of the things I'm looking at is the distance  
7           between the roots. The whiter area up here that  
8           we're looking at is the enamel. That's the crown of  
9           the tooth. From here over is the crown of the tooth.  
10          And that part has been destroyed.

11                 The little grayer shade on the inside is  
12           the dentin. That's the inside part of the tooth.  
13           Um, enamel is the hardest structure in the body.  
14           Dentin is the second hardest structure in the  
15           body. Uh, they're both harder than bone.

16                 The dark line in the middle of the tooth  
17           is the pulp. That's the blood vessel near the  
18           middle of the tooth.

19                 So what I'm looking at, I'm comparing  
20           the pulp tissues in the middle of the tooth,  
21           antemortem and postmortem. There's a little  
22           curvature in the root on the postmortem x-ray  
23           that I can see on the antemortem x-ray.

24                 So that's just a side-by-side  
25           comparison.

1 Q All right. All right, Doctor, let me ask you,  
2 then, for, um, your opinion. Um, based on your  
3 analysis of Tooth No. 31, the one that you were  
4 able to fracture match back together, do you have  
5 an opinion on whether the root and bone fragments  
6 from Tooth 31 recovered, uh, from the burn pit,  
7 are consistent with the dental x-rays of Teresa  
8 Halbach that you obtained from Dr. Krupka?

9 A Yes, I do.

10 Q And what is that opinion?

11 A In my opinion, they were very consistent. And that I  
12 could place -- actually place the antemortem x-ray on  
13 top of the postmortem x-ray on the panorex, and then,  
14 also, on the '97 bitewing x-rays, and they would  
15 appear as one. I mean, I could superimpose one on  
16 top of the other.

17 And the -- the pulp tissue, the root  
18 structure, uh, would coincide perfectly in there.  
19 So they were very consistent.

20 Q Now -- now, in your terms of forensic dentistry,  
21 what does very consistent mean?

22 A To me, very consistent means that it's a probable  
23 identification. Um, positive identification -- I --  
24 I was a little leary of -- of that term, because of  
25 the fact that I only, essentially, had one fragment

1 to really work with. Um, but I also am very  
2 conservative in my opinion. Um, if I say positive  
3 identification, to me that means to the exclusion of  
4 all others. And, um --

5 Q Does that mean a hundred percent in your mind?

6 A A hundred percent in my mind. Yes. And --

7 Q So --

8 A -- this is -- looked like it was very, very close.

9 Q All right. That was my question. How close  
10 are -- were you to making a positive  
11 identification here?

12 A I was very close. I mean, it was right there, and --  
13 and probably the only thing holding me back is that  
14 I'm, again, ultra-conservative in my opinion.

15 Q All right.

16 ATTORNEY FALLON: I have no further  
17 questions for the witness and would move into  
18 evidence the, uh, photographs which, uh,  
19 Dr. Simley has identified. Um, Exhibits, uh --  
20 Plus Exhibit 162, which was the tooth fragment  
21 that he fractured matched. And that would be  
22 Exhibit 162, 176, 177, 178, 179, 180, 181, and,  
23 for completion of the record, Exhibit 182, the  
24 CV.

25 THE COURT: Any objection, Counsel?

1                   ATTORNEY FREMGEN:  No, Judge.  
2                   THE COURT:  They're received.  
3                   Cross-examination.  
4                   ATTORNEY FREMGEN:  No, Judge.  
5                   THE COURT:  All right.  You may step down.  
6                   THE WITNESS:  Thank you.  
7                   THE COURT:  Any further witnesses?  
8                   ATTORNEY FALLON:  I think that concludes  
9                   our witnesses for this afternoon.  
10                  THE COURT:  For this afternoon?  
11                  ATTORNEY FREMGEN:  Judge, for the -- for  
12                  the record, I would move in Exhibit 175.  I  
13                  believe that was the one I introduced with, uh,  
14                  Agent Sturdivant.  I believe it was a picture of  
15                  a -- a larger, wider angle picture of the burn --  
16                  THE COURT:  Photo of the burn pit.  
17                  ATTORNEY FREMGEN:  -- pit.  Right.  
18                  ATTORNEY FALLON:  We have no objection.  
19                  THE COURT:  All right.  
20                  ATTORNEY FALLON:  We would join in that  
21                  request.  
22                  THE COURT:  All right.  That's -- that's  
23                  received as well.  All right.  We are then adjourned  
24                  until tomorrow at, uh, 8:30.  
25                  ATTORNEY FALLON:  Very well.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

THE COURT: Ladies and gentlemen, the usual  
admonition. Don't talk about the case to anyone,  
not even among yourselves. Okay.

(Wherein court stands adjourned at 4:07 p.m.)

1 STATE OF WISCONSIN )  
2 ) SS.  
3 COUNTY OF MANITOWOC )

4 I, Jennifer K. Hau, Official Court  
5 Reporter for Circuit Court Branch 3 and the State  
6 of Wisconsin, do hereby certify that I reported  
7 the foregoing matter and that the foregoing  
8 transcript has been carefully prepared by me with  
9 my computerized stenographic notes as taken by me  
10 in machine shorthand, and by computer-assisted  
11 transcription thereafter transcribed, and that it  
12 is a true and correct transcript of the  
13 proceedings had in said matter to the best of my  
14 knowledge and ability.

15 Dated this 11<sup>th</sup> day of December 2007.

16  
17  
18  
19 Jennifer K. Hau  
20 Jennifer K. Hau, RPR  
21 Official Court Reporter  
22  
23  
24  
25

[illegible]



A		
A8 [5] 46/14 46/17 46/21 52/6 52/7	amplify [2] 36/10 107/11	214/25 219/24 223/23 224/2
A9 [3] 48/3 48/11 53/16	amplifying [1] 50/23	assistance [1] 222/2
above [1] 228/11	analysis [14] 24/22 40/2 40/14 43/23	Assistant [1] 215/1
absence [8] 87/1 105/6 115/25 116/3	72/11 106/3 122/5 125/12 126/3 126/6	assisted [2] 194/19 235/10
116/6 116/11 116/21 116/23	126/25 164/9 208/25 231/3	associated [4] 138/11 139/10 167/8
abuse [2] 208/12 209/17	analyst [4] 32/11 39/20 88/8 122/1	218/12
abutted [1] 178/21	analysts [6] 24/10 30/3 30/25 32/15	Association [2] 214/5 214/7
academic [2] 218/6 223/13	41/10 105/17	assume [6] 148/4 151/6 151/7 152/6
Academy [1] 214/1	analyze [2] 32/11 198/8	203/5 219/19
access [1] 26/16	analyzed [2] 30/9 205/11	assuming [7] 87/23 112/12 149/9 177/9
accreditation [2] 31/9 31/11	angle [3] 139/1 139/3 233/15	179/14 179/16 205/8
accredited [3] 31/10 31/19 31/22	animal [2] 204/22 205/1	assumption [2] 112/16 205/9
accurately [3] 41/16 52/2 69/24	antemortem [4] 225/5 230/21 230/23	assumptions [1] 152/5
acid [1] 28/7	231/12	attached [3] 68/12 69/7 195/1
across [2] 54/20 228/1	anybody [1] 216/11	attempt [8] 23/22 81/24 83/8 194/13
acted [2] 139/18 140/1	anyone [3] 105/23 168/19 234/2	215/14 217/11 217/23 219/16
acting [1] 7/21	anytime [6] 39/7 42/18 72/10 79/4 98/17	attempted [4] 106/15 141/22 142/2
activated [1] 211/18	103/7	194/1
active [1] 150/16	anywhere [1] 151/20	attend [2] 25/23 26/4
actively [2] 133/14 133/21	aorta [1] 164/1	attended [6] 25/17 27/11 124/24 125/4
additional [15] 14/25 24/6 24/10 60/20	apparatus [2] 194/19 196/18	125/6 125/9
61/7 125/24 135/21 153/11 159/21	apparent [1] 83/15	attention [16] 8/12 167/5 168/1 172/4
160/18 189/19 213/19 220/23 221/21	appear [10] 41/16 43/8 63/5 85/2	172/7 172/14 173/20 182/20 183/20
226/1	114/13 138/20 190/6 193/5 200/2	184/5 184/14 185/3 188/23 189/1
adequately [2] 58/5 76/8	231/15	204/14 214/11
adjourn [1] 123/4	appearance [6] 5/7 43/6 85/14 94/23	Attorney [143] 1/20 1/22 3/4 3/5 3/6 3/9
adjourned [2] 233/23 234/4	114/6 134/25	3/10 3/11 3/12 3/14 3/15 3/16 3/17 3/20
admission [1] 16/15	APPEARANCES [2] 1/13 5/4	3/21 3/22 4/4 4/5 4/8 4/9 4/11 5/5 5/9
ADMITTED [1] 4/13	appeared [12] 1/25 41/17 45/17 62/10	5/9 5/10 5/14 5/16 5/18 6/4 11/11 11/16
admonition [1] 234/2	69/9 101/9 120/1 153/25 154/12 184/20	11/23 12/6 12/7 12/16 12/18 13/5 14/19
adult [1] 29/9	184/21 185/21	14/22 14/23 14/25 15/2 15/8 15/10
advanced [2] 25/22 125/6	appearing [1] 186/22	16/12 16/18 16/23 22/9 22/11 22/19
advantage [1] 218/25	appears [6] 5/10 5/11 81/18 187/22	22/22 23/8 65/3 65/12 65/14 68/13
affect [1] 169/17	197/18 206/15	68/23 68/25 76/20 76/25 77/3 77/6
affiliation [1] 214/8	applicable [1] 210/6	77/14 77/16 78/2 81/12 82/15 82/17
affiliations [1] 212/15	application [4] 208/2 208/3 212/9	82/21 84/21 89/5 103/19 103/21 103/23
African [1] 73/16	212/10	103/25 117/2 117/4 121/12 123/5 123/8
afternoon [7] 123/11 167/18 167/19	applications [3] 25/18 38/11 38/13	123/13 123/23 143/14 143/17 143/20
180/25 182/20 233/9 233/10	applied [2] 191/19 218/17	144/18 152/16 152/19 152/25 153/2
afterwards [1] 164/22	approach [2] 12/16 218/19	163/7 163/8 163/11 165/9 165/11
age [1] 154/20	appropriate [2] 11/25 33/12	165/17 165/19 165/21 165/25 166/10
agencies [3] 33/1 38/16 212/16	approximately [21] 25/2 26/20 26/25	170/10 170/13 170/25 171/5 171/8
agency [1] 39/3	30/8 64/20 104/2 126/13 146/16 169/24	172/9 172/12 172/16 172/19 173/6
agent [12] 19/2 181/14 181/19 184/10	181/2 182/6 182/15 185/12 185/13	180/10 180/14 180/17 180/22 180/24
203/7 208/18 214/25 220/3 223/1 223/8	189/2 196/13 209/18 210/14 213/5	181/7 181/17 187/12 187/14 187/19
228/18 233/14	213/7 215/13	187/20 200/6 200/11 200/14 200/16
ages [1] 220/22	APRIL [1] 1/10	203/11 203/13 203/14 206/17 206/20
aggressive [1] 187/5	aren't [1] 83/21	206/24 207/2 207/14 215/2 232/16
agree [4] 117/10 117/25 122/14 144/11	argument [1] 11/17	233/1 233/4 233/8 233/11 233/17
ahead [3] 103/22 143/25 153/2	arm [1] 157/3	233/18 233/20 233/25
alive [4] 14/4 15/24 155/21 198/4	arrangement [2] 167/15 176/4	attorney's [1] 32/25
allegations [1] 122/11	arrested [3] 19/22 21/22 22/4	attribute [1] 73/6
alleged [4] 23/20 23/21 34/20 34/20	arri [1] 203/24	attribution [1] 73/1
Allen [1] 181/14	arrival [1] 194/12	audit [1] 31/14
alligatoring [1] 191/9	arrived [6] 194/7 194/8 194/15 194/17	audited [1] 31/22
allow [1] 26/12	202/19 205/15	auditors [2] 32/3 32/5
allows [2] 35/17 36/9	arro [1] 205/14	audits [1] 32/20
alone [1] 139/18	arson [4] 182/12 182/13 191/8 194/2	August [7] 174/10 174/13 174/15
along [8] 63/2 63/4 64/19 103/3 134/10	artery [1] 164/1	176/10 180/19 220/6 221/22
136/22 178/15 179/23	ASCLD [1] 31/11	August 25 [1] 221/22
Amber [1] 167/18	ashen [1] 183/15	August 30 [1] 220/6
amelogenin [1] 53/5	ashened [1] 202/4	authorized [2] 32/23 32/24
America [2] 213/4 213/8	Ashley's [2] 9/11 9/12	average [1] 146/25
American [5] 31/12 73/17 213/21 214/1	aspect [10] 225/23 226/5 226/6 226/8	AVERY [56] 3/3 5/19 5/22 6/2 6/15 41/5
214/9	226/10 226/10 226/15 227/11 227/12	49/13 50/4 50/9 50/25 51/5 51/16 52/16
among [2] 217/14 234/3	227/14	52/20 52/22 53/10 53/19 53/23 54/3
amount [12] 95/5 106/7 106/23 108/25	aspects [1] 225/22	56/4 56/13 56/18 56/23 58/11 58/21
139/23 155/11 155/13 157/19 158/10	assault [2] 122/12 127/16	58/23 75/3 90/4 94/10 94/15 96/1 97/4
163/22 220/17 220/18	assign [3] 37/10 55/4 69/12	99/21 101/2 101/23 131/25 156/5 168/4
amounts [1] 109/21	assigned [3] 32/4 32/5 74/1	169/5 169/14 173/15 173/17 174/5
amplifies [1] 50/15	assignment [3] 182/7 182/9 182/10	174/17 174/20 175/4 175/10 175/13
	assist [13] 27/21 183/1 189/9 194/9	176/13 176/16 176/16 176/22 177/10
	208/21 211/22 213/12 213/16 213/17	183/2 183/10 183/25

<b>A</b>	biological [31] 23/21 23/22 29/24 34/8 34/9 34/15 34/19 35/24 37/21 42/16 42/23 43/13 53/2 78/12 79/1 82/1 83/10 86/11 86/20 91/15 92/8 92/15 94/4 97/21 100/2 105/5 105/24 115/11 116/16 118/16 165/4 biology [2] 25/8 25/21 birthday [7] 8/23 9/10 9/14 9/17 9/19 9/22 18/14 bit [18] 7/15 7/17 45/23 66/10 107/22 108/10 134/13 158/16 170/4 187/11 188/2 188/22 209/4 209/11 215/6 218/24 221/23 221/24 bite [4] 208/12 209/17 210/21 220/15 bitewing [6] 220/12 220/13 220/21 221/8 221/11 231/14 biting [2] 187/18 227/23 Black [1] 83/1 blade [5] 102/17 193/4 193/4 193/5 197/5 blades [1] 191/7 Blaine [1] 17/12 bleach [14] 114/5 114/14 114/16 114/17 114/18 114/19 114/24 115/14 115/19 120/1 120/4 120/9 164/25 165/13 bleaching [2] 120/5 120/10 bleeding [5] 133/14 133/21 148/15 164/12 164/13 blood [226] 34/8 34/12 34/12 37/6 37/15 37/16 42/16 43/1 43/6 43/8 43/15 43/17 43/18 43/20 43/20 43/22 44/1 45/7 45/17 47/8 47/12 51/23 52/7 52/15 53/13 53/23 55/1 57/25 59/7 59/13 61/20 61/23 63/5 63/10 64/2 64/5 66/23 67/6 67/18 71/8 71/17 75/12 78/21 78/23 80/5 80/8 80/15 82/5 83/14 83/15 83/24 84/8 84/19 85/12 85/15 85/18 85/24 86/5 86/9 86/15 86/15 86/19 87/1 88/13 88/14 90/21 90/22 91/1 91/5 91/9 91/12 91/12 91/18 91/20 93/12 94/19 94/21 94/23 94/24 99/10 99/12 100/1 100/8 100/15 100/19 100/20 100/22 101/10 101/11 101/17 101/20 102/9 102/13 102/18 103/6 103/10 105/2 105/2 105/3 105/6 105/12 106/4 106/11 106/18 107/24 108/2 108/5 108/21 108/24 109/4 109/7 109/17 111/11 113/18 113/24 114/6 114/8 115/10 117/6 117/7 117/8 117/11 117/13 117/14 117/15 118/2 118/3 118/6 118/7 118/12 118/22 120/11 120/17 124/20 124/23 124/25 125/5 125/7 125/12 125/23 126/2 126/6 126/9 126/24 127/4 127/6 127/6 127/19 127/22 128/1 128/23 129/4 129/5 129/7 131/10 131/19 132/6 132/10 132/15 132/24 133/2 133/2 133/8 133/13 134/6 135/17 135/18 136/3 136/5 136/19 137/10 137/11 137/13 138/22 139/7 139/23 140/6 140/22 145/6 146/1 146/4 146/21 146/24 149/3 150/15 151/5 151/21 152/9 153/15 153/17 155/9 155/14 155/18 155/24 155/25 156/1 156/2 156/8 157/22 157/22 158/5 158/5 158/7 158/15 158/18 158/21 158/21 159/17 160/2 160/2 160/4 161/17 162/7 163/12 163/12 163/16 163/20 163/22 164/4 164/7 164/16 164/19 164/20 165/1 169/10 230/17 bloodied [1] 135/16 bloodshed [1] 127/9 bloody [26] 129/12 130/12 131/5 132/5 132/9 132/24 134/18 135/9 135/12	135/24 136/5 137/16 137/20 138/22 140/4 140/6 141/3 141/8 141/8 149/20 151/3 151/4 151/20 152/1 159/17 161/3 blowback [6] 161/16 161/22 162/3 162/4 162/9 162/13 blows [1] 127/19 blueprint [2] 28/20 28/22 board [10] 211/25 212/3 212/11 212/17 212/22 212/25 213/6 213/7 214/8 214/9 Bobby [1] 17/14 body [35] 11/9 13/24 14/1 15/19 20/12 21/5 21/8 21/18 28/25 34/6 34/10 34/23 35/9 35/13 137/19 141/3 141/8 147/22 148/5 149/20 150/17 150/20 150/23 151/18 151/20 151/22 151/25 152/6 152/7 153/16 155/20 169/6 169/14 230/13 230/15 bone [36] 68/11 69/6 69/10 69/18 184/2 184/22 186/3 188/18 189/2 189/4 189/11 189/20 189/23 190/4 193/13 193/24 195/15 195/18 204/7 204/11 204/15 204/16 204/18 204/20 204/21 204/24 205/3 216/4 216/22 217/3 220/19 223/11 223/14 227/13 230/15 231/5 bones [3] 193/24 205/11 205/12 bonfire [3] 10/20 11/5 11/5 bookcase [3] 176/20 177/7 178/23 bottom [12] 112/2 120/20 130/24 178/2 191/17 191/19 191/21 192/4 192/5 192/25 193/3 221/12 box [2] 187/21 195/20 box-like [1] 187/21 boxes [1] 93/11 boy [1] 7/23 BRANCH [2] 1/1 235/5 brand [1] 114/3 BRANDT [4] 3/19 165/20 166/3 166/8 break [4] 70/21 77/8 77/9 180/25 BRENDAN [49] 1/7 1/24 5/3 5/10 6/16 6/18 6/23 6/25 7/4 7/10 8/13 8/17 9/25 10/2 10/6 11/4 11/9 12/8 13/17 14/3 14/6 14/14 14/17 15/18 15/24 16/9 16/24 17/19 18/4 18/15 18/17 19/22 20/18 77/24 78/5 81/8 89/25 90/10 90/19 94/17 96/5 97/7 101/6 102/1 103/11 103/16 113/19 114/1 114/11 Brendan's [3] 6/21 21/1 91/20 Brewer [1] 167/18 brittle [2] 216/24 219/2 broad [1] 146/2 broke [1] 18/10 broken [1] 219/7 brother [2] 6/21 17/12 brothers [1] 17/14 brought [6] 24/15 38/25 41/4 190/14 220/3 220/12 brown [10] 45/14 46/11 46/23 48/18 49/1 62/19 63/15 64/16 109/8 114/7 brownish [2] 84/6 120/19 brushed [1] 119/25 Bryan [1] 17/16 buccal [17] 36/24 37/3 37/4 37/7 49/12 49/15 50/3 50/9 51/22 56/3 58/21 65/22 225/19 225/21 225/23 226/5 229/20 bucket [1] 130/24 buckle [1] 195/16 build [2] 28/20 28/21 built [1] 107/19 bull [1] 75/5 bullet [19] 75/1 75/5 75/7 75/9 75/11 75/14 75/19 76/2 76/14 76/17 76/19 98/23 99/1 99/1 99/14 118/21 118/22
<b>B</b>	B-r-a-n-d-t [1] 166/8 b-u-c-c-a-l [1] 225/20 B.S [3] 146/11 146/13 209/8 Bachelor [1] 25/8 Bachelor's [4] 124/5 166/18 166/21 171/14 background [2] 124/4 215/7 backgrounds [1] 32/15 backseat [1] 49/2 bad [1] 116/14 badly [1] 224/20 bag [1] 60/8 bagged [1] 198/14 bar [3] 39/4 39/9 54/18 Barbara's [2] 6/21 6/21 bare [1] 112/17 barking [1] 187/9 barrel [10] 80/3 80/3 80/4 80/6 80/8 80/11 80/23 81/2 111/10 162/6 bathroom [2] 100/9 101/12 battery [3] 87/11 142/10 142/14 Baumgartner [1] 168/15 Baumgartner [3] 167/16 168/12 168/15 bay [3] 65/7 128/20 142/17 bear [1] 199/3 bed [13] 155/17 176/19 177/7 177/20 177/24 178/3 178/14 178/17 179/2 179/5 179/10 179/23 180/7 bedding [9] 23/19 91/14 91/24 91/25 92/4 92/6 92/9 122/15 122/20 bedroom [6] 101/12 176/13 176/17 177/11 179/18 180/19 begun [1] 195/3 behind [14] 20/7 110/5 110/10 111/3 134/11 137/13 141/10 152/2 183/20 183/25 184/4 185/15 186/1 201/20 Belgian [1] 186/22 believed [5] 150/20 188/18 189/19 189/22 204/6 Bellin [1] 65/7 belt [7] 188/8 191/6 195/16 197/5 197/21 197/21 204/12 belted [7] 188/12 188/13 188/14 188/19 189/24 201/17 202/25 belts [2] 189/23 204/8 bench [7] 47/21 114/19 114/22 130/24 188/17 199/16 199/19 beneficial [2] 220/24 224/4 benefit [2] 155/6 218/21 benefits [1] 218/22 beside [1] 202/25 besides [3] 37/25 38/13 145/5 best [7] 148/21 169/24 170/1 197/6 224/9 224/25 235/13 bicuspid [3] 224/23 226/23 227/1 big [8] 35/3 45/1 61/17 141/18 204/18 218/25 219/1 222/17 bigger [1] 226/16 biggest [1] 213/23 billion [6] 73/15 73/16 73/18 74/5 74/7 74/11 binders [1] 212/12 biolog [1] 83/9	

<b>B</b>	103/2 105/8 106/16 107/7 109/6 109/18 109/25 110/1 110/1 113/9 115/9 121/9 124/14 146/24 154/20 208/12 209/15 209/16 209/17 209/18 210/21 212/13 casings [6] 92/13 92/17 92/20 92/21 93/4 119/11 categories [3] 128/6 129/11 147/6 category [2] 134/17 147/7 Cates [1] 194/11 Caucasian [2] 73/15 74/8 caused [2] 151/21 159/11 causing [2] 140/5 162/7 CD [3] 48/18 52/10 130/25 cell [7] 28/9 34/10 34/22 65/21 79/2 79/5 118/16 cells [20] 29/8 34/5 34/13 34/13 34/14 34/15 37/9 49/16 65/16 65/22 65/25 109/5 109/8 109/14 110/7 110/8 110/11 110/23 118/2 118/8 cellular [2] 28/24 29/4 center [6] 128/20 185/17 185/18 209/20 211/1 211/19 central [1] 222/16 certificate [2] 31/11 31/17 certificates [1] 31/9 certification [1] 211/25 certified [6] 212/3 212/11 212/22 212/25 213/6 213/7 certify [1] 235/6 cervical [1] 65/17 CF [3] 1/6 5/4 186/9 chain [1] 39/24 chair [2] 16/3 21/12 chance [3] 71/4 97/23 158/25 changed [1] 8/6 characteristic [1] 135/9 characteristics [8] 28/17 29/12 89/10 89/16 134/21 135/8 147/8 148/25 characterization [1] 178/3 charged [1] 21/24 charred [14] 68/12 68/15 68/17 69/7 69/21 70/1 70/4 74/14 184/2 184/22 189/20 193/24 216/23 219/3 charring [2] 191/20 193/3 charts [1] 71/6 cheaper [1] 210/9 check [8] 31/25 32/6 32/7 49/17 86/6 141/19 141/23 142/1 checked [3] 84/7 85/16 142/21 checks [2] 32/14 142/9 cheek [8] 37/5 37/8 225/21 225/23 226/8 226/14 226/15 227/14 chemical [1] 83/23 chemistry [4] 25/22 124/5 146/12 146/13 Cherry [3] 59/16 59/21 68/2 chest [1] 164/11 Chevalier [1] 9/13 chew [2] 228/9 228/10 chews [2] 70/23 114/17 child [3] 171/20 208/12 209/17 children [3] 166/13 171/24 172/3 choices [2] 51/19 51/19 chose [1] 103/6 chromatograph [1] 145/12 chromosome [3] 53/7 53/8 66/15 Chuck [1] 194/11 circful [1] 138/24 circles [2] 134/24 222/6 circuit [4] 1/1 1/12 138/25 235/5 circular [5] 138/17 138/20 138/24 139/4 197/19 circumstances [2] 11/25 42/25	CJ1 [2] 96/15 97/1 CJ2 [2] 95/12 97/2 class [1] 25/22 classes [3] 27/10 171/20 171/23 classic [3] 135/12 135/14 156/13 clean [7] 114/4 114/19 114/19 114/24 115/20 164/25 201/3 cleaned [2] 116/19 164/21 cleaning [1] 115/19 clear [5] 15/11 145/11 190/25 199/22 209/24 clearly [1] 199/17 CLERK [2] 5/20 172/21 close [8] 6/23 62/3 175/20 202/6 202/8 232/8 232/9 232/12 close-up [1] 62/3 closely [1] 198/22 closer [6] 7/17 13/19 24/19 82/18 193/17 198/23 clothing [7] 23/19 42/20 91/14 125/10 125/13 125/21 164/15 code [2] 39/9 54/18 coding [1] 39/4 coincide [1] 231/18 collect [4] 65/23 87/6 87/18 175/6 collected [17] 45/2 45/4 45/14 45/15 46/3 46/11 47/8 47/14 48/16 62/14 65/17 87/8 87/10 87/12 87/14 87/17 198/13 collecting [2] 45/19 47/15 College [1] 209/7 color [2] 29/10 29/11 colored [1] 120/21 com [2] 38/6 99/17 combination [5] 112/1 112/6 133/8 133/20 137/15 combinations [1] 133/13 combine [1] 218/24 coming [2] 131/19 154/1 comma [2] 51/6 51/17 comment [1] 117/6 Commenting [1] 171/1 comments [4] 117/5 118/1 121/11 212/22 common [12] 34/7 72/12 72/14 72/20 73/11 122/16 122/16 150/8 172/2 216/10 217/21 218/19 commonly [1] 208/8 community [3] 29/20 31/20 38/7 company [3] 30/19 30/22 31/4 compare [22] 24/3 28/19 35/21 36/22 37/18 49/21 50/1 51/4 51/21 56/2 58/10 66/20 67/5 72/1 76/4 117/17 217/9 219/20 219/20 225/4 226/6 227/13 compared [3] 52/16 156/19 227/13 comparing [3] 148/14 154/17 230/19 comparison [10] 89/25 99/17 103/11 219/17 219/24 222/3 223/19 224/8 230/4 230/25 comparisons [1] 35/12 compartment [11] 53/14 53/24 59/16 129/6 129/8 129/9 129/25 130/20 133/10 133/11 142/9 competency [1] 25/15 complete [7] 34/16 71/10 71/15 74/21 107/24 108/8 202/8 completed [2] 40/20 195/22 completely [3] 57/10 188/16 199/17 completion [1] 232/23 component [2] 34/10 125/7 composite [1] 72/17 compromised [1] 70/19 computer [4] 39/17 54/15 177/5 235/10
<b>C</b>		
C-u-l-h-a-n-e [1] 23/6 cabinet [2] 176/19 177/8 cable [1] 87/11 cables [1] 142/14 calculate [1] 73/22 caliber [5] 111/8 157/15 157/16 157/17 157/18 calls [6] 175/3 175/4 175/9 175/16 175/21 194/1 Calumet [2] 68/17 198/16 Canada [1] 213/4 candidate [1] 132/8 Candy [1] 6/15 capacity [2] 167/23 207/18 capital [1] 196/12 car [14] 42/15 43/3 43/9 46/1 46/3 67/7 93/8 107/25 132/7 133/23 134/7 141/11 163/15 185/16 cardboard [1] 93/11 care [2] 7/2 207/23 career [1] 163/1 carefully [1] 235/8 carg [1] 141/9 cargo [31] 49/3 52/13 59/10 63/3 63/16 63/21 64/17 64/22 66/22 67/6 67/19 71/9 71/17 88/5 108/5 133/22 134/3 136/14 137/19 137/21 138/5 140/13 140/18 140/23 141/4 141/9 149/17 151/1 153/8 163/14 163/14 carpet [1] 154/1 carpeted [3] 153/8 153/15 153/18 carpeting [1] 136/1 carry [2] 106/13 108/7 case [63] 1/6 30/21 30/23 32/9 38/14 38/14 38/20 38/24 39/14 39/23 39/23 40/2 40/3 40/4 40/5 40/9 42/24 44/5 48/19 52/10 54/24 55/24 65/24 77/23 89/3 91/10 91/17 103/2 103/5 104/3 104/5 104/23 105/3 105/19 106/8 107/13 119/17 121/3 121/7 122/2 122/10 129/3 129/5 134/20 139/4 154/18 154/19 155/13 156/4 161/23 162/15 163/4 208/17 209/3 210/22 210/23 212/6 212/8 214/21 214/22 217/24 219/15 234/2 cases [32] 32/10 33/9 33/10 33/11 33/18 33/19 71/1 86/22 91/11 95/3		

<p><b>C</b></p> <p>computer-assisted [1] 235/10  computer-generated [1] 177/5  computerized [2] 39/4 235/9  con [1] 52/23  concave [1] 206/5  conception [1] 29/9  concerned [1] 17/19  conclude [2] 150/22 157/9  concluded [1] 149/9  concludes [1] 233/8  conclusions [2] 97/1 147/20  concrete [1] 169/11  condition [7] 16/18 107/14 191/1 192/22  200/3 216/20 217/8  conduct [1] 69/17  conducted [1] 154/12  configuration [1] 180/19  configured [1] 177/15  confined [1] 155/12  confirming [2] 43/17 43/18  confused [6] 16/10 19/15 19/16 22/17  169/19 170/7  confusing [1] 93/25  conjunction [1] 225/8  connected [1] 29/16  connection [1] 153/19  conservative [4] 25/4 30/11 232/2  232/14  considerable [1] 108/4  consist [2] 129/2 215/19  consisted [3] 25/13 212/11 220/5  console [2] 45/16 59/22  consultant [1] 207/24  consumed [3] 188/16 199/17 216/17  contact [34] 116/5 116/8 128/8 129/10  129/11 129/13 130/3 130/10 130/11  130/13 130/17 130/22 131/3 131/10  131/20 132/10 134/18 134/19 135/10  135/16 135/21 135/24 137/2 137/12  147/4 159/16 160/15 160/16 168/3  168/7 169/22 174/4 174/16 194/1  contacted [3] 161/10 161/12 194/3  contain [3] 40/13 98/11 223/18  contained [2] 28/22 29/2  contains [1] 60/8  continues [1] 5/6  continuing [2] 212/16 213/18  control [2] 24/12 32/8  Controlled [2] 145/9 145/23  convenient [1] 65/23  conversation [14] 8/13 8/17 10/2 10/4  10/6 10/9 10/15 10/21 11/4 15/14 15/23  168/20 169/25 170/7  conversations [2] 14/13 174/23  convicted [1] 33/22  conviction [2] 33/9 33/19  coordinating [1] 124/11  coordinator [4] 124/2 124/10 144/2  153/20  copies [3] 36/10 50/15 107/11  copy [3] 27/9 34/16 214/16  corner [3] 177/22 179/17 179/17  coroner's [1] 32/25  Coroners [1] 214/6  coronoid [1] 223/12  correctly [11] 50/8 55/14 56/6 58/5  58/13 66/6 67/2 67/10 75/25 76/8  195/10  correlate [6] 48/7 48/22 62/22 63/22  64/14 64/14  cotton [4] 44/7 47/17 47/20 82/10</p>	<p>counsel [12] 5/3 15/1 22/21 77/2 108/11  122/7 123/11 172/10 180/13 181/6  200/10 232/25  counseling [1] 168/8  counselor [3] 166/19 168/9 168/11  counselors [4] 10/5 10/22 22/13 22/15  country [4] 36/5 73/25 213/24 222/12  county [9] 1/1 68/17 173/23 174/3 183/5  183/6 198/16 208/22 235/2  couple [7] 19/22 163/8 183/9 190/2  194/22 200/20 218/22  course [13] 25/20 25/21 30/5 30/12  105/21 105/21 112/12 125/4 125/6  146/20 147/13 155/23 197/5  courses [1] 171/23  courts [1] 145/8  cous [1] 6/19  cousin [1] 9/11  cousins [3] 6/20 169/5 169/13  cover [1] 156/20  covers [1] 138/7  create [2] 80/23 157/13  created [1] 157/20  Credibility [1] 171/3  creeper [5] 83/5 83/11 83/22 84/7 84/12  creepers [2] 84/15 84/16  crime [73] 23/11 23/13 23/16 23/17  23/20 24/7 24/25 26/8 30/3 30/8 31/8  31/12 33/15 33/24 34/20 35/15 36/1  36/4 37/15 37/16 37/22 38/20 41/4  45/24 55/4 61/3 65/9 69/2 69/2 69/12  73/25 81/22 84/25 92/1 96/18 98/4  99/20 102/3 104/2 104/8 115/25 116/21  121/1 123/25 124/8 124/12 124/16  124/22 125/6 125/15 125/20 125/22  128/21 129/17 142/18 146/1 146/2  146/6 164/9 194/3 194/6 194/10 194/17  195/7 195/21 198/2 198/7 198/8 201/7  201/11 201/13 201/13 202/2  Crimes [1] 182/11  Criminal [3] 19/3 181/20 182/8  criminalist [1] 144/23  critical [2] 218/4 218/7  cropped [3] 229/2 229/12 230/4  cross [20] 3/5 3/10 3/15 3/21 4/5 4/9  16/21 16/22 77/13 77/15 143/16 143/19  170/11 170/12 180/13 180/16 200/9  200/13 200/15 233/3  cross-examination [14] 3/5 3/10 3/15  3/21 4/5 4/9 16/22 77/15 143/19 170/12  180/16 200/9 200/15 233/3  crown [9] 216/2 217/4 217/5 218/10  224/14 227/17 228/8 230/8 230/9  crowns [2] 217/1 224/12  crushed [1] 219/5  crust [1] 45/14  crying [2] 8/25 10/13  CSI [1] 107/17  cued [1] 203/12  cuffs [2] 96/24 120/14  CULHANE [14] 3/8 22/23 22/25 23/5  23/9 24/17 34/24 44/11 44/12 59/5  77/17 104/1 129/16 136/10  curious [1] 189/17  current [2] 124/7 182/7  currently [5] 30/5 36/2 37/7 182/22  211/6  curriculum [3] 27/9 126/22 214/16  curvature [1] 230/22  cuspid [2] 217/6 224/23  custody [1] 39/24  cut [22] 45/6 47/22 48/6 48/12 55/2  131/24 131/24 132/4 132/8 133/6</p>	<p>148/11 148/16 155/4 155/15 155/17  156/3 163/21 163/22 163/23 164/3  164/6 221/13  cuttings [1] 49/6  CV [4] 76/23 76/23 214/16 232/24  cyanoacrylate [2] 218/17 219/13</p> <p><b>D</b></p> <p>D-3 [2] 50/24 51/6  D13 [1] 71/1  D3 [1] 71/2  D5 [1] 71/1  D7 [1] 71/2  DAB [1] 32/18  dad [4] 6/14 6/20 6/20 15/15  daily [1] 167/23  dark [1] 230/16  darkened [2] 193/18 197/1  darkness [3] 196/19 197/25 198/5  dashboard [2] 142/3 142/5  DASSEY [18] 1/7 1/24 5/4 5/11 6/16  78/5 81/8 90/10 90/19 96/5 97/7 101/6  102/1 103/11 103/17 113/19 114/1  114/11  Dassey's [3] 77/24 89/25 94/17  data [1] 40/1  database [2] 73/23 73/24  date [5] 1/10 26/1 26/5 40/11 215/4  Dated [1] 235/15  dates [1] 40/13  day [13] 1/5 9/22 15/23 141/24 142/20  173/22 174/18 174/21 175/14 182/25  183/7 212/19 235/15  DD [1] 79/15  dead [3] 142/10 155/23 198/4  deal [3] 7/2 155/18 171/24  dealing [1] 34/8  death [1] 229/16  Deb [1] 184/10  debris [10] 189/21 190/5 195/4 195/8  195/13 195/22 196/4 198/11 198/14  204/4  decay [1] 220/19  December [3] 8/12 8/18 166/22  decent [2] 225/4 225/5  decide [4] 102/24 120/15 121/17 122/2  decided [1] 33/10  decision [3] 86/16 91/7 95/4  decisions [3] 103/3 105/16 121/13  decomposed [1] 210/3  deemed [1] 212/17  deep [1] 163/23  defendant [4] 1/8 1/21 1/23 1/24  defense [3] 35/3 108/10 122/7  defined [1] 208/1  definitely [2] 135/13 162/23  degradation [1] 107/8  degrade [1] 70/21  degraded [1] 112/4  degree [19] 25/8 53/22 56/12 58/22  67/16 76/12 124/5 133/12 139/1 140/25  154/22 166/21 166/25 167/9 171/14  191/15 209/6 209/8 212/4  demeanor [3] 169/17 170/2 170/18  demonstrating [1] 224/2  demonstration [2] 27/19 50/7  dental [22] 208/7 208/11 208/13 209/12  209/16 209/25 210/1 210/7 210/11  210/17 210/19 215/22 215/24 216/2  216/6 219/2 219/4 220/4 222/6 225/3  226/8 231/7  dentin [2] 230/12 230/14  dentist [5] 207/16 212/23 220/14 221/19</p>
--	---	--

D		
dentist... [1] 222/12	99/18 100/21 101/2 101/19 102/21	30/4 30/7 30/10 31/2 31/3 32/5 32/6
dentistry [16] 207/21 207/22 207/22	107/6 107/13 110/20 111/23 117/10	32/21 34/3 34/5 34/11 34/16 34/21 35/8
207/24 207/25 208/1 208/2 208/4 208/6	117/16 118/18 119/13	35/13 35/18 35/19 36/3 36/8 36/11
209/10 209/15 212/6 214/10 214/19	develop [1] 50/1	36/14 36/16 36/18 36/18 36/24 37/12
215/11 231/20	developed [25] 31/2 36/19 45/21 51/23	37/16 37/24 38/10 38/16 44/4 44/10
dentists [6] 213/1 213/6 213/8 217/15	52/14 53/12 55/23 55/25 56/3 56/9	45/21 47/23 49/5 49/9 49/20 49/24 50/3
220/10 220/10	56/19 58/3 58/9 58/21 66/22 67/3 71/8	50/18 50/22 51/1 51/1 51/23 52/14
deoxyribonucleic [1] 28/7	76/1 76/5 78/3 79/8 103/15 107/16	53/11 53/12 55/3 55/9 55/15 55/22 56/2
Department [6] 19/3 68/18 181/19	111/16 111/18	56/2 56/14 56/18 57/3 57/14 58/2 58/9
181/23 182/22 211/10	developing [1] 77/21	58/10 58/20 58/24 59/4 60/18 62/5
depend [1] 107/7	development [3] 29/4 29/7 171/21	64/21 64/25 65/20 66/2 66/6 66/21
depending [3] 42/24 115/12 155/9	devices [1] 195/2	66/24 67/2 67/5 67/18 67/24 68/1 69/17
depends [5] 91/10 104/23 110/3 117/13	devoted [1] 24/21	69/20 69/25 70/22 70/23 71/8 71/24
118/13	diagnostic [1] 38/8	72/10 74/1 75/11 75/17 75/18 75/21
depict [5] 41/16 129/24 197/18 202/12	diagnostics [1] 65/18	75/22 75/25 76/4 76/13 76/19 77/20
226/4	diagram [1] 177/5	77/24 78/24 79/21 80/24 81/4 81/25
depicted [18] 178/24 185/8 185/10	difference [4] 127/23 127/24 148/22	82/6 83/11 86/1 86/1 86/13 86/21 88/20
185/10 186/14 188/6 188/7 192/17	151/13	89/23 89/24 91/2 93/3 93/13 93/21 94/6
193/19 197/9 198/15 199/24 223/9	differences [6] 108/20 147/18 148/17	94/17 95/3 95/16 95/20 95/23 96/2
225/10 225/16 226/19 227/8 228/13	148/24 157/1 160/22	96/22 96/25 97/5 98/1 98/11 99/17
deployed [1] 211/18	difficult [2] 136/23 215/21	100/21 101/20 101/22 102/21 104/11
deposited [2] 127/20 130/12	digital [1] 142/3	104/15 105/14 106/3 106/13 106/21
depth [1] 149/17	dimensions [2] 149/14 149/15	106/23 106/23 107/10 107/12 107/24
deputy [3] 184/11 184/18 194/18	direct [22] 3/4 3/9 3/14 3/20 4/4 4/8 4/11	108/8 108/12 108/17 108/22 108/25
describe [23] 34/3 62/9 62/17 68/9 69/1	6/3 8/11 23/7 89/4 123/22 146/19	109/19 109/21 109/25 110/2 110/5
69/5 114/3 125/2 130/8 130/17 131/9	150/24 151/9 151/13 166/9 173/5	110/10 110/20 111/3 111/16 111/16
134/14 136/24 148/24 155/6 168/6	173/19 181/16 182/20 207/13	111/20 112/4 112/4 112/8 113/7 113/10
169/16 176/15 190/25 192/22 203/8	directed [5] 152/22 183/20 184/5 184/14	113/13 113/14 113/16 114/16 114/17
203/17 216/20	185/3	114/21 115/3 115/7 115/9 115/16
described [8] 49/7 54/8 75/1 136/10	directing [2] 167/5 168/1	115/21 115/25 116/4 116/6 116/21
137/2 149/4 158/12 193/15	direction [2] 25/12 159/15	116/23 117/10 117/12 117/16 117/20
describing [2] 147/2 205/23	directions [1] 28/23	117/22 117/24 118/12 119/4 119/12
description [1] 135/23	directly [6] 11/20 12/1 155/14 185/15	119/21 121/4 121/5 121/15 122/17
design [1] 190/10	193/18 199/18	143/8 165/4 210/9
designation [26] 39/9 39/13 44/20 45/13	Directors [1] 31/12	DNA's [2] 29/23 116/3
45/23 45/25 46/2 46/10 48/3 48/17	directs [2] 29/4 29/7	Doctor [3] 208/17 214/22 231/1
48/25 54/17 54/17 55/4 55/7 60/6 60/7	dirt [4] 184/4 187/6 187/7 187/8	document [2] 126/21 145/24
61/13 61/19 62/21 63/17 69/12 75/6	disaster [6] 208/10 210/25 211/4 211/5	documentation [3] 39/22 212/13 212/15
79/15 90/15 99/6	211/15 213/10	documents [2] 11/19 145/24
designations [1] 50/17	disasters [1] 38/9	dog [6] 186/24 187/2 187/4 187/8
designed [2] 30/19 221/14	discern [2] 118/21 160/21	187/11 187/18
desk [2] 176/19 177/7	discipline [2] 144/10 146/6	doghouse [2] 187/7 187/24
destroy [2] 115/16 165/3	disciplines [2] 144/6 144/13	doing [7] 24/24 26/8 30/7 42/17 121/25
destroyed [4] 116/9 218/11 224/14	discolored [1] 57/24	142/20 200/20
230/10	disconnected [2] 142/15 176/1	Don [1] 207/3
destroys [1] 114/17	discover [1] 154/12	DONALD [3] 4/10 207/6 207/11
det [1] 72/12	discovered [2] 186/25 193/25	door [28] 8/22 8/24 63/20 63/20 87/12
detached [1] 185/16	discoveries [1] 193/22	87/20 88/5 101/12 130/1 130/21 132/18
detect [4] 115/17 116/10 116/24 120/17	discovering [1] 189/14	136/18 136/25 137/23 138/5 138/6
detectable [1] 120/21	discovery [1] 193/13	138/10 138/10 138/21 139/19 140/8
detection [2] 106/24 107/18	discuss [1] 141/14	141/2 151/17 152/14 154/16 157/22
detergent [1] 115/15	discusses [1] 115/25	177/23 179/8
determination [5] 37/20 85/11 86/18	discussion [1] 170/3	doors [1] 57/12
99/8 198/9	disfigurement [1] 210/4	doorway [1] 180/6
determinations [1] 127/4	display [7] 50/8 56/6 58/13 66/6 69/25	double [1] 198/14
determine [36] 60/14 72/12 75/10 79/21	75/25 76/9	DR [2] 4/10 231/8
80/13 80/21 83/9 83/23 86/11 86/19	displays [4] 55/15 58/6 67/2 67/11	Dr. [1] 232/19
88/20 90/20 91/1 91/1 92/10 92/14	disposal [1] 219/24	Dr. Simley [1] 232/19
93/11 96/21 96/21 98/6 98/14 99/10	distal [1] 226/2	draining [1] 156/1
102/9 102/20 112/8 120/15 125/23	distance [1] 230/6	drank [1] 60/15
127/23 145/12 154/13 154/17 161/1	distinctive [1] 156/11	draw [1] 172/7
161/21 163/22 205/12 215/9	disting [1] 127/24	drawing [1] 214/11
determined [1] 29/12	distinguish [7] 127/24 148/2 151/11	dresser [4] 176/20 177/8 179/14 179/16
determines [2] 28/14 110/14	151/18 151/24 157/15 204/25	drew [4] 188/23 189/1 197/24 204/13
determining [3] 102/12 122/17 127/7	distinguished [1] 205/5	drinking [1] 60/16
devel [1] 81/24	district [2] 32/24 215/2	drip [1] 132/25
develop [44] 23/23 24/2 35/18 35/19	Division [2] 181/20 182/8	dripped [1] 158/16
36/16 36/23 36/24 37/12 37/15 47/23	DMORT [3] 211/14 211/14 211/16	driver's [3] 45/4 129/25 130/7
49/9 50/3 53/18 55/9 66/2 69/20 72/10	DNA [228] 23/17 23/23 23/25 24/2	driving [1] 174/1
75/22 78/9 78/24 81/4 81/6 81/9 81/24	24/22 24/24 25/2 25/7 25/9 25/18 25/23	drop [5] 132/19 132/20 132/22 133/5
82/12 83/11 86/1 90/3 92/16 93/21 94/6	26/2 26/22 27/2 27/17 27/21 28/6 28/7	148/15
	28/10 28/11 28/12 28/15 28/17 28/19	droplet [1] 133/3
	28/24 29/3 29/4 29/7 29/15 29/20 30/2	dropped [1] 219/6

D	63/13 envelopes [2] 44/13 61/7 environmental [1] 116/9 enzymes [1] 29/1 epithelial [2] 34/13 109/13 equipment [4] 24/14 26/10 32/8 194/22 erect [2] 194/20 194/23 erecting [1] 194/19 Ertl [3] 194/11 194/18 195/7 escapes [1] 191/25 especially [4] 34/17 103/2 153/10 155/20 essentially [4] 180/18 201/17 217/1 231/25 estimate [3] 30/8 169/24 210/14 estimated [3] 185/11 189/12 204/19 estimates [1] 175/19 etc [1] 99/21 ev [1] 205/19 evaluated [1] 31/17 event [2] 28/1 74/14 eventually [2] 45/20 115/15 everybody [1] 7/18 everybody's [1] 162/2 everyone [1] 199/6 everything [9] 16/11 19/17 28/23 29/1 31/24 46/2 220/8 220/11 228/20 evidence [85] 23/18 24/5 30/9 31/2 31/25 32/1 32/2 33/13 36/20 38/15 38/25 39/1 39/2 39/6 39/7 39/12 39/18 39/19 39/21 40/10 41/11 42/19 42/22 49/21 50/2 51/4 52/19 52/21 52/23 53/9 54/4 54/11 54/20 55/23 58/18 67/13 67/22 74/6 76/21 78/12 79/6 83/13 86/25 103/15 104/2 104/22 105/1 105/7 105/14 105/18 105/18 105/24 110/5 122/3 122/6 128/10 143/8 143/9 143/10 150/15 150/16 150/20 150/24 151/8 151/9 156/8 159/8 165/23 198/16 200/7 201/5 203/6 208/13 209/17 215/15 215/16 215/17 218/23 219/8 219/14 224/10 225/1 225/4 225/5 232/18 evident [2] 160/4 161/22 evidential [1] 205/19 evidentiary [1] 143/12 Ex [1] 202/22 exact [1] 62/12 exactly [11] 15/5 27/17 28/24 46/6 84/3 99/11 111/1 112/2 129/1 150/13 202/12 exam [1] 54/24 examination [64] 3/4 3/5 3/6 3/9 3/10 3/11 3/12 3/14 3/15 3/16 3/17 3/20 3/21 3/22 4/4 4/5 4/8 4/9 4/11 6/3 16/22 22/10 23/7 42/21 57/19 62/15 69/11 77/15 80/19 83/18 85/13 103/24 117/3 123/22 125/9 129/1 129/3 129/4 138/4 143/19 150/14 154/13 155/3 156/8 161/18 162/17 163/10 165/10 166/9 170/12 172/11 173/5 180/16 181/16 199/1 200/9 200/15 207/13 212/8 212/18 212/18 212/19 225/1 233/3 examinations [4] 104/21 142/20 161/21 163/1 examine [19] 30/22 31/1 39/21 104/17 105/24 128/22 133/22 137/23 154/3 159/10 190/15 196/1 198/22 215/9 215/14 216/4 217/10 223/3 225/22 examined [24] 5/24 23/2 75/6 83/15 85/6 85/7 85/8 85/9 87/8 114/1 114/11 123/18 125/17 134/4 150/25 158/23 163/2 166/5 172/25 181/11 207/8 216/22 217/12 217/14 Examiners [1] 214/6	examining [4] 23/18 82/2 84/24 125/13 except [2] 87/5 87/9 exchange [1] 26/13 exclude [2] 97/7 216/11 excluded [4] 96/3 96/7 97/11 97/12 excluding [2] 101/24 102/1 exclusion [1] 232/3 excuse [10] 82/9 89/7 97/14 98/19 99/23 102/6 160/6 165/20 180/15 223/17 execute [1] 183/10 execution [1] 183/1 exhibit [124] 12/15 12/20 12/23 16/14 27/5 27/7 41/21 44/14 44/15 44/23 45/11 46/8 46/13 46/20 47/1 47/25 48/8 48/14 48/21 48/23 54/7 56/20 56/25 60/2 60/3 61/15 62/2 62/16 62/23 63/12 63/22 64/8 64/10 64/12 64/17 68/7 74/24 74/25 75/1 75/3 76/25 79/17 79/17 81/13 81/15 82/16 84/22 84/23 84/24 85/3 93/18 95/9 95/9 96/10 114/10 126/19 128/9 128/11 129/15 130/15 131/9 131/23 132/12 134/1 136/10 138/2 140/10 141/15 142/14 177/4 177/15 178/24 179/22 184/25 185/6 186/7 186/8 186/9 186/10 186/14 188/4 188/5 188/6 189/7 190/16 190/19 192/14 192/15 193/19 195/25 196/1 196/2 197/9 197/23 198/25 199/1 199/8 199/22 199/24 201/14 202/22 203/8 205/22 214/12 214/13 214/15 222/25 223/2 223/3 223/6 223/10 223/17 223/18 225/14 225/15 227/21 228/15 229/1 229/13 230/3 232/20 232/22 232/23 233/12 exhibits [10] 4/13 60/21 61/6 74/24 76/21 77/4 165/22 190/14 200/7 232/19 existence [2] 83/23 84/19 expect [9] 74/5 74/6 120/4 144/5 148/9 148/21 152/9 153/8 155/18 experience [14] 77/20 125/11 126/24 147/13 152/5 157/8 161/2 161/17 162/21 191/22 209/12 210/25 212/4 214/18 experiences [1] 213/19 experimentation [1] 158/20 expert [7] 26/22 27/2 126/9 126/14 145/7 146/19 210/11 expertise [4] 154/23 204/24 205/4 212/5 explain [26] 27/16 28/16 37/2 38/3 38/23 42/3 45/12 45/23 48/1 48/15 50/11 52/15 55/18 57/16 58/16 66/10 69/24 70/3 70/18 104/20 108/22 113/3 127/3 139/13 162/3 224/7 explained [2] 101/15 102/12 explaining [1] 27/21 explanation [1] 223/23 exposed [3] 70/20 193/2 193/9 express [1] 210/15 extent [3] 16/13 78/4 191/13 exterior [1] 87/4 external [1] 164/12 extract [15] 75/17 83/8 88/10 88/11 93/4 95/20 99/16 102/21 106/19 117/24 118/12 118/18 119/4 119/12 119/20 extractable [7] 92/11 93/12 95/15 96/22 103/9 121/15 122/17 extracted [4] 82/11 86/7 86/8 103/15 extraction [3] 55/3 58/3 106/20 extremely [1] 219/2 eye [2] 29/10 120/18 eyes [2] 83/20 186/19 eyetooth [1] 217/6
E	ear [4] 220/8 220/9 228/20 228/20 Earl [1] 6/15 earlier [4] 50/13 68/14 102/12 137/2 early [1] 168/2 easier [4] 28/9 117/8 117/10 210/8 easiest [1] 28/19 easily [5] 117/16 117/23 219/5 222/23 224/15 east [2] 178/11 179/24 easy [2] 65/23 216/10 EDELSTEIN [18] 1/22 3/15 3/17 5/10 81/12 82/15 84/21 143/17 143/20 152/16 152/19 152/25 153/2 163/7 165/9 165/11 165/17 187/12 edge [7] 82/9 130/23 130/23 135/3 199/20 202/6 206/2 edges [2] 57/21 82/10 education [6] 25/6 126/24 161/2 166/19 212/16 213/18 educational [5] 27/11 32/14 124/3 166/16 214/18 effect [3] 157/21 191/10 191/23 efforts [1] 11/21 eight [8] 184/3 189/3 189/5 189/12 193/14 194/24 198/12 204/15 electronics [1] 142/4 eligible [1] 212/18 elliptical [4] 134/23 139/2 139/6 158/13 Elmhurst [1] 209/7 ELMO [3] 81/13 84/22 205/23 emerge [3] 147/14 156/12 157/2 emerges [1] 156/18 employ [1] 182/22 employed [6] 23/12 123/24 125/16 167/11 181/22 207/17 employment [1] 167/8 enamel [2] 230/8 230/13 encompass [1] 144/5 encompasses [1] 144/12 encounter [1] 91/17 end [15] 7/9 15/12 80/3 80/4 80/5 80/8 80/11 80/19 80/23 138/8 150/9 150/10 162/5 170/6 204/16 ended [1] 218/5 ends [1] 221/13 energy [1] 162/8 enforcement [9] 32/22 38/1 38/16 38/19 65/9 92/1 104/3 104/14 182/1 engaged [1] 196/15 engine [2] 57/11 142/9 enough [13] 89/2 106/25 107/3 107/10 109/7 111/24 111/25 112/4 112/5 132/24 140/1 158/10 224/20 entire [13] 36/18 51/1 66/17 72/13 72/18 72/20 120/3 120/14 124/21 140/12 161/5 161/14 221/17 entirety [2] 66/18 221/10 entities [1] 228/2 entrance [1] 138/6 entry [1] 213/22 envelope [5] 48/1 48/13 48/22 61/9	

<b>F</b>	face [2] 29/11 210/5 facing [2] 178/3 199/18 factor [1] 116/9 fairly [11] 61/24 62/11 62/13 114/4 117/14 118/3 139/23 162/20 162/22 198/6 202/14 fall [2] 132/25 134/17 fallen [1] 139/6 FALLON [54] 1/16 3/4 3/6 3/20 3/22 4/8 4/11 5/5 5/8 5/14 5/16 5/18 6/4 11/22 11/23 12/6 12/7 12/16 12/18 13/5 14/22 14/25 15/7 15/8 15/10 16/12 18/25 22/9 22/11 22/19 123/5 123/8 165/19 166/10 170/10 170/25 171/5 172/12 172/16 181/7 181/17 187/14 187/19 187/20 200/6 206/20 206/24 207/2 207/14 232/16 233/8 233/18 233/20 233/25 families [1] 17/6 family [3] 78/7 207/22 220/14 fancy [1] 214/10 far [8] 8/2 11/19 36/4 102/25 143/12 154/9 154/11 203/22 farthest [1] 178/8 Fassbender [6] 10/9 10/23 13/7 195/25 197/8 223/2 father [1] 29/25 FBI [2] 32/19 73/24 February [6] 7/9 9/18 9/20 15/12 19/19 20/17 feel [3] 11/24 28/4 122/3 feeling [4] 154/20 159/14 168/17 168/25 feet [22] 150/7 150/9 150/9 152/11 184/3 185/12 185/12 185/13 185/21 185/23 189/3 189/5 189/12 193/14 194/24 195/2 195/3 195/11 195/12 198/12 198/12 204/15 felt [4] 122/6 170/4 195/14 198/1 FEMA [1] 211/11 female [4] 53/1 53/6 66/14 70/11 few [6] 27/15 61/6 103/21 117/2 147/21 190/14 fiancé [3] 173/18 174/5 175/9 field [7] 135/11 144/9 144/12 208/2 208/4 214/19 215/10 fields [1] 37/25 Fifteen [3] 6/6 124/17 175/22 fifth [1] 174/1 fifty [2] 68/8 68/9 file [7] 38/11 38/21 38/24 39/23 40/3 40/5 40/9 filing [2] 176/19 177/8 fillings [1] 224/13 film [1] 220/15 finally [4] 48/21 106/19 141/13 164/19 Financial [1] 182/11 findings [13] 50/8 52/3 55/15 58/6 58/14 67/11 69/25 70/4 76/9 160/18 209/3 223/24 224/3 fine [5] 66/1 68/21 77/19 84/4 177/1 finger [3] 131/25 148/16 219/5 fingerprint [1] 210/6 finish [1] 153/4 finished [1] 13/10 fire [11] 10/16 11/10 12/9 13/18 15/19 192/5 193/2 193/9 201/25 216/17 224/14 firearm [6] 81/5 148/10 148/14 156/11 162/4 162/16 firearms [2] 163/2 176/23 Firstly [1] 69/24 fit [3] 57/5 140/19 150/1	five [8] 25/5 31/14 31/18 114/18 123/3 125/14 197/24 225/22 five-and-a-half [1] 125/14 five-minute [1] 123/3 FK [3] 99/6 99/10 119/7 FL [8] 75/6 76/1 76/14 76/17 98/24 99/11 99/15 118/21 flags [1] 202/1 flat [1] 195/9 flip [1] 135/2 floor [2] 45/16 100/9 flow [14] 138/11 139/10 139/15 139/17 139/22 155/24 157/23 157/25 158/6 158/11 158/12 158/17 158/19 158/22 flowed [1] 139/16 fluid [6] 80/22 83/10 86/12 103/9 115/11 118/16 fluids [2] 35/24 105/25 flung [4] 138/22 139/7 140/5 151/21 focus [4] 82/18 91/12 105/13 105/13 focused [2] 91/18 103/5 focusing [3] 86/14 86/25 105/5 folks [3] 194/2 194/4 195/7 follow [1] 35/25 followed [2] 78/5 101/14 following [1] 32/12 follows [7] 5/24 23/2 123/18 166/5 172/25 181/11 207/8 foot [4] 185/18 185/18 185/22 206/6 forceps [1] 114/20 foregoing [2] 235/7 235/7 foremost [1] 168/7 forensic [29] 23/10 25/18 29/14 29/19 30/20 31/20 38/1 124/2 124/10 144/1 144/17 207/24 207/25 208/1 208/6 209/12 209/14 212/6 212/22 212/25 213/8 213/13 213/21 213/24 214/1 214/9 214/19 215/10 231/20 forensics [2] 34/18 38/13 forever [1] 219/9 form [4] 78/25 79/1 104/17 144/19 formal [1] 124/3 forth [2] 32/17 32/19 Forty [1] 106/5 Forty-one [1] 106/5 forward [4] 103/4 107/4 107/4 199/5 forwarded [1] 221/25 found [45] 18/7 20/12 34/4 34/5 34/19 35/15 49/1 50/18 50/20 52/7 52/12 53/13 53/24 56/14 56/22 57/3 57/4 58/24 59/6 59/20 60/11 68/1 68/16 71/24 74/15 75/2 76/2 76/13 101/10 101/11 105/2 107/24 108/2 108/4 112/19 113/9 113/24 130/6 142/16 150/15 150/19 151/8 197/1 197/3 204/5 four [7] 7/9 8/5 61/7 64/22 195/3 195/11 218/4 four-month [2] 7/9 8/5 FOX [2] 1/11 167/18 Fox-Brewer [1] 167/18 fracture [14] 217/16 217/18 217/19 217/22 217/23 218/3 218/15 218/21 219/11 219/21 227/25 228/3 229/23 231/4 fractured [2] 227/24 232/21 fragment [43] 51/3 51/14 51/19 68/11 69/6 69/18 75/2 75/5 75/7 75/9 75/11 75/14 75/19 76/17 76/19 98/23 99/2 99/14 99/14 118/21 186/3 188/19 189/2 189/4 189/10 189/14 189/16 189/23 193/13 204/15 204/18 204/20 204/21 205/3 223/14 226/8 226/12 226/13 229/8 229/10 229/21 231/25 232/20	fragment's [1] 189/11 fragmented [1] 215/22 fragments [25] 50/25 55/22 55/24 70/25 71/3 190/4 195/15 204/24 205/5 205/6 216/2 216/3 216/5 216/21 216/22 217/9 217/10 218/2 218/8 223/11 223/16 224/16 224/18 229/6 231/5 frame [3] 154/25 182/16 199/16 frankly [1] 12/1 free [1] 28/4 freed [1] 33/20 FREMGEN [52] 1/20 3/5 3/10 3/12 3/21 4/5 4/9 5/9 5/9 11/11 11/14 11/16 14/19 14/23 15/2 16/18 16/23 65/4 65/12 68/14 68/18 68/22 68/23 77/3 77/13 77/14 77/16 82/17 82/21 103/19 111/7 112/18 113/17 117/2 117/4 165/25 170/13 171/8 172/9 180/14 180/17 180/22 200/11 200/14 200/16 203/13 203/14 206/17 233/1 233/4 233/11 233/17 frequency [1] 74/1 frequently [1] 38/7 Freymler [2] 208/19 214/25 Fridays [1] 167/25 friend [1] 8/24 friendly [2] 7/25 8/3 friends [2] 6/23 8/22 Froehlich [1] 215/2 front [23] 45/4 48/5 48/9 48/12 48/19 129/5 129/9 129/25 130/7 130/20 130/21 130/22 130/23 151/17 185/4 186/5 188/1 193/14 199/19 204/16 222/18 226/2 226/20 full [7] 24/21 71/10 88/21 108/8 111/23 112/5 212/12 function [2] 29/2 29/17 functional [1] 29/16 furniture [2] 176/15 177/10 further [23] 16/12 22/19 34/24 43/21 43/23 44/4 44/10 77/6 86/9 86/16 88/19 90/25 106/14 106/15 107/1 121/14 122/8 156/21 224/2 226/12 227/15 232/16 233/7 future [1] 165/3
<b>G</b>	GAHN [29] 1/18 3/9 3/11 3/14 3/16 5/8 22/22 23/8 65/3 65/14 68/13 68/25 76/20 76/25 77/6 78/2 89/5 103/21 103/23 103/25 117/5 121/12 123/13 123/23 143/14 144/18 163/8 163/11 165/21 gain [2] 125/19 213/18 gained [1] 125/25 games [1] 17/3 garage [12] 20/8 42/5 75/2 76/2 128/20 156/7 183/21 183/21 183/25 184/4 185/16 186/1 garment [1] 115/17 gas [1] 145/11 gather [3] 111/25 157/5 159/19 gender [2] 53/6 70/10 gene [1] 29/16 general [13] 72/13 73/12 135/22 144/24 144/25 162/10 162/13 171/24 196/22 207/16 207/22 207/23 220/10 generalization [1] 113/14 generalizations [3] 110/25 111/6 113/8 generally [4] 112/24 162/4 183/5 213/3 generate [4] 38/20 39/23 40/1 73/10 generated [4] 40/4 148/13 148/15 177/5 generating [1] 38/24		



<b>G</b> genes [2] 29/7 29/13 genetic [6] 36/15 50/14 55/20 74/17 74/19 89/2 gentlemen [3] 5/2 77/10 234/1 German [2] 186/22 187/4 gets [1] 226/14 GG [1] 84/12 GH [1] 84/12 girl [1] 170/20 girlfriend [3] 18/5 18/7 18/9 glass [1] 158/5 gloves [6] 112/13 142/25 143/2 143/7 200/24 201/9 Glue [1] 218/17 Gluing [1] 219/10 gone [5] 217/1 219/9 224/13 224/15 228/12 grabbed [1] 201/9 grade [1] 6/11 gradually [1] 185/12 graduated [5] 166/22 167/2 207/19 209/7 209/9 grainy [1] 226/6 grandma's [1] 10/18 granted [1] 171/6 grass [1] 186/1 gravel [5] 185/11 185/14 185/19 185/23 185/24 gravity [4] 133/1 139/18 140/1 157/21 grayer [1] 230/11 great [4] 7/2 155/11 155/18 203/13 greater [1] 157/18 Green [1] 65/7 Groffy [2] 41/8 61/2 grommets [1] 195/15 ground [5] 132/25 139/17 140/2 184/19 194/24 group [4] 31/13 31/23 32/18 33/8 growing [1] 6/22 Guang [1] 194/11 guard [3] 80/2 81/3 111/13 guessing [1] 161/13 guidance [1] 167/17 gum [1] 228/11 gun [5] 79/23 162/8 162/20 176/23 176/24 guns [4] 163/2 176/24 176/25 179/3 gunshot [8] 148/22 156/13 156/14 156/18 156/23 157/2 157/9 162/5 guys [3] 10/23 10/24 17/2	half [3] 125/14 134/24 194/6 Halloween [4] 7/8 15/19 173/10 174/3 hallway [4] 8/21 180/2 180/3 180/5 hammer [2] 190/10 197/4 hand [19] 5/21 22/24 27/6 41/24 44/12 47/5 60/19 61/7 109/15 123/15 126/18 131/5 133/6 141/15 166/2 172/22 178/18 187/22 190/15 handcuffs [1] 97/17 handed [1] 111/8 handle [7] 87/21 88/5 113/6 191/3 192/8 192/19 206/9 handled [1] 191/2 handles [1] 87/12 handling [2] 31/25 121/9 hands [3] 112/14 132/5 201/3 hang [1] 17/2 happened [10] 18/8 20/2 39/25 51/16 57/9 133/18 141/7 141/22 168/13 183/24 happens [3] 113/10 219/7 226/4 happy [1] 7/23 happy-go-lucky [1] 7/23 hard [4] 20/4 117/17 121/22 202/12 harder [1] 230/15 hardest [2] 230/13 230/14 hate [1] 152/20 Hau [3] 2/3 235/4 235/19 head [15] 135/15 141/3 141/8 149/24 150/6 150/9 151/5 151/6 152/1 152/10 157/3 159/18 161/3 161/6 163/17 headboard [15] 84/25 85/2 85/5 85/10 85/12 85/18 85/20 86/2 86/3 86/6 178/6 178/8 178/12 178/14 179/24 health [4] 207/23 211/7 211/8 211/11 hearsay [1] 187/13 heart [1] 155/25 heat [4] 70/20 70/22 191/19 192/2 height [1] 185/13 held [1] 9/15 Here's [1] 131/15 hereby [1] 235/6 herein [7] 5/23 23/1 123/17 166/4 172/24 181/10 207/7 high [6] 6/10 73/5 156/13 167/13 167/20 167/21 higher [2] 208/12 212/4 hinged [1] 138/5 Hispanic [2] 73/18 73/19 hit [4] 158/15 164/2 203/11 226/16 hits [1] 133/3 hm [2] 77/22 96/11 hold [5] 12/20 31/8 31/11 165/20 181/25 holder [1] 130/25 holding [2] 191/24 232/13 Holmes [3] 220/3 223/8 228/18 home [1] 166/12 Homeland [1] 211/10 homicide [5] 105/3 121/7 122/10 127/25 162/16 HON [1] 1/11 Honor [14] 5/5 65/3 68/14 103/21 123/13 143/15 143/18 144/18 152/16 152/21 163/9 165/21 200/6 206/18 hood [15] 54/10 54/23 55/10 55/16 56/1 56/9 56/14 56/19 87/9 93/8 93/9 142/8 142/11 142/12 142/24 hope [1] 144/14 Hospital [1] 65/7 hot [1] 183/12 hour-and-a-half [1] 194/6 hours [1] 196/17 house [3] 9/16 28/21 28/22	human [10] 43/18 88/13 158/18 204/22 204/25 205/12 211/7 211/8 211/12 215/5 hundred [3] 213/7 232/5 232/6 hypothesis [2] 154/6 154/8 hypothetical [1] 148/19  I I'd [15] 11/11 27/15 27/16 59/19 60/20 61/7 64/7 64/8 126/17 130/5 182/19 184/23 196/24 212/4 215/3 I'll [10] 15/8 40/19 84/3 148/21 170/10 193/11 199/5 202/22 203/9 205/22 I'm [118] 11/16 11/25 12/4 12/18 12/21 13/13 13/21 23/17 24/8 24/9 24/11 24/14 27/6 34/24 35/7 40/16 50/6 52/1 52/6 54/6 55/13 56/23 58/4 60/1 60/19 61/5 61/6 62/1 64/9 64/11 66/5 67/1 67/10 68/4 68/5 69/23 74/23 77/17 81/12 82/15 84/21 87/23 93/24 95/8 96/9 97/25 100/25 106/9 106/9 108/14 109/13 112/16 112/16 114/24 124/2 124/10 124/12 126/18 128/9 129/14 130/14 131/8 131/22 132/11 133/25 136/9 138/1 138/13 140/9 141/14 144/1 144/19 145/10 148/3 148/13 149/9 151/10 152/25 156/22 158/25 160/7 166/12 173/19 177/1 177/3 177/25 178/10 179/21 181/19 186/9 190/15 195/9 195/24 195/24 197/8 199/2 200/20 201/11 201/13 202/8 203/7 207/16 208/3 209/8 211/4 213/15 214/4 220/13 222/13 222/15 222/16 222/25 223/1 225/7 230/6 230/19 230/19 232/14 I've [20] 25/16 25/20 27/11 70/6 106/9 114/9 124/21 124/22 125/8 125/13 125/17 143/23 209/14 210/18 211/13 211/16 211/17 212/13 217/12 217/14 ID [3] 54/17 55/8 55/25 Idaho [1] 125/15 idea [2] 43/14 213/5 identifiable [2] 208/9 224/15 identification [27] 12/15 12/19 27/5 68/21 84/11 95/11 96/15 96/17 98/24 208/21 209/16 209/25 210/1 210/2 210/5 210/6 210/12 210/17 211/22 214/5 215/1 215/14 217/11 231/23 231/23 232/3 232/11 identifications [4] 208/7 208/11 210/8 210/19 identified [8] 56/21 129/16 131/23 183/13 183/21 208/10 217/7 232/19 identify [25] 23/22 27/8 38/8 44/15 46/9 57/1 61/5 68/6 75/3 126/20 132/13 140/10 141/16 151/24 169/12 188/11 190/8 198/24 215/21 216/12 216/13 222/24 224/19 224/21 224/25 igni [1] 57/7 ignition [9] 46/12 46/24 47/9 52/8 57/7 131/15 131/17 132/7 154/15 II [1] 4/10 IJ [1] 90/15 IK [1] 90/15 illustrated [1] 54/5 illustrates [1] 28/11 illustrative [1] 186/6 im [1] 41/9 image [2] 130/20 134/3 imaging [1] 41/9 immediate [3] 185/5 199/20 202/21 impact [6] 110/19 115/21 137/3 138/10 139/22 147/9
<b>H</b> hacksaw [1] 197/5 hadn't [1] 142/21 hair [30] 29/10 34/9 98/1 98/7 98/8 98/10 98/19 135/10 135/12 135/15 137/20 141/8 149/10 149/20 151/3 151/4 151/5 152/1 159/2 159/11 159/13 159/18 160/5 160/7 160/8 160/19 161/3 161/6 161/10 161/14 hairs [1] 98/10 Halbach [30] 8/14 20/2 21/25 65/1 65/6 66/3 66/8 66/21 67/8 67/14 67/17 67/23 71/7 71/16 71/20 71/23 74/16 76/5 76/13 90/5 90/6 94/13 96/3 97/9 101/4 101/24 119/5 198/4 220/1 231/8 Halbach's [25] 41/2 41/17 42/6 42/8 43/2 43/9 51/24 53/25 54/10 55/10 56/15 60/25 67/7 72/1 78/4 108/4 128/13 129/17 130/16 132/7 133/23 134/7 135/19 163/15 205/13	hold [5] 12/20 31/8 31/11 165/20 181/25 holder [1] 130/25 holding [2] 191/24 232/13 Holmes [3] 220/3 223/8 228/18 home [1] 166/12 Homeland [1] 211/10 homicide [5] 105/3 121/7 122/10 127/25 162/16 HON [1] 1/11 Honor [14] 5/5 65/3 68/14 103/21 123/13 143/15 143/18 144/18 152/16 152/21 163/9 165/21 200/6 206/18 hood [15] 54/10 54/23 55/10 55/16 56/1 56/9 56/14 56/19 87/9 93/8 93/9 142/8 142/11 142/12 142/24 hope [1] 144/14 Hospital [1] 65/7 hot [1] 183/12 hour-and-a-half [1] 194/6 hours [1] 196/17 house [3] 9/16 28/21 28/22	



I	137/23 138/9 139/19 140/7 141/1 141/2 intern [1] 167/12 internal [1] 164/12 internship [4] 167/7 167/14 167/23 171/17 interpretation [12] 124/20 124/23 124/25 125/5 125/8 125/25 126/13 127/6 127/22 145/6 147/19 148/6 interpretations [2] 25/19 32/13 interpreting [2] 125/19 126/9 interrupt [1] 152/20 interspersed [1] 36/14 intertwined [3] 188/19 189/23 204/11 interviewed [1] 15/12 introduced [2] 128/10 233/13 investigate [1] 122/16 investigation [6] 98/18 105/22 146/7 162/15 181/20 182/9 investigations [2] 19/3 122/15 investigator [7] 10/22 19/2 190/15 190/24 193/11 197/8 198/25 invisible [1] 120/17 involvement [2] 42/13 208/10 irons [2] 95/14 97/15 Irregardless [2] 158/7 158/8 issue [2] 119/19 141/14 issues [2] 24/13 194/3 item [61] 39/12 39/13 42/22 44/19 45/2 45/13 45/22 46/2 46/7 46/10 46/21 48/3 48/17 48/25 54/16 54/17 55/4 55/7 55/25 59/15 60/6 60/7 61/13 61/19 62/20 63/17 68/19 69/1 69/2 69/12 69/16 75/6 76/1 76/14 79/5 79/12 82/10 83/13 86/24 88/7 93/18 96/13 103/8 104/21 105/10 105/11 109/10 109/15 109/20 109/23 109/23 112/14 113/12 115/22 117/19 118/13 184/12 187/21 190/17 197/9 200/23 items [32] 38/15 38/19 39/15 39/16 40/10 49/10 67/3 86/18 86/22 89/22 99/24 100/1 102/3 104/1 104/25 105/23 110/4 110/12 113/7 117/7 117/22 193/18 195/20 196/21 198/2 200/12 201/3 215/9 215/13 215/17 215/18 215/23	jurors [43] 27/17 28/16 34/3 37/2 38/4 38/23 44/16 45/1 45/12 46/9 47/15 48/7 48/15 48/24 49/7 50/11 52/16 55/18 57/1 57/16 58/4 58/16 59/20 61/20 62/4 62/9 62/17 62/25 63/13 66/11 67/1 70/18 113/3 127/3 130/6 134/15 138/3 141/17 173/24 175/2 175/15 177/18 224/4 jury [18] 1/4 27/22 28/5 55/14 64/15 70/3 104/20 128/5 130/19 131/14 134/9 138/14 139/12 155/6 159/5 171/4 173/21 209/24 Justice [3] 181/20 181/23 182/23
impacted [5] 138/25 139/3 139/16 139/19 139/24 impacts [2] 133/3 138/23 impeach [1] 12/2 impeachment [1] 16/15 impending [1] 198/5 implements [3] 190/7 196/21 196/25 importance [1] 195/19 impression [1] 202/16 Improper [1] 170/25 in-court [1] 210/16 inaudible [2] 11/13 201/12 inch [5] 184/20 184/21 184/21 204/19 204/19 inches [1] 62/12 incident [1] 154/9 incisor [1] 224/23 incisors [1] 222/17 including [2] 94/12 173/10 inconclusive [7] 88/16 88/18 88/23 89/1 89/3 116/4 116/11 incorrect [1] 165/14 indeed [2] 133/17 141/7 independently [1] 103/7 indi [1] 57/25 indicate [14] 40/10 84/11 88/1 90/17 106/17 137/6 139/21 139/23 151/1 151/4 153/13 160/25 165/16 212/3 indicates [4] 135/14 136/4 136/7 137/13 indication [9] 57/25 99/12 127/10 127/14 127/18 157/11 157/12 159/18 206/9 indications [1] 157/4 indicative [5] 139/7 140/4 151/3 156/15 159/17 indicator [1] 161/7 indirect [3] 151/8 151/10 151/14 individuals [12] 24/1 26/7 26/9 31/13 32/18 38/9 39/1 73/23 124/11 208/8 211/23 217/13 influencing [1] 133/2 inform [3] 58/4 63/13 67/1 inherit [1] 29/24 inherited [2] 28/18 29/23 initial [2] 224/17 229/19 initially [5] 129/2 186/3 215/20 215/24 218/14 initials [2] 54/19 54/20 injury [3] 208/14 210/22 210/22 inner [1] 151/16 Innocence [2] 33/3 33/7 inquiry [1] 176/3 inside [15] 9/9 17/4 37/5 37/8 49/16 49/17 95/21 96/23 137/18 149/14 154/16 156/7 157/22 230/11 230/12 instance [16] 39/13 43/15 78/13 79/9 83/13 87/20 89/9 98/20 100/4 117/7 118/17 118/20 119/11 206/13 213/1 216/8 instances [2] 74/8 105/12 Instantaneously [1] 113/10 institution [2] 166/23 167/3 instrumentation [1] 114/23 instruments [4] 26/11 114/25 127/15 147/12 insulated [1] 227/15 intended [1] 172/7 interest [3] 183/15 183/24 184/9 interested [3] 29/15 29/22 75/10 interesting [1] 188/25 interior [10] 43/4 87/4 87/12 128/23	K Karen [2] 167/16 168/12 Katrina [4] 209/20 211/2 211/9 211/20 KAYLA [17] 3/3 5/19 5/22 6/2 6/5 11/8 12/18 15/10 22/7 22/12 168/3 168/8 168/14 168/16 168/24 169/22 170/15 Kayla's [2] 169/16 170/2 keep [3] 26/1 26/5 201/3 keeps [2] 39/5 54/18 Ken [1] 5/7 KENNETH [1] 1/14 kept [3] 38/10 39/23 40/2 key [29] 56/22 57/2 57/3 57/4 57/6 57/10 57/14 57/17 57/19 57/22 57/22 57/23 58/1 58/7 58/10 58/19 58/25 59/4 93/20 93/23 94/1 94/3 94/13 94/17 94/19 94/22 112/18 112/19 142/4 kick [1] 116/13 kills [1] 115/2 kits [1] 26/12 kitty [1] 179/17 kitty-corner [1] 179/17 knife [1] 148/12 knives [4] 102/4 102/5 102/9 102/15 known [4] 35/21 79/10 95/25 215/25 KRATZ [18] 1/14 4/4 5/7 13/13 27/6 40/16 44/12 54/6 60/1 60/19 61/6 68/5 126/18 172/19 173/6 180/10 180/24 203/11 Krupka [1] 231/8	
J	L lab [58] 23/13 23/16 23/17 24/7 24/25 30/3 30/8 30/21 31/12 31/24 33/24 36/1 38/20 39/8 39/10 42/9 45/24 47/21 54/16 55/4 60/6 61/3 65/9 69/2 69/2 69/12 81/22 84/25 92/2 96/18 98/4 102/3 104/2 104/8 121/1 121/3 124/9 124/22 125/15 125/22 129/17 142/18 143/22 144/4 144/7 146/14 153/23 154/2 161/21 194/4 194/6 194/10 194/17 195/7 195/21 198/2 198/7 198/8 label [1] 54/16 labeled [2] 101/10 220/2 laboratories [1] 37/5 laboratory [31] 23/11 25/11 26/17 30/13 30/17 30/24 31/8 31/10 31/14 31/15 31/15 32/4 32/7 32/21 33/16 38/25 39/5 39/17 40/25 41/4 42/5 42/7 43/12 60/6 72/22 73/7 114/18 123/25 124/16 128/21 142/23 labs [3] 26/8 36/4 73/25 lack [1] 153/12 ladies [3] 5/2 77/9 234/1 landscape [2] 185/14 185/25 large [19] 47/6 61/24 62/11 93/7 108/25 108/25 114/4 118/3 139/23 155/11 155/11 155/13 158/10 163/23 187/4 194/21 194/23 202/23 204/7	
jack [2] 83/1 144/16 jack-of-all [1] 144/16 jacket [6] 40/3 40/9 90/12 90/23 91/3 91/22 jackets [1] 32/9 jail [13] 173/23 173/25 174/3 174/8 174/9 174/12 175/24 176/10 176/18 176/22 177/12 177/14 177/20 January [4] 9/18 167/6 168/1 168/2 Jason [1] 184/1 jaw [3] 223/13 223/16 226/12 jeans [10] 90/13 90/17 90/21 91/3 91/20 114/8 114/10 119/23 120/3 120/20 Jeff [1] 215/2 Jennifer [3] 2/3 235/4 235/19 JEROME [1] 1/11 Jim [3] 220/3 223/8 228/18 job [2] 122/1 144/2 JODI [4] 4/3 172/19 172/23 173/3 John [3] 194/10 194/17 195/7 join [1] 233/20 Jost [3] 184/1 184/11 194/19 journals [1] 26/16 judged [1] 171/4 June [1] 146/16 junkyard [1] 183/11		

<b>L</b>	looks [4] 114/5 197/1 227/25 229/13 losing [2] 7/14 17/19 lost [1] 219/8 lot [22] 26/13 29/18 36/10 38/7 38/11 50/15 70/20 91/12 103/1 103/1 104/23 104/25 109/5 109/8 110/3 110/8 113/9 117/15 155/9 164/4 164/7 220/9 lots [3] 91/13 117/20 117/20 loud [1] 13/3 love [4] 14/6 220/9 220/10 220/11 low [1] 116/10 lower [9] 218/8 221/9 221/23 222/19 222/20 223/13 223/15 223/15 228/23 lucky [1] 7/23 lunge [2] 187/5 187/10 lying [2] 19/12 184/19	<b>M</b> ma'am [1] 35/8 machine [1] 235/10 Madison [12] 23/11 23/13 24/25 30/4 30/7 31/8 33/5 104/2 123/25 124/22 128/21 207/16 magnitude [1] 103/2 Maine [3] 182/2 182/3 182/4 maintain [1] 219/14 maintained [1] 73/23 male [3] 53/1 53/8 53/11 malpractice [1] 208/13 mandible [1] 223/15 MANITOWOC [7] 1/1 173/23 174/2 183/6 183/25 208/22 235/2 manner [1] 127/18 mark [5] 1/20 5/9 208/13 209/17 210/21 marked [28] 4/13 12/15 12/19 27/5 27/7 44/14 54/7 56/25 75/1 95/8 96/10 114/9 126/19 129/15 130/15 131/8 131/23 132/12 134/1 136/9 138/2 140/9 141/15 185/2 190/16 199/8 203/7 223/1 marker [6] 50/20 52/21 53/4 53/6 70/11 111/18 markers [22] 36/15 50/13 50/14 50/16 50/18 51/20 52/19 52/24 55/21 55/21 56/10 66/12 67/15 70/6 70/7 70/9 70/24 71/2 71/5 72/5 72/16 111/17 markings [1] 196/8 Marquette [2] 207/19 209/9 mass [2] 38/9 208/10 Master's [4] 166/18 167/9 171/15 171/18 Masters [1] 166/25 mat [1] 150/13 match [11] 74/21 79/10 89/24 90/8 95/24 97/5 217/19 217/22 218/3 218/16 231/4 matched [8] 74/16 103/11 119/4 219/21 227/25 228/3 229/23 232/21 matches [1] 81/8 matching [7] 77/20 78/11 217/16 217/18 217/23 218/21 219/11 material [13] 23/22 23/23 43/13 45/15 47/19 105/5 115/10 117/15 184/19 189/24 195/8 197/19 204/11 materials [7] 28/23 34/8 34/16 42/16 42/24 91/15 115/19 matter [12] 72/22 163/25 184/3 184/22 187/14 189/20 190/4 193/24 193/25 195/18 235/7 235/13 mean [30] 12/1 31/19 45/24 46/17 46/17 73/20 73/21 87/5 87/6 116/22 118/7 118/12 130/11 132/21 138/19 139/13 161/15 164/1 164/2 205/14 209/25 224/18 224/19 224/21 225/13	229/15 231/15 231/21 232/5 232/12 meant [1] 30/23 measure [2] 117/18 140/17 measured [1] 140/18 measurements [2] 62/12 140/14 mechanically [1] 195/6 medical [8] 38/6 65/16 65/18 124/5 146/13 211/6 213/10 214/6 meeting [2] 32/16 172/13 meetings [5] 25/23 26/4 26/6 26/10 26/12 member [3] 211/4 213/12 214/4 members [3] 5/12 78/7 92/1 memory [1] 195/9 mentioned [9] 78/23 118/10 118/20 120/25 121/7 204/13 210/24 211/1 213/10 mesial [1] 226/1 met [2] 170/14 171/9 metal [10] 49/2 52/12 64/18 64/19 191/5 192/25 193/8 195/15 195/16 206/11 method [1] 36/8 microphone [4] 13/18 24/18 173/8 199/5 middle [8] 131/24 167/12 167/15 167/17 205/24 230/16 230/18 230/20 mike [1] 7/17 mimick [1] 30/19 mind [2] 232/5 232/6 minded [1] 168/16 minor [1] 146/13 minute [4] 19/4 77/9 123/3 186/4 minutes [7] 77/10 147/21 170/1 175/22 175/23 176/1 181/2 Mishicot [4] 6/10 6/10 167/12 167/13 misidentify [1] 216/11 miss [1] 20/4 misspoke [1] 206/2 mistaken [1] 216/9 mix [1] 94/12 mixture [4] 95/22 96/2 96/25 113/12 mixtures [2] 109/25 113/14 model [1] 28/11 moistened [2] 44/8 47/17 molar [7] 218/9 222/14 222/19 222/21 224/22 226/22 228/23 molded [1] 159/5 molding [4] 101/11 134/10 134/11 159/4 molecular [1] 25/21 mom [5] 6/13 10/19 10/20 15/15 166/12 moment [10] 13/9 44/11 126/17 128/12 186/13 196/1 197/14 199/4 209/22 223/3 moments [1] 27/16 Monday [3] 42/11 128/18 167/24 month [2] 7/9 8/5 months [2] 22/4 174/14 morning [4] 5/2 5/5 6/5 167/17 Mortuary [1] 211/15 mother [1] 29/25 Motion [1] 171/6 motor [2] 183/16 199/16 mound [2] 187/6 187/8 mouth [5] 60/16 220/8 226/2 226/3 228/19 movement [5] 127/12 136/4 136/7 137/8 137/14 Mr [2] 11/14 40/16 Mr. [49] 11/22 13/13 15/7 18/25 27/6 44/12 51/5 51/16 54/6 56/23 60/1 60/19 61/6 65/4 68/5 68/14 68/18 68/22 77/13 111/7 112/18 113/17 117/5 123/24 126/18 128/17 129/20 134/14 141/13 143/21 152/4 153/19 163/12 173/17
----------	--	---	---

<b>M</b>	<p>nightstand [3] 177/8 179/4 179/10  nine [1] 79/19  Ninety [1] 26/21  Ninety-two [1] 26/21  Ninth [1] 6/12  Nitron [1] 143/3  nobody [1] 163/4  nonbloodied [1] 134/19  nonbloody [1] 129/13  none [5] 90/2 101/4 101/6 103/16 206/20  nonhuman [2] 88/13 215/5  nonstain [1] 137/12  nonstained [2] 130/13 136/6  Norm [1] 5/8  normal [6] 7/5 7/5 18/2 170/17 201/6 216/25  normally [5] 17/8 65/22 170/20 216/25 228/11  NORMAN [1] 1/18  North [2] 213/4 213/8  nose [1] 222/17  note [4] 114/13 154/3 186/21 187/20  noted [2] 84/18 190/10  notes [13] 40/1 82/3 84/3 84/5 84/10 103/8 111/15 113/25 114/2 114/2 114/4 114/13 235/9  notice [1] 7/10  noticed [5] 119/24 151/9 189/19 190/3 190/9  November [15] 8/18 8/20 42/10 42/14 128/18 134/5 141/25 142/17 142/19 182/21 192/18 208/19 214/23 220/2 223/8  November 10 [1] 220/2  November 11 [1] 223/8  November 7 [4] 42/10 42/14 128/18 142/17  November 8 [2] 142/19 192/18  November 9 [2] 208/19 214/23  nucleated [5] 34/5 34/10 34/22 65/21 79/5  number [39] 39/10 39/11 39/14 40/17 44/12 45/23 45/25 54/16 60/6 68/7 72/17 74/16 78/9 79/17 82/3 95/12 96/15 96/17 102/3 104/7 115/6 115/7 171/20 171/23 188/4 188/7 208/5 208/12 211/17 213/14 215/3 215/16 217/12 218/22 219/25 222/6 222/24 225/13 225/14  numbered [1] 46/3  numbering [1] 222/11  numbers [13] 50/16 50/21 51/2 51/7 51/10 52/17 70/8 72/14 72/19 73/5 84/12 186/7 222/10  numerical [1] 39/11  numerous [4] 43/5 51/14 84/5 138/10</p>	<p>observations [3] 138/3 154/4 160/21  observe [6] 99/24 129/7 130/2 134/6 135/18 136/19  observed [20] 129/5 130/18 131/10 132/4 132/6 132/16 133/9 136/25 137/16 137/18 138/15 140/23 141/1 147/25 148/7 154/16 163/13 192/18 199/23 200/3  observing [2] 80/10 134/15  obtain [4] 79/21 89/23 94/3 98/1  obtained [3] 51/22 66/7 231/8  obvious [4] 42/22 43/5 87/19 87/24  obviously [10] 70/19 78/21 79/7 82/22 105/3 116/4 121/8 144/12 155/9 201/22  occasion [5] 128/22 155/2 168/2 174/4 174/21  occasions [2] 174/19 175/12  occlusal [3] 225/25 227/22 229/20  occupation [1] 23/9  occur [2] 174/24 195/6  occurred [2] 127/9 168/7  occurrence [2] 193/8 201/6  occurs [2] 74/2 155/8  October [6] 7/8 10/17 173/20 174/15 175/8 175/12  October 31 [6] 7/8 10/17 173/20 174/15 175/8 175/12  odometer [3] 141/20 141/23 142/1  odontology [3] 213/22 214/9 214/10  offer [1] 165/22  office [4] 167/17 168/8 168/14 220/3  officer [6] 19/9 19/12 39/3 184/1 190/23 203/3  officers [16] 10/8 11/9 12/8 12/11 13/6 14/3 14/12 14/16 15/11 15/22 19/10 19/19 20/15 20/22 22/12 65/9  offices [2] 32/25 32/25  Official [3] 2/4 235/4 235/19  offspring [1] 30/2  old [1] 6/5  one [129] 8/21 10/22 12/1 12/2 17/18 19/2 19/2 22/9 28/1 35/9 35/22 41/9 44/7 44/11 44/13 46/3 50/4 51/7 51/20 52/18 68/8 68/9 70/22 72/15 72/15 73/15 73/15 73/16 73/18 73/25 74/4 74/4 74/4 74/7 74/7 74/23 79/19 84/1 84/18 88/25 89/9 92/6 95/23 96/25 100/17 100/18 100/18 100/19 100/24 100/25 104/5 106/5 106/8 109/24 111/18 114/7 117/5 117/23 118/1 120/19 122/22 123/7 127/21 127/21 129/10 129/21 137/3 138/5 138/18 141/13 145/16 152/7 165/9 165/22 168/21 169/5 172/2 174/20 175/17 175/17 179/21 180/15 180/15 183/9 183/18 183/24 184/20 184/21 184/21 184/21 185/4 186/8 187/25 190/22 194/20 195/12 198/24 199/4 201/2 203/11 204/19 204/19 206/24 210/21 213/23 214/2 215/3 216/3 216/6 217/4 217/21 217/22 218/15 218/22 218/25 219/1 221/10 223/11 224/9 225/11 225/12 227/3 227/19 229/7 231/3 231/15 231/15 231/25 233/13  one's [2] 160/1 160/2  One-fifty [2] 68/8 68/9  One-ten [1] 123/7  ones [6] 70/8 151/3 151/23 210/20 218/5 218/7  online [3] 24/15 25/9 25/21  open [7] 18/19 63/21 87/20 130/1 130/21 142/3 180/6  opened [5] 54/21 57/12 142/8 142/11</p>
<b>N</b>	<p>naked [1] 120/18  name [22] 6/1 6/1 9/12 21/1 23/4 23/4 49/13 123/20 123/20 166/7 166/7 168/3 173/2 173/2 181/13 181/13 191/25 207/10 207/10 207/11 214/10 220/2  Namely [1] 66/23  Narcotics [2] 181/21 182/8  national [3] 211/4 211/5 213/10  natural [2] 185/14 185/25  naturally [2] 110/7 110/11  nature [3] 138/17 138/20 201/8  NDMS [2] 211/5 211/13  near [6] 139/4 184/13 190/7 192/18 197/24 230/17  nearing [1] 197/25  necessarily [5] 105/12 109/10 156/25 157/23 161/5  necessary [2] 32/17 49/20  neck [2] 163/21 164/6  need [16] 28/1 28/4 28/21 28/23 40/7 41/11 43/20 49/22 49/23 62/15 103/8 179/15 199/10 208/9 225/4 225/5  needed [1] 220/23  needs [2] 28/25 39/20  negative [11] 43/21 80/17 80/18 83/16 84/9 85/17 86/8 90/22 91/19 114/8 120/20  negligence [1] 208/14  neither [1] 84/18  never [2] 156/7 160/25  new [8] 24/10 24/14 24/14 26/9 26/10 33/12 33/12 33/13  news [4] 20/1 20/9 20/10 21/19  nice [1] 8/7  NICK [4] 3/13 123/14 123/16 123/21</p>	<p>o'clock [1] 197/24  oath [1] 207/5  ob [2] 14/19 102/8  object [18] 11/11 14/19 129/12 132/5 132/24 132/25 134/18 135/24 136/3 136/5 137/11 138/23 139/8 140/4 140/6 143/8 143/10 153/14  objection [10] 12/5 16/16 144/18 144/19 165/24 170/25 200/10 200/11 232/25 233/18  objection's [2] 171/3 187/17  objections [1] 77/2  objects [1] 23/19  observation [2] 102/8 137/15</p>

<p>○</p> <p>opened... [1] 142/24</p> <p>opening [4] 59/23 60/15 64/19 140/18</p> <p>opens [2] 138/6 138/8</p> <p>operates [1] 211/6</p> <p>Operational [1] 211/15</p> <p>opinion [43] 53/21 54/2 54/3 56/12 56/17 58/22 59/2 59/3 67/16 67/21 67/22 67/25 76/11 76/16 133/11 133/16 140/24 141/6 147/22 147/24 149/19 149/19 149/22 149/25 149/25 150/5 150/7 154/23 159/22 184/2 197/20 199/15 208/25 209/1 209/2 210/11 210/15 231/2 231/5 231/10 231/11 232/2 232/14</p> <p>opportunity [11] 12/3 79/20 83/8 91/24 93/7 93/20 94/1 96/20 99/4 100/11 101/8</p> <p>opposed [4] 107/17 148/23 157/3 164/12</p> <p>oral [3] 207/23 212/19 220/9</p> <p>order [8] 28/13 28/14 35/24 49/21 72/17 107/18 135/3 164/16</p> <p>organization [1] 213/23</p> <p>organizations [6] 213/9 213/11 213/14 213/20 213/24 214/3</p> <p>orient [1] 179/22</p> <p>originated [1] 151/19</p> <p>our [41] 8/20 11/23 24/11 27/24 30/17 31/16 32/7 32/8 32/8 32/12 32/15 34/6 36/19 39/17 39/19 39/24 40/2 40/2 40/24 41/9 41/9 42/4 42/6 54/14 54/14 54/15 54/17 60/5 83/20 106/19 106/24 109/1 110/5 114/19 114/20 114/22 114/22 128/20 143/8 180/25 233/9</p> <p>outer [1] 206/2</p> <p>outgoing [1] 8/8</p> <p>outside [5] 30/18 152/18 220/7 226/15 228/19</p> <p>overall [1] 140/12</p> <p>overrule [1] 12/4</p> <p>Overruled [1] 144/21</p> <p>overseeing [2] 24/11 144/5</p> <p>oxidized [2] 191/4 193/6</p>	<p>passenger [16] 48/5 48/12 48/19 53/14 53/24 59/16 129/6 129/8 129/9 130/21 132/18 133/9 133/10 134/11 152/3 152/15</p> <p>passenger's [1] 130/20</p> <p>passive [7] 128/7 132/19 132/20 132/21 133/5 147/4 148/15</p> <p>past [4] 125/14 125/17 210/12 217/11</p> <p>patients [1] 207/23</p> <p>pattern [25] 124/23 124/25 125/5 125/12 126/2 126/6 126/25 127/22 130/17 132/6 134/23 135/12 136/2 136/2 136/8 137/5 137/6 139/2 139/20 148/11 150/16 155/7 156/8 158/13 160/22</p> <p>patterning [3] 125/8 148/22 156/17</p> <p>patterns [30] 124/20 126/10 127/5 128/2 133/9 133/13 134/6 135/19 136/19 137/16 137/17 138/12 139/10 139/17 139/22 140/22 141/1 147/14 148/6 152/13 156/11 157/2 157/6 157/10 157/11 159/10 163/12 164/20 164/21 164/23</p> <p>PCR [3] 36/9 38/5 50/14</p> <p>PCR-based [1] 36/9</p> <p>Pediatric [1] 220/10</p> <p>Pepsi [8] 59/17 59/21 60/4 60/8 60/10 66/24 67/7 68/2</p> <p>percent [7] 29/24 29/25 30/1 114/18 228/12 232/5 232/6</p> <p>perfect [1] 83/21</p> <p>perfectly [3] 65/25 138/24 231/18</p> <p>perform [10] 32/21 32/23 38/16 43/7 43/24 49/5 57/14 63/7 64/2 64/21</p> <p>performed [4] 25/3 40/14 47/9 161/20</p> <p>performing [1] 30/4</p> <p>perhaps [8] 35/14 116/16 152/7 183/15 188/24 189/9 191/6 193/16</p> <p>periapical [4] 221/1 221/3 221/7 221/18</p> <p>period [4] 7/10 8/5 124/19 167/5</p> <p>permanent [1] 222/21</p> <p>person's [6] 34/23 35/9 35/13 36/18 49/24 161/6</p> <p>Personal [1] 210/22</p> <p>personnel [1] 194/10</p> <p>perspective [1] 170/17</p> <p>phone [4] 175/3 175/21 194/1 208/18</p> <p>phonetic [3] 138/24 184/24 204/6</p> <p>photo [9] 179/21 188/7 189/4 192/17 199/11 202/8 202/12 202/20 233/16</p> <p>photograph [49] 36/12 41/24 41/25 42/4 44/24 46/25 47/2 47/4 47/5 48/9 48/10 48/23 57/4 61/16 61/16 62/2 62/23 63/23 63/24 64/11 64/18 68/6 68/10 68/11 68/20 84/23 128/11 129/16 129/18 129/23 130/16 131/11 131/24 132/13 132/15 132/17 141/17 142/14 187/22 188/1 188/4 197/18 203/9 203/15 225/10 225/11 227/5 227/6 227/20</p> <p>photographed [1] 41/12</p> <p>photographer [1] 61/3</p> <p>photographs [20] 40/17 40/22 40/23 41/1 41/10 41/13 41/15 60/20 60/24 99/24 99/25 158/24 159/3 185/1 186/5 186/7 200/17 225/7 229/19 232/18</p> <p>phrase [2] 191/9 217/15</p> <p>physical [5] 23/18 32/6 116/5 224/10 224/25</p> <p>physically [1] 173/21</p> <p>pick [6] 198/1 198/6 205/11 221/9 221/10 221/14</p> <p>picked [2] 195/14 196/4</p>	<p>picking [1] 221/12</p> <p>picks [4] 220/8 220/11 220/16 228/20</p> <p>picture [15] 42/5 82/22 82/25 85/3 136/16 180/20 198/15 201/14 202/23 203/8 204/2 229/2 229/12 233/14 233/15</p> <p>piece [22] 39/7 42/19 63/4 64/19 68/15 69/6 69/21 105/18 110/22 143/8 184/2 184/19 184/22 186/3 189/4 194/21 195/16 216/7 216/9 217/22 219/8 225/1</p> <p>pieces [9] 84/14 105/7 204/7 215/16 216/5 217/20 218/23 219/1 219/4</p> <p>pile [12] 184/4 185/11 185/18 185/24 189/20 190/5 190/7 195/4 195/22 196/7 202/25 204/4</p> <p>piled [1] 185/14</p> <p>pinned [4] 14/4 14/17 16/2 21/11</p> <p>pipets [1] 114/22</p> <p>pit [46] 20/7 20/13 21/4 21/18 68/16 74/15 185/17 185/20 188/24 189/2 189/3 189/13 189/17 189/18 189/18 189/21 192/18 194/7 194/9 194/13 194/16 196/22 198/18 198/20 198/20 198/22 199/18 199/21 201/25 202/4 202/7 202/9 202/13 202/21 202/23 203/20 203/21 203/23 204/16 205/4 205/24 206/3 206/5 231/6 233/16 233/17</p> <p>place [6] 84/21 116/8 175/4 179/19 231/12 231/12</p> <p>placed [14] 141/10 147/22 148/5 149/11 149/20 150/21 175/3 175/16 185/25 195/10 195/13 195/20 198/15 198/20</p> <p>placement [2] 127/8 127/8</p> <p>places [3] 87/19 183/23 184/9</p> <p>placing [2] 175/9 189/10</p> <p>plain [1] 121/18</p> <p>PLAINTIFF [1] 1/4</p> <p>plastic [6] 63/2 63/4 130/25 134/10 159/4 216/7</p> <p>plate [5] 81/19 81/21 82/1 82/2 135/4</p> <p>plates [2] 112/7 112/9</p> <p>Platteville [2] 166/24 167/4</p> <p>play [1] 110/14</p> <p>played [1] 17/3</p> <p>playing [1] 17/5</p> <p>plenty [2] 109/18 109/19</p> <p>plugs [1] 39/25</p> <p>plus [2] 121/3 232/20</p> <p>pointed [1] 184/18</p> <p>pointer [5] 27/25 35/1 129/20 177/25 188/9</p> <p>pointing [3] 35/6 178/1 178/10</p> <p>police [6] 19/10 19/12 32/25 39/3 182/2 182/5</p> <p>policy [2] 72/22 73/7</p> <p>pooled [1] 152/9</p> <p>poor [1] 110/18</p> <p>population [13] 29/19 72/13 72/16 72/21 72/24 73/8 73/12 73/16 73/17 73/18 73/19 74/3 74/8</p> <p>por [1] 224/20</p> <p>portion [25] 16/15 44/6 45/5 47/22 55/2 57/22 62/14 62/14 69/8 69/18 98/10 98/12 102/18 159/4 160/3 161/9 161/12 171/18 192/23 206/11 217/4 217/5 225/25 227/16 227/17</p> <p>portions [2] 107/12 224/20</p> <p>portrayal [1] 186/18</p> <p>portrayed [1] 193/20</p> <p>position [2] 124/1 151/2</p> <p>positioned [3] 187/7 221/9 221/23</p> <p>positions [1] 182/1</p>
<p>P</p> <p>P-e-r-i-a-p-i-c-a-l [1] 221/5</p> <p>p.m [4] 123/10 181/4 181/5 234/4</p> <p>PAGE [2] 3/2 4/2</p> <p>pair [4] 90/12 95/14 120/3 200/23</p> <p>panel [10] 49/2 52/12 136/11 137/18 141/1 151/17 154/16 157/22 158/12 158/15</p> <p>panorex [8] 220/5 220/6 228/17 228/19 229/2 230/1 230/4 231/13</p> <p>pants [4] 113/18 114/1 115/5 115/8</p> <p>pap [13] 65/6 65/8 65/15 65/16 65/19 65/24 65/25 66/2 66/7 66/20 67/8 72/1 76/6</p> <p>Pard [1] 149/1</p> <p>parents [1] 29/24</p> <p>partial [13] 70/13 70/15 71/12 73/4 74/5 88/17 88/21 88/23 88/24 89/5 89/7 89/14 89/20</p> <p>partially [2] 191/3 191/3</p> <p>particularly [1] 216/16</p> <p>parts [7] 11/10 13/24 15/19 20/12 21/5 21/8 21/18</p> <p>party [5] 8/23 9/10 9/14 9/21 18/14</p> <p>pass [5] 30/1 163/7 170/10 212/20 215/8</p> <p>passed [1] 31/5</p>		

<b>P</b>	223/12 processed [3] 60/18 75/21 194/16 processing [8] 42/18 43/3 59/6 88/8 125/7 194/4 194/13 201/5 produce [2] 29/1 68/19 produced [1] 199/8 professional [2] 213/9 214/18 proficiency [7] 25/15 30/14 30/17 30/18 30/19 30/23 31/5 profile [121] 23/23 34/21 34/21 35/18 35/19 36/16 36/19 36/24 37/11 37/12 37/16 45/21 47/23 49/9 49/24 50/1 50/3 51/2 51/21 52/14 52/16 52/24 53/12 55/9 55/15 56/2 56/3 56/9 58/3 58/9 58/11 58/18 58/20 66/2 66/7 66/18 66/20 66/24 67/3 67/5 67/12 67/13 69/20 70/13 70/15 71/7 71/13 71/24 72/9 72/10 72/13 72/18 72/20 72/23 73/1 73/3 73/4 73/12 74/6 75/22 76/1 76/4 76/5 76/17 77/24 78/3 78/4 78/24 79/8 79/22 80/23 80/24 81/6 81/8 81/9 81/25 82/12 83/12 86/2 86/12 86/13 86/21 88/16 88/20 88/21 88/22 88/23 88/24 89/7 89/15 89/20 89/23 89/25 90/1 90/3 90/3 92/16 93/21 94/7 98/1 99/18 100/22 101/3 101/19 102/22 103/15 107/6 107/13 107/15 108/8 110/15 110/20 111/4 111/23 112/5 112/19 112/25 117/11 117/17 118/18 119/14 profiles [17] 23/25 24/2 31/2 31/3 35/21 51/23 53/18 66/14 66/19 66/21 67/22 71/8 71/10 71/15 77/21 78/9 107/24 profiling [1] 89/5 program [3] 24/12 25/11 25/13 project [3] 33/3 33/7 184/25 projected [6] 128/7 147/4 147/10 164/18 186/13 197/14 projectile [2] 156/10 162/5 properties [1] 27/22 property [1] 156/5 prosecution [2] 5/13 32/22 Prosecutor [3] 1/14 1/16 1/18 Prosecutors [1] 5/7 protect [3] 205/20 219/13 226/13 protected [1] 227/15 protecting [1] 143/11 proteins [1] 29/1 protocols [1] 32/12 proved [1] 64/5 psychology [1] 166/18 pull [3] 13/18 24/18 32/9 pulled [1] 140/2 pulp [3] 230/17 230/20 231/17 purchase [1] 30/18 purchased [1] 31/4 purpose [2] 45/19 72/11 purposes [3] 34/6 99/17 228/12 pursue [1] 11/24 pursuit [1] 167/8 pushes [1] 226/11 putting [2] 195/1 219/11	quicker [1] 210/8 quickly [1] 198/6 quite [6] 12/1 38/7 66/16 66/18 109/16 216/10
	<b>R</b>	
positive [22] 43/19 44/3 44/5 47/12 63/10 64/5 80/15 88/14 88/15 100/15 100/19 100/20 101/17 102/13 103/9 106/4 106/11 106/18 210/1 231/23 232/2 232/10 positively [1] 151/23 possibility [2] 86/15 147/16 possible [6] 35/12 51/7 83/24 92/8 97/5 98/14 possibly [4] 78/15 80/14 80/22 117/11 post [2] 33/9 33/19 post-conviction [2] 33/9 33/19 postmort [1] 229/10 postmortem [8] 225/4 229/14 229/16 230/2 230/5 230/21 230/22 231/13 pot [1] 219/7 potential [15] 34/11 78/11 99/21 104/15 105/4 105/5 115/7 121/15 205/19 215/16 215/17 215/20 215/22 218/23 219/8 potentially [1] 119/12 PowerPoint [8] 27/18 34/2 50/6 223/22 224/1 225/9 227/10 227/11 practical [1] 228/12 practice [2] 145/5 207/21 precisely [1] 143/21 preliminary [14] 43/7 43/11 43/12 43/24 44/6 45/9 45/20 47/10 63/7 64/2 94/24 95/6 99/13 106/18 premier [1] 214/2 prepare [1] 77/23 prepared [4] 27/18 198/25 223/22 235/8 presence [8] 23/21 42/15 83/14 86/25 105/6 116/4 163/3 196/20 present [10] 79/5 109/6 111/20 154/14 157/10 157/19 168/10 168/19 186/24 227/3 presentation [1] 223/22 presented [1] 225/8 preserve [3] 205/20 219/13 226/12 preserved [2] 198/18 224/10 pressure [2] 156/1 219/6 presumptive [7] 43/16 43/25 84/8 85/17 88/15 91/15 145/17 pretty [3] 7/25 146/2 146/4 prevent [1] 153/17 previous [2] 64/7 202/17 previously [13] 54/7 56/21 56/25 65/4 74/25 98/22 114/9 130/15 131/23 132/12 134/1 163/1 229/18 primarily [3] 82/4 82/6 118/5 primary [2] 105/13 105/13 prior [11] 71/6 125/15 142/22 154/1 176/9 176/17 176/22 181/25 182/9 184/8 194/12 priority [1] 121/8 prison [1] 33/20 private [2] 30/18 30/21 pro [1] 88/21 prob [1] 7/6 probative [2] 122/4 122/6 probing [1] 154/5 problematic [1] 216/16 procedure [6] 35/25 78/1 78/5 101/14 106/19 107/10 procedures [5] 24/15 26/9 31/16 32/1 79/7 proceed [2] 5/17 11/24 proceedings [2] 2/2 235/13 process [11] 31/21 41/11 42/15 50/15 52/25 60/10 75/8 102/8 124/12 196/14	rack [1] 176/24 racks [1] 176/23 radiographically [1] 216/15 raise [5] 5/20 22/24 123/15 166/2 172/21 raised [1] 119/24 rake [9] 190/10 190/11 190/20 191/1 191/2 191/4 191/7 191/16 192/8 Rambler [1] 93/8 random [1] 102/17 range [2] 51/10 104/20 rapidly [1] 196/19 rare [5] 72/12 72/15 72/20 73/11 74/9 rarer [2] 72/23 73/2 rate [6] 157/23 158/1 158/6 158/17 158/20 158/22 RAV [53] 41/2 41/17 42/6 42/8 43/2 44/21 49/3 51/24 53/25 54/10 55/11 56/15 57/5 57/7 59/6 59/7 59/11 60/5 63/3 63/17 64/23 67/19 71/9 71/18 79/9 87/2 87/9 89/24 105/2 118/5 128/13 129/6 129/8 130/16 131/16 134/4 136/11 137/24 138/8 140/13 140/20 140/24 141/12 147/23 149/3 149/15 149/21 150/2 150/21 151/1 153/23 159/1 165/13 ray [23] 5/10 220/6 220/7 220/7 220/13 220/16 221/1 221/3 221/7 221/8 221/12 222/2 228/17 228/19 229/10 229/14 229/18 229/21 229/23 230/22 230/23 231/12 231/13 Ray's [1] 82/18 RAYMOND [1] 1/22 rays [14] 216/14 216/15 219/25 220/1 220/12 220/18 220/21 220/24 221/19 221/20 221/21 221/22 231/7 231/14 re [1] 31/17 re-evaluated [1] 31/17 reach [1] 187/8 react [1] 80/14 reaction [3] 43/19 43/22 44/3 reading [4] 13/11 21/19 142/1 142/6 ready [1] 5/13 reagents [1] 75/16 rear [32] 52/12 59/10 64/17 64/22 66/22 67/6 67/19 71/9 71/17 108/5 132/17 133/10 133/22 134/3 134/11 136/11 136/14 136/18 137/19 137/20 138/5 138/8 140/13 140/23 141/4 141/9 141/10 151/17 152/2 152/15 152/15 163/14 reason [5] 86/10 115/2 121/19 153/23 154/10 reasonable [7] 53/21 56/12 58/22 67/16 76/11 133/12 140/24 receipt [1] 200/8 receive [5] 38/15 54/11 69/1 166/20 166/25 received [26] 16/20 40/10 54/13 54/19 54/22 57/17 57/18 69/4 75/7 77/5 104/3 104/8 106/8 106/9 166/1 177/4 200/13 208/18 209/5 209/8 215/15 223/7 228/3 228/18 233/2 233/23 receiving [1] 143/9 Recess [3] 77/11 123/9 181/4 recognition [1] 210/4 recognize [16] 10/24 12/22 60/2 81/21	
	<b>Q</b>	
	qualifications [3] 27/10 77/18 215/7 qualified [2] 26/22 212/9 qualifies [1] 25/6 quality [3] 24/12 32/8 112/5 quantitate [1] 106/20 quantitation [1] 107/9 quarter [1] 181/2 quarters [1] 210/20 ques [1] 148/18	

<b>R</b>	report [6] 12/8 31/3 84/11 89/1 89/2 174/9 reported [3] 2/3 15/18 235/6 Reporter [4] 2/4 11/14 235/5 235/19 reports [1] 122/5 representation [1] 202/15 representatives [1] 26/11 reputation [1] 171/10 request [7] 33/15 104/24 105/22 105/25 162/17 162/23 233/21 requested [2] 162/19 162/24 requesting [1] 142/1 requests [2] 33/1 122/8 require [1] 199/2 requirements [1] 32/16 res [1] 111/19 research [1] 26/14 residence [1] 176/6 resolved [1] 24/13 resort [1] 210/7 respond [1] 124/14 response [9] 10/25 12/24 17/10 21/8 144/9 144/12 153/21 210/25 211/15 responses [2] 211/3 211/21 responsibilities [2] 23/15 124/8 responsibility [1] 24/16 responsible [6] 23/18 24/9 24/11 24/14 124/11 124/13 restate [2] 15/6 15/9 restructured [1] 211/9 result [5] 33/18 95/6 155/7 156/18 157/9 results [8] 56/7 70/7 70/8 71/1 71/4 72/4 72/6 109/2 retain [1] 44/4 retained [1] 44/10 retrieved [1] 65/8 return [1] 30/1 returns [1] 162/8 reveal [1] 168/24 revelations [1] 169/17 review [8] 33/9 33/11 91/25 94/1 97/14 97/15 99/4 103/8 reviewed [1] 98/23 reviewing [1] 13/14 ridge [1] 191/23 ridge-like [1] 191/23 rifle [2] 111/8 157/16 right-hand [1] 178/18 ring [1] 212/12 rises [1] 185/13 rived [1] 203/24 role [1] 211/21 Ron [2] 41/8 61/2 room [3] 9/9 17/4 177/15 root [23] 98/9 98/12 216/2 217/2 218/2 218/8 221/11 221/15 221/17 221/24 223/16 224/11 224/16 224/17 226/20 226/21 228/1 228/2 228/6 228/7 230/22 231/5 231/17 roots [4] 218/11 221/13 224/21 230/7 rough [3] 110/21 110/22 226/7 roughly [3] 182/17 182/18 196/17 round [1] 95/22 routine [1] 208/7 routinely [1] 105/17 RPR [2] 2/3 235/19 rules [1] 111/1 run [1] 25/3 running [3] 25/14 145/11 224/7 rusted [1] 191/5	S-t-a-c-h-o-w-s-k-i [1] 173/4 S-t-a-h-l-k-e [1] 123/21 S-t-u-r-d-i-v-a-n-t [1] 181/15 saliva [4] 34/9 34/14 78/17 103/10 salvage [3] 41/5 183/2 183/4 sample [51] 24/5 35/19 35/20 35/20 36/20 36/21 37/8 38/10 44/3 48/4 49/21 49/22 49/23 50/25 51/4 52/19 52/22 53/10 55/23 56/11 58/19 61/12 62/5 63/25 64/25 70/16 70/19 74/6 82/8 86/20 88/11 92/11 92/15 94/4 95/1 95/5 96/1 98/8 99/17 100/2 100/22 107/7 107/14 108/24 109/5 109/7 109/19 110/16 118/13 119/12 121/15 sampled [3] 44/6 69/8 95/21 samples [31] 23/20 24/1 24/2 25/14 30/9 30/20 34/19 35/14 37/6 46/4 52/23 54/4 67/23 90/2 92/8 95/25 97/21 98/2 98/7 98/19 100/25 101/1 103/4 103/14 103/15 104/14 106/2 106/21 106/22 107/23 109/2 sand [1] 185/14 sat [1] 18/17 sauce [1] 135/1 scared [7] 168/17 168/25 169/4 169/9 169/18 170/4 170/20 scene [23] 23/20 34/20 35/15 37/15 37/16 37/22 99/20 116/1 116/21 125/6 146/7 156/9 192/17 194/17 199/23 201/7 201/11 201/13 201/24 202/2 203/4 203/5 205/15 scenes [9] 124/12 125/13 125/17 125/20 146/1 146/2 155/3 164/10 194/5 scheduled [1] 174/12 schematic [1] 29/5 school [13] 6/7 6/9 6/10 10/6 22/14 33/4 167/12 167/13 167/15 167/17 167/20 167/21 209/10 schooling [1] 125/3 schools [3] 25/17 124/24 167/22 science [6] 25/8 124/2 124/10 144/2 208/2 208/4 Sciences [1] 214/2 scientific [10] 26/2 26/15 31/20 53/22 56/13 58/23 67/17 76/12 133/12 140/25 scientist [1] 23/10 scientists [2] 29/16 70/12 scissors [1] 114/20 scoop [1] 185/22 scooped [3] 185/23 195/8 206/6 screen [21] 35/3 42/1 45/2 47/6 48/11 61/17 63/25 81/13 81/15 81/16 82/16 82/23 128/9 141/18 184/24 185/4 186/15 193/20 225/12 225/17 230/1 screens [1] 195/10 screwdriver [7] 190/11 197/4 197/13 197/15 205/23 206/4 206/7 seal [1] 54/19 search [2] 183/1 183/10 seat [36] 12/21 45/4 48/5 48/12 48/19 52/12 100/18 130/1 130/7 130/21 130/24 130/24 134/12 141/10 152/3 152/15 188/16 188/17 199/16 199/19 199/19 199/23 200/1 201/17 202/3 202/6 202/10 202/13 202/15 202/18 202/20 202/24 203/21 203/22 204/3 204/10 seated [7] 5/25 23/3 123/19 166/6 173/1 181/12 207/9 seating [1] 141/11 second [13] 99/1 141/24 142/20 165/22 175/17 201/8 218/8 222/20 225/24 226/23 227/1 228/23 230/14
	<b>S</b>	
	S-i-m-l-e-y [1] 207/12	

S		
secondly [2] 183/11 201/4	showing [3] 12/18 136/6 195/24	sometimes [10] 17/15 17/24 88/24
section [8] 23/17 24/9 24/11 24/13	shown [2] 61/17 223/1	111/2 159/14 172/3 172/5 172/6 210/7
31/15 121/4 121/5 226/25	shows [8] 58/17 88/25 107/18 203/9	216/13
sections [1] 32/4	227/11 227/23 228/20 228/21	somewhat [5] 112/23 139/5 188/24
security [2] 31/25 211/11	shrug [1] 18/21	191/4 193/5
seek [1] 16/15	shrugged [2] 9/2 9/7	somewhere [3] 83/22 150/11 202/18
seem [4] 8/3 77/18 169/19 170/7	side [25] 45/5 50/17 50/21 132/18	son [1] 6/21
seemed [1] 18/1	134/11 138/5 140/7 149/5 178/6 187/22	soot [2] 201/2 206/8
Seems [1] 77/19	202/5 220/16 225/21 225/23 225/24	sort [24] 79/22 80/22 81/4 81/25 83/8
seen [13] 7/20 8/24 10/20 11/9 13/24	226/8 226/9 226/10 226/15 227/12	86/1 86/11 86/19 88/20 91/1 92/14
14/17 15/19 15/24 15/24 27/19 83/3	227/14 230/3 230/3 230/24 230/24	92/15 93/3 96/22 99/16 100/2 103/9
132/1 204/15	side-by-side [2] 230/3 230/24	116/5 118/15 133/19 135/11 155/7
segment [1] 28/10	sides [2] 57/22 226/1	198/8 205/18
seized [2] 92/4 98/5	sift [2] 195/4 198/5	sorted [1] 195/14
sells [1] 34/14	sifted [6] 195/17 196/19 197/25 198/10	source [29] 24/4 37/21 53/23 54/3 56/14
semen [6] 34/9 34/13 43/15 78/19	198/11 198/13	56/18 58/24 59/3 67/18 67/24 68/1
109/17 115/10	sifter [1] 195/13	71/16 71/21 71/23 72/9 72/25 73/3
seminars [4] 25/23 26/5 26/6 27/11	sifting [8] 194/19 195/1 195/5 195/10	76/13 76/18 79/22 113/16 130/13 132/9
send [1] 98/14	195/22 196/4 196/14 196/18	151/5 151/20 153/15 158/7 158/8
sense [1] 150/8	significance [1] 161/16	217/21
sensitive [1] 109/1	significant [2] 77/19 188/25	south [1] 178/18
sensitivity [1] 108/20	signify [1] 225/20	Southeastern [1] 73/17
sent [2] 102/3 122/22	signs [1] 193/2	southwest [1] 179/17
separate [5] 15/23 80/21 84/14 218/13	silly [1] 200/21	Southwestern [1] 73/19
228/2	similar [4] 53/18 158/1 158/3 158/21	spa [1] 149/6
September [1] 211/8	SIMLEY [5] 4/10 207/3 207/6 207/12	space [1] 155/12
September 11 [1] 211/8	232/19	spade [6] 190/9 192/16 192/20 192/23
series [3] 28/12 50/16 134/12	simply [7] 11/17 55/3 57/18 83/14 86/14	193/1 206/14
serves [1] 195/9	99/14 113/13	spaghetti [4] 135/1 135/1 135/5 149/6
servicemen [1] 38/10	single [2] 113/16 164/10	spatter [6] 145/6 146/1 146/21 156/14
Services [3] 211/7 211/8 211/12	sink [4] 100/9 100/18 100/20 101/1	161/17 162/7
set [4] 160/22 177/15 186/19 196/18	site [1] 190/21	spatter's [1] 146/4
sets [2] 32/19 97/19	sites [1] 183/15	speak [4] 11/15 168/9 168/11 173/7
setting [3] 24/14 29/14 38/1	sitting [1] 8/20	speaker [1] 149/4
setup [1] 176/4	situated [1] 177/21	speaking [2] 91/24 197/16
seven [4] 70/9 74/19 89/10 174/14	six [9] 62/12 72/24 184/3 185/20 185/22	special [13] 1/14 1/16 1/18 5/7 19/2
several [5] 22/4 51/19 100/16 113/15	185/23 198/12 206/6 215/15	181/14 181/19 184/10 208/18 214/25
193/25	six-foot [2] 185/22 206/6	220/3 223/8 228/18
sexual [1] 122/11	size [8] 50/22 51/1 51/1 55/22 62/10	specialists [1] 39/2
shade [1] 230/11	114/3 163/24 221/8	specialized [1] 124/24
shape [1] 29/11	sizes [3] 51/3 51/14 51/19	specialty [3] 143/22 143/23 145/2
share [2] 176/13 199/5	skee [1] 184/24	specks [1] 119/25
shared [1] 176/17	skeletonized [1] 210/3	speculation [1] 154/5
shaving [1] 164/3	skills [2] 125/11 144/25	spell [8] 6/1 23/4 123/20 166/7 173/2
shed [4] 110/7 110/11 112/3 187/21	skin [5] 34/13 34/14 109/14 112/17	181/13 207/10 221/4
shedder [4] 110/18 110/18 116/14	112/17	spend [1] 182/13
116/14	skull [4] 190/4 190/4 205/3 205/5	sperm [1] 34/14
sheds [1] 110/8	slender [1] 140/19	spindles [1] 85/20
shell [6] 92/13 92/17 92/19 92/20 93/4	slide [20] 27/24 34/7 50/7 50/8 50/12	split [1] 230/1
119/11	52/1 52/2 52/5 55/13 56/6 58/5 58/13	spoke [4] 19/18 20/15 21/3 78/11
Shepherd [2] 186/22 187/4	64/8 66/5 67/2 67/10 68/4 69/23 75/25	spoken [2] 65/4 68/14
Shepherd-type [1] 187/4	76/8	spot [1] 84/1
Sheriff's [1] 68/18	Slow [1] 208/3	spots [2] 183/12 183/19
SHERRY [5] 3/8 22/23 22/25 23/5	small [14] 28/10 62/14 75/9 95/2 109/21	spread [2] 155/11 156/21
129/16	114/7 120/19 155/12 157/15 161/11	SS [1] 235/1
shift [1] 59/5	178/8 204/15 204/20 218/25	stab [2] 148/23 164/10
shoot [1] 220/16	smallen [2] 204/6 204/7	stabbing [2] 152/8 156/19
shop [1] 169/9	smaller [3] 28/12 71/2 71/3	stabbing-type [1] 156/19
short [1] 154/25	smear [13] 65/6 65/8 65/15 65/16 65/19	STACHOWSKI [14] 4/3 172/20 172/23
shorthand [1] 235/10	65/25 65/25 66/3 66/7 66/21 67/8 72/2	173/3 173/7 173/9 173/19 174/7 174/19
shot [1] 140/12	76/6	175/7 175/19 176/2 176/21 180/11
shoulders [3] 9/2 9/7 18/21	smooth [4] 110/24 111/2 111/5 227/14	STAHLKE [13] 3/13 123/14 123/16
shovel [5] 190/9 192/23 192/25 195/9	so-called [2] 183/12 183/23	123/21 123/24 128/17 129/20 134/14
206/14	soaked [1] 120/3	141/13 143/21 152/4 153/19 163/12
show [31] 45/1 50/6 52/2 61/19 61/23	Society [2] 31/12 213/21	stain [86] 43/20 44/4 44/9 45/6 45/7
62/25 63/10 68/10 72/4 95/8 96/9	socket [2] 226/21 226/23	45/17 46/11 46/23 47/8 47/19 48/6
129/14 130/14 130/17 131/8 131/22	soda [1] 59/24	48/18 49/1 52/7 61/21 61/23 61/24 62/8
132/11 133/25 136/9 138/1 140/9 177/3	solely [2] 16/13 171/3	62/10 62/11 62/13 62/19 63/15 64/5
179/15 179/21 190/23 193/2 195/25	soluble [1] 115/11	64/16 91/16 102/16 109/8 109/11
197/8 202/22 203/7 223/2	solution [1] 114/19	109/18 114/5 114/7 117/7 117/14
showed [4] 15/18 71/7 221/24 229/18	someone's [4] 112/13 116/14 116/19	117/15 118/3 118/6 118/8 118/8 120/5
	155/2	120/19 120/21 124/20 124/23 124/25
	sometime [3] 20/16 172/3 183/22	125/5 125/7 126/2 126/6 126/10 127/4



S		
stain... [35] 127/6 127/22 128/1 130/9 130/10 130/11 130/12 131/18 131/20 132/10 132/10 132/15 132/18 132/23 133/2 133/8 133/13 134/6 134/19 134/21 135/13 135/14 135/18 136/19 137/16 139/22 146/24 154/14 154/15 154/21 159/19 160/8 161/4 164/20 164/21	54/3 56/4 56/13 56/18 56/23 58/11 58/21 58/23 75/2 76/2 78/3 90/4 94/10 94/15 96/1 97/4 99/20 100/8 101/2 101/23 108/2 112/19 131/25 132/4 169/5 169/14 173/15 174/5 175/9 175/14 183/21 183/25 185/15 186/1	sunken [1] 203/24 Super [2] 218/17 219/10 superficial [1] 164/6 superimpose [1] 231/15 supervisor [1] 25/12 support [1] 220/19 suppose [1] 117/25 surf [1] 135/7 surface [40] 75/15 75/18 95/22 96/23 110/18 110/23 110/24 111/5 111/25 116/16 129/13 130/13 133/4 134/20 135/6 135/10 135/17 136/3 136/6 137/12 138/23 138/25 139/16 139/19 139/24 139/25 140/7 143/11 153/13 158/1 158/3 158/6 158/9 158/22 161/10 161/12 162/6 226/7 227/13 227/23
stained [1] 47/23	Steven's [3] 14/18 15/25 20/7	surfaces [2] 111/2 115/20
staining [3] 54/25 114/5 153/11	stick [2] 139/25 218/18	surgeon's [1] 143/6
stains [106] 42/23 43/1 43/5 43/6 43/8 44/7 51/24 52/15 53/13 53/23 57/20 59/7 59/13 60/13 63/7 66/23 67/6 67/18 75/12 82/4 83/15 84/6 85/14 85/16 91/13 99/21 100/8 100/12 108/5 114/6 114/14 118/5 120/8 120/8 125/10 125/20 125/23 125/25 126/13 127/6 127/7 128/6 128/7 128/7 128/8 128/24 129/4 129/5 129/7 129/10 129/11 129/12 130/3 130/6 130/18 130/22 130/25 131/1 131/3 131/4 131/10 134/12 134/17 134/22 135/8 135/21 135/22 135/25 136/21 136/22 136/24 137/2 137/3 138/10 138/11 138/13 138/15 138/16 139/15 140/3 140/3 147/3 147/6 147/8 147/9 147/10 147/25 148/6 148/13 148/14 150/24 151/15 151/16 151/19 151/21 151/25 152/1 153/7 153/12 154/11 154/18 156/15 157/19 163/13 163/17 165/1	sticker [1] 39/8 still [6] 8/7 107/6 155/21 156/2 158/8 170/4 stipulate [1] 65/5 stomach [1] 164/11 stop [3] 103/5 103/6 168/18 storage [4] 28/8 39/19 39/19 150/1 store [1] 32/1 stored [2] 28/15 29/6 STR [6] 36/3 36/8 36/9 36/15 50/13 55/21 straight [1] 177/23 strands [2] 135/4 161/11 Straus [1] 184/10 stretch [1] 161/8 stricken [1] 187/13 strike [3] 158/23 171/5 187/17 strikes [1] 162/6 striking [2] 140/7 158/9 strong [1] 135/14 struck [3] 147/11 156/10 171/7 structure [9] 217/2 220/17 221/11 221/15 221/24 224/15 230/13 230/14 231/18 structures [7] 215/22 215/24 216/2 216/6 216/12 219/4 224/11 strung [1] 28/13 stuck [1] 191/6 student [2] 167/7 168/3 students [1] 33/9 studies [4] 112/22 113/4 146/10 172/1 study [1] 171/23 stuff [6] 10/13 17/2 17/4 188/20 198/5 198/13 STURDIVANT [7] 4/7 181/8 181/9 181/15 182/19 199/4 233/14 sub [2] 93/22 146/6 sub-discipline [1] 146/6 subject [1] 126/2 subjects [1] 93/22 submissions [6] 104/4 104/7 104/10 104/18 106/7 121/1 submit [1] 212/9 submits [1] 38/19 submitted [10] 23/25 85/8 92/22 104/14 106/2 106/6 113/19 122/23 125/22 212/10 submitter [2] 39/3 122/7 submitters [2] 32/24 32/24 subsequently [1] 46/3 substance [7] 37/21 53/2 116/17 145/12 158/9 165/4 192/9 substances [2] 145/9 145/23 substantial [1] 62/13 substantially [1] 200/2 suffice [1] 78/1 sufficient [2] 110/20 111/25 suggest [4] 150/16 153/24 154/7 160/23 suggested [1] 165/13 suicide [1] 127/25 suitable [1] 98/11 summarize [1] 124/7 summarizes [1] 27/12 summary [2] 126/23 214/17 summoned [1] 184/11	surgeons [1] 220/9 SUSAN [4] 3/19 165/19 166/3 166/8 suspect [2] 127/11 127/12 suspect's [1] 127/8 suspected [5] 100/1 100/8 101/10 101/11 162/17 sustained [2] 171/3 187/17 SUV [1] 60/25 swab [43] 36/24 37/3 37/4 44/8 44/19 44/20 47/17 47/20 49/12 49/15 50/4 50/9 51/22 54/9 54/22 55/2 55/2 55/10 56/3 56/19 57/21 57/23 58/2 58/21 79/9 79/25 80/13 80/21 82/11 83/21 84/1 87/18 87/22 88/1 88/7 88/9 96/21 100/4 101/9 102/14 109/12 120/14 120/23 swabbed [15] 44/9 47/19 57/3 57/21 60/15 79/23 80/1 81/2 82/8 87/10 87/23 95/21 96/23 111/10 111/13 swabbing [11] 37/4 37/7 49/16 57/24 58/19 58/24 59/4 59/4 60/17 68/2 99/21 swabbings [3] 94/21 102/17 107/24 swabs [16] 37/7 49/6 64/22 85/7 85/20 86/2 86/4 86/5 87/2 87/5 87/8 87/11 88/4 100/7 100/16 100/19 sweat [3] 78/13 103/10 152/23 swipe [10] 136/2 136/2 136/7 137/5 137/6 152/13 153/1 160/1 160/5 160/12 swiped [1] 152/24 swipes [1] 160/1 swiping [1] 159/24 swirl [1] 188/8 switch [5] 47/9 57/7 132/7 154/15 189/6 sworn [7] 5/24 23/2 123/18 166/5 172/25 181/11 207/8 system [20] 25/15 28/8 30/24 31/10 36/9 38/6 39/4 39/18 54/15 54/15 106/24 107/3 107/19 108/7 108/20 109/3 111/22 211/6 213/11 222/11 systems [1] 109/1
stained [1] 47/23	STR [6] 36/3 36/8 36/9 36/15 50/13 55/21	T
staining [3] 54/25 114/5 153/11	straight [1] 177/23	table [1] 135/2
stains [106] 42/23 43/1 43/5 43/6 43/8 44/7 51/24 52/15 53/13 53/23 57/20 59/7 59/13 60/13 63/7 66/23 67/6 67/18 75/12 82/4 83/15 84/6 85/14 85/16 91/13 99/21 100/8 100/12 108/5 114/6 114/14 118/5 120/8 120/8 125/10 125/20 125/23 125/25 126/13 127/6 127/7 128/6 128/7 128/7 128/8 128/24 129/4 129/5 129/7 129/10 129/11 129/12 130/3 130/6 130/18 130/22 130/25 131/1 131/3 131/4 131/10 134/12 134/17 134/22 135/8 135/21 135/22 135/25 136/21 136/22 136/24 137/2 137/3 138/10 138/11 138/13 138/15 138/16 139/15 140/3 140/3 147/3 147/6 147/8 147/9 147/10 147/25 148/6 148/13 148/14 150/24 151/15 151/16 151/19 151/21 151/25 152/1 153/7 153/12 154/11 154/18 156/15 157/19 163/13 163/17 165/1	strands [2] 135/4 161/11	taken [22] 23/20 25/20 40/24 42/4 44/19 44/21 46/23 48/5 48/11 54/9 61/2 63/25 65/6 65/9 85/7 85/21 133/19 171/20 203/6 208/11 229/23 235/9
stairs [1] 18/17	Straus [1] 184/10	takes [1] 41/10
stand [5] 22/23 123/14 172/20 199/2 207/3	stretch [1] 161/8	talking [19] 19/9 50/13 70/6 78/12 108/14 108/15 109/4 109/5 109/9 118/4 145/10 145/11 153/1 158/10 158/25 160/7 222/13 222/15 222/16
standard [13] 24/1 35/20 37/6 37/8 49/18 49/20 49/25 64/25 65/10 65/19 65/22 96/1 108/21	stricken [1] 187/13	talks [1] 112/23
standards [2] 32/19 219/20	strike [3] 158/23 171/5 187/17	target [6] 36/13 36/14 36/17 36/19 50/22 107/12
standing [4] 184/1 184/12 207/5 211/25	strikes [1] 162/6	targeting [1] 109/10
standpoint [1] 177/6	striking [2] 140/7 158/9	
stands [7] 27/17 28/6 28/7 31/12 194/24 211/14 234/4	strong [1] 135/14	
start [4] 28/5 57/11 85/11 87/18	struck [3] 147/11 156/10 171/7	
starts [1] 51/12	structure [9] 217/2 220/17 221/11 221/15 221/24 224/15 230/13 230/14 231/18	
State's [1] 84/24	structures [7] 215/22 215/24 216/2 216/6 216/12 219/4 224/11	
statement [15] 11/20 12/12 13/6 13/10 13/13 13/14 13/21 14/20 15/3 15/3 15/17 19/1 144/7 156/17 162/18	strung [1] 28/13	
statements [1] 15/1	stuck [1] 191/6	
States [2] 213/4 214/3	student [2] 167/7 168/3	
statistic [6] 72/11 72/14 73/11 73/14 73/20 74/9	students [1] 33/9	
statistics [2] 25/20 73/22	studies [4] 112/22 113/4 146/10 172/1	
stay [3] 166/12 174/2 174/11	study [1] 171/23	
stay-at-home [1] 166/12	stuff [6] 10/13 17/2 17/4 188/20 198/5 198/13	
steel [16] 188/8 188/12 188/13 188/14 188/19 189/23 189/24 189/24 191/6 197/5 197/20 197/21 201/17 202/25 204/8 204/12	STURDIVANT [7] 4/7 181/8 181/9 181/15 182/19 199/4 233/14	
steel-belt [2] 197/5 197/21	sub [2] 93/22 146/6	
steel-belted [7] 188/12 188/13 188/14 188/19 189/24 201/17 202/25	sub-discipline [1] 146/6	
stenographic [1] 235/9	subject [1] 126/2	
step [10] 22/20 44/2 123/2 165/18 172/18 180/23 199/2 199/5 206/21 233/5	subjects [1] 93/22	
steps [3] 10/13 18/6 107/4	submissions [6] 104/4 104/7 104/10 104/18 106/7 121/1	
sterile [2] 44/8 47/18	submit [1] 212/9	
Steve [1] 56/11	submits [1] 38/19	
Steven [51] 9/4 10/1 10/3 20/24 21/21 49/13 50/4 50/9 50/24 50/25 51/22 52/16 52/20 52/22 53/10 53/19 53/22	submitted [10] 23/25 85/8 92/22 104/14 106/2 106/6 113/19 122/23 125/22 212/10	
	submitter [2] 39/3 122/7	
	submitters [2] 32/24 32/24	
	subsequently [1] 46/3	
	substance [7] 37/21 53/2 116/17 145/12 158/9 165/4 192/9	
	substances [2] 145/9 145/23	
	substantial [1] 62/13	
	substantially [1] 200/2	
	suffice [1] 78/1	
	sufficient [2] 110/20 111/25	
	suggest [4] 150/16 153/24 154/7 160/23	
	suggested [1] 165/13	
	suicide [1] 127/25	
	suitable [1] 98/11	
	summarize [1] 124/7	
	summarizes [1] 27/12	
	summary [2] 126/23 214/17	
	summoned [1] 184/11	



T	this [380]	top [20] 135/2 150/9 178/2 186/1 187/7
tarp [2] 198/12 198/20	THO [1] 52/21	191/18 191/19 192/4 195/13 198/11
taught [1] 126/1	THO-1 [1] 52/21	204/4 221/12 225/11 225/12 225/25
team [4] 211/4 211/14 211/15 211/16	THOMAS [4] 1/16 4/7 181/9 181/14	227/24 228/7 228/8 231/13 231/16
teams [3] 124/11 124/13 153/21	thorough [2] 115/13 198/6	tops [2] 114/19 114/22
tech [2] 201/8 201/11	though [9] 18/12 22/5 106/16 150/3	torso [7] 150/12 150/17 150/22 152/8
technical [2] 24/8 24/13	160/4 162/14 185/21 202/3 220/23	153/10 163/18 164/10
technician [2] 99/19 201/13	thought [7] 46/16 86/23 172/14 188/17	total [4] 104/1 150/3 161/7 215/16
technologically [1] 82/19	190/3 195/18 205/10	totally [1] 216/14
technology [12] 25/24 26/2 27/3 33/13	thousand [1] 25/5	touch [12] 60/17 108/12 108/17 108/22
36/2 36/5 37/24 38/5 38/5 38/12 124/6	three [18] 23/14 32/5 72/23 73/18 89/16	109/11 110/4 110/9 118/16 143/11
146/13	100/17 112/1 128/6 147/3 147/6 166/15	189/16 209/21 209/21
teeth [10] 195/15 221/10 221/12 222/7	168/22 181/3 210/20 212/12 216/4	touched [23] 82/7 86/23 87/25 105/10
222/10 222/15 222/18 224/13 228/21	216/21 223/16	105/11 109/9 109/12 109/20 109/23
228/21	three-quarters [1] 210/20	109/24 110/2 110/12 110/19 111/24
telephone [2] 174/25 175/1	three-ring [1] 212/12	112/3 112/9 112/25 113/7 113/12
telling [11] 12/8 16/8 28/5 46/5 46/6	threshold [10] 63/2 136/13 136/14	113/15 117/11 117/19 117/21
70/11 170/8 170/22 170/23 171/10	136/17 136/25 137/17 141/2 151/16	touching [4] 110/21 110/24 112/17
228/5	152/14 163/13	117/6
tells [4] 50/19 53/11 72/19 74/2	thro [1] 156/3	toward [5] 139/17 140/2 149/4 149/13
ten [6] 30/5 123/7 126/13 146/20 181/3	throat [6] 155/4 155/15 155/17 156/3	162/8
181/3	163/21 164/3	towards [9] 69/10 178/2 187/6 189/18
tend [1] 156/19	through [28] 6/20 25/10 25/14 29/9 33/2	191/18 193/4 199/20 226/1 226/2
tender [1] 200/9	46/4 76/21 78/2 98/5 98/13 98/18 102/7	Toyota [8] 56/22 57/2 57/5 58/7 58/10
Teresa [70] 8/14 14/4 14/17 15/24 20/2	105/17 108/7 157/7 158/20 167/24	58/19 58/25 141/12
21/11 21/25 41/2 41/16 42/6 42/8 43/1	169/11 180/5 195/4 195/17 196/5 198/5	trace [2] 94/4 111/20
43/9 51/24 53/25 54/10 55/10 56/15	198/10 198/13 200/8 200/12 226/15	track [2] 39/5 54/18
60/25 65/1 65/6 66/3 66/8 66/21 67/6	throughout [10] 36/14 36/18 50/18	tracking [1] 54/15
67/8 67/14 67/17 67/23 71/7 71/16	52/18 52/24 55/21 56/10 58/20 67/14	Trade [3] 209/20 211/1 211/19
71/20 71/23 72/1 72/7 72/8 73/6 74/14	73/25	trades [1] 144/17
74/16 76/5 76/12 76/18 78/4 90/5 90/6	throw [2] 158/5 158/21	trailer [9] 14/18 15/25 56/22 99/21
94/12 96/3 97/9 101/4 101/24 108/4	thrown [1] 139/8	99/25 176/5 176/7 176/9 178/11
119/5 128/12 129/17 130/16 132/7	Thursday [1] 167/24	training [17] 24/10 25/11 25/13 124/2
133/23 134/7 135/19 163/15 163/17	timeline [1] 154/17	124/10 124/13 126/24 144/1 144/1
198/3 198/21 205/13 220/1 220/4	times [15] 26/20 26/25 27/1 72/24 78/23	144/2 144/6 147/13 153/20 157/7 161/2
224/13 225/3 228/22 231/7	91/12 115/6 115/12 126/12 126/13	166/17 212/5
Teresa's [3] 14/1 220/2 221/19	146/20 175/15 210/15 210/18 215/15	trans [1] 137/12
term [6] 159/24 160/11 160/14 161/16	timing [1] 154/11	transcribed [1] 235/11
162/13 231/24	tire [5] 188/14 188/20 201/18 201/20	transcript [3] 2/2 235/8 235/12
terminology [1] 162/11	201/22	transcription [1] 235/11
terms [6] 10/21 183/18 191/11 213/3	tires [2] 188/8 188/14	transfer [25] 79/1 79/2 105/1 109/13
217/8 231/20	tissue [6] 35/9 68/12 69/7 69/8 69/17	113/5 113/10 117/12 118/15 129/10
test [27] 30/23 35/24 43/25 43/25 44/6	231/17	129/11 130/3 130/10 130/11 130/22
45/9 45/20 47/10 65/16 75/15 84/8	tissues [1] 230/20	131/3 132/10 134/18 135/21 135/25
85/17 88/15 91/16 95/15 97/23 99/13	title [3] 145/3 145/4 211/25	137/2 137/10 159/17 160/8 160/15
100/11 101/9 101/17 102/18 102/19	today [10] 16/5 26/18 38/15 40/5 40/7	160/17
106/16 106/18 115/22 121/14 122/24	68/20 158/25 159/6 180/11 208/24	transferred [5] 47/20 82/1 82/7 109/14
tested [8] 33/18 47/12 70/5 85/22	together [14] 17/2 17/6 28/13 72/19	152/2
100/16 100/17 106/4 106/11	217/20 217/22 218/3 218/13 218/15	transferring [4] 113/7 135/17 143/7
testimony [5] 94/9 147/1 180/18 210/16	218/16 218/18 219/12 228/4 231/4	153/17
212/14	toilet [1] 100/18	transfers [1] 136/4
testing [42] 24/22 24/24 25/7 25/9 25/18	told [24] 10/8 10/12 10/13 10/22 11/3	trap [1] 164/16
26/9 26/9 26/23 30/4 30/7 30/10 30/14	11/9 12/8 14/3 14/3 14/12 14/16 14/16	trauma [1] 208/14
30/17 32/21 32/23 33/15 35/25 38/8	14/17 15/18 15/22 21/7 22/13 22/14	treat [1] 30/20
38/17 44/4 44/10 47/21 49/5 49/20 50/9	50/14 90/18 92/6 169/4 179/23 187/10	treated [2] 99/11 99/15
52/25 57/14 58/6 64/21 65/20 69/17	Tom [2] 5/8 181/8	treating [1] 10/18
69/25 87/15 94/24 102/11 104/15	tomorrow [1] 233/24	trial [4] 1/4 1/5 33/12 176/3
106/14 106/15 122/9 122/15 145/21	tongue [5] 225/24 226/9 226/10 226/11	trick [1] 10/18
158/20	227/12	tried [4] 18/14 18/19 119/7 224/21
tests [20] 25/2 25/15 25/16 30/18 30/19	too [11] 20/13 28/3 81/15 88/16 116/10	trigger [5] 79/25 80/1 80/2 81/2 111/13
30/23 31/6 43/8 43/11 43/12 43/12	116/13 121/17 121/21 161/8 162/11	trillion [1] 72/25
43/16 63/7 64/2 91/15 104/21 107/5	220/20	triple [1] 198/14
145/17 145/20 161/21	tooth [55] 216/3 216/9 216/12 216/21	triple-bagged [1] 198/14
textbook [2] 152/1 161/4	216/25 217/3 218/9 218/10 218/12	tripod [3] 194/21 194/23 195/1
theme [1] 172/2	219/21 220/17 221/9 221/17 222/9	tripod-type [1] 194/21
themselves [4] 110/4 143/10 148/12	222/12 222/14 222/20 222/24 223/18	trooper [1] 187/11
172/7	224/8 224/9 224/22 224/24 225/19	troopers [1] 183/14
thereafter [2] 102/19 235/11	225/22 225/25 226/11 226/16 226/18	trouble [2] 14/9 16/9
Therefore [1] 191/20	226/22 227/2 227/16 227/18 227/24	truth [2] 170/23 171/11
they'll [1] 222/16	228/22 228/24 229/3 229/4 229/6 229/8	try [7] 11/13 11/18 84/1 98/6 107/11
thinking [2] 7/7 142/10	229/10 229/12 229/19 229/22 230/4	119/19 119/20
third [1] 222/14	230/5 230/9 230/9 230/12 230/16	trying [9] 38/15 60/12 60/14 75/10 75/17
	230/18 230/20 231/3 231/6 232/20	105/9 127/23 156/22 229/7

T	V	
<p>tube [1] 75/15  Tuesday [1] 182/20  turn [2] 57/12 142/3  turned [3] 57/10 195/21 198/21  TV [2] 21/19 176/20  twenty [2] 23/14 79/19  twenty-nine [1] 79/19  Twenty-three [1] 23/14  twice [2] 175/14 211/18  twig [2] 190/1 193/16  two [54] 9/22 10/23 10/24 19/1 24/3  26/21 32/5 36/22 37/18 50/25 73/16  74/24 84/11 84/14 84/15 84/16 88/25  93/22 93/22 97/19 117/17 117/19 131/2  152/7 154/17 168/24 175/16 176/24  177/22 182/15 185/1 185/13 185/16  186/5 195/2 195/11 196/17 201/3  211/22 212/12 212/19 213/2 217/19  218/2 218/4 218/5 218/7 218/11 221/10  222/16 223/11 224/11 226/1 228/2  two-car [1] 185/16  two-day [1] 212/19  type [44] 7/23 26/8 36/2 36/5 38/12  38/20 42/24 43/7 70/10 79/5 91/10  102/16 104/23 105/19 106/15 115/13  115/15 128/23 129/7 130/2 130/8  130/12 131/1 131/18 132/5 132/8 132/8  132/23 135/18 139/20 143/2 148/10  156/16 156/19 157/12 157/14 159/10  162/17 162/25 187/4 191/14 194/21  207/21 224/23  types [23] 26/10 34/7 34/15 66/16 66/17  72/6 72/15 74/1 85/15 88/25 91/13  122/14 127/3 127/14 127/19 128/1  147/2 147/6 147/12 147/14 148/2  209/13 211/3  typical [1] 135/9  typically [4] 156/20 157/18 161/3 201/5  typing [4] 36/3 36/6 36/8 36/9</p>	<p>vacuum [2] 98/5 98/20  validations [1] 32/7  valuable [1] 127/21  value [2] 143/12 205/19  van [10] 188/17 198/16 201/17 202/3  202/6 202/6 202/10 202/18 202/20  204/10  vanity [3] 100/9 100/17 100/19  variables [5] 110/13 116/7 116/13  155/10 164/14  variation [1] 29/18  variety [1] 183/17  various [1] 85/16  varying [1] 220/21  vehicle [28] 42/19 45/5 46/1 46/6 46/12  57/13 61/13 62/20 87/20 88/2 128/14  128/16 128/19 128/23 129/17 130/18  135/20 136/17 138/7 141/20 142/2  142/16 142/21 142/24 152/14 154/9  183/16 199/16  vehicles [1] 41/11  velocity [1] 156/14  venue [1] 26/7  ver [1] 214/12  veracity [1] 171/1  verbal [3] 10/25 12/24 17/10  verified [1] 215/25  version [1] 179/15  versus [1] 117/7  vessel [1] 230/17  victim [4] 23/21 34/19 34/20 127/9  victim's [1] 127/7  video [1] 17/3  view [2] 162/10 199/3  viewable [1] 208/9  views [1] 229/20  visible [6] 54/25 57/20 60/13 82/4  117/14 117/14  visual [15] 42/20 54/24 57/19 57/25  75/12 83/18 85/13 99/12 102/8 102/16  102/16 117/18 129/4 160/21 210/5  visual-type [1] 102/16  visually [7] 75/11 80/10 94/20 118/23  118/24 120/12 208/9  vitae [3] 27/9 126/22 214/16</p>	<p>weight [2] 7/14 17/19  welcome [2] 200/19 206/23  whatsoever [1] 159/9  wheel [1] 61/25  Whereas [2] 221/11 226/14  Wherein [1] 234/4  wherever [1] 35/14  white [3] 34/12 119/25 120/5  whiter [1] 230/7  whitish [1] 114/5  who've [1] 217/13  whoever [1] 111/24  whole [5] 36/10 138/7 216/3 221/11  221/14  wide [2] 185/21 195/11  wider [1] 233/15  width [2] 149/16 195/2  Wiegert [8] 10/8 10/23 13/7 56/23  190/15 190/24 193/12 198/25  Wild [3] 59/16 59/21 68/2  window [2] 178/9 179/25  windows [1] 177/22  wipes [1] 160/1  wiping [2] 115/19 159/25  wire [2] 197/19 202/25  wiring [5] 188/12 188/14 197/5 197/21  201/18  WISCONSIN [28] 1/1 1/3 1/15 1/17 1/19  5/3 23/10 23/11 33/4 65/7 74/12 123/25  124/15 125/16 126/9 145/8 146/14  166/24 167/4 181/19 181/22 207/16  213/1 213/2 214/4 214/6 235/1 235/6  Wisconsin-Platteville [2] 166/24 167/4  wisdom [3] 222/14 227/2 228/21  without [2] 160/2 216/14  witness [30] 5/19 5/23 11/24 12/2 12/2  13/2 13/4 16/13 22/21 23/1 123/3  123/12 123/17 144/22 152/20 152/21  153/6 163/7 166/4 170/10 172/17  172/24 173/3 181/6 181/10 181/14  200/9 206/25 207/7 232/17  witnesses [4] 3/2 4/2 233/7 233/9  woman [2] 65/17 140/19  wood [7] 110/22 191/23 192/10 192/12  192/21 216/5 216/9  wooden [2] 84/25 85/2  words [5] 50/24 106/25 134/23 174/24  175/24  work [12] 23/10 23/17 25/7 33/24 70/21  108/25 117/15 156/9 182/4 209/19  213/13 232/1  workday [1] 24/21  worked [5] 167/16 167/18 167/24 182/2  182/11  working [4] 95/4 171/17 191/18 224/6  workshops [2] 25/17 125/9  world [5] 73/7 209/19 211/1 211/19  213/25  world's [1] 72/24  worst [1] 217/14  wound [19] 133/19 148/16 148/22  148/23 150/16 150/22 151/6 156/13  156/14 156/18 156/19 156/23 157/2  157/9 162/5 162/12 163/24 164/10  164/18  wounding [1] 156/16  wounds [3] 151/2 152/8 153/10  written [3] 15/17 122/5 212/19  written/oral [1] 212/19  wrongfully [1] 33/22  wrote [1] 19/1</p>
U	W	
<p>ultra [1] 232/14  ultra-conservative [1] 232/14  Um-hm [2] 77/22 96/11  un [1] 200/22  unable [4] 81/4 82/12 88/19 119/7  uncle [2] 169/5 169/13  uncommon [1] 162/14  undergo [1] 30/13  undergraduate [2] 146/10 209/6  underneath [7] 153/14 177/22 179/3  179/24 211/6 211/10 222/17  uniform [5] 157/23 157/25 158/17  158/19 160/23  unique [1] 134/21  unit [6] 24/8 104/11 104/12 106/3 106/8  106/10  United [2] 213/4 214/3  units [1] 28/13  universal [1] 222/11  University [5] 33/4 166/24 167/4 207/19  209/10  Unless [2] 92/10 123/3  Unlikely [1] 161/3  unusual [3] 70/15 193/8 216/8  up-to-date [2] 26/1 26/5  upper [2] 222/13 223/12  upset [3] 7/15 17/22 17/24  usable [2] 98/6 110/15  usual [1] 234/1</p>	<p>wad [1] 204/7  wadded [1] 201/18  walk [3] 17/24 177/23 177/23  walked [5] 18/23 184/9 184/17 187/6  189/17  wall [13] 176/23 176/24 178/6 178/8  178/10 178/11 178/12 178/18 178/19  178/20 178/23 179/2 179/24  warrant [2] 183/1 183/10  wash [7] 75/17 115/12 115/13 115/14  115/14 115/16 119/12  washed [4] 75/15 99/14 115/5 119/2  washing [2] 75/19 75/23  washings [1] 115/8  waste [1] 95/5  water [3] 44/8 47/18 115/11  wavy [1] 137/17  weak [1] 118/7  weapon [4] 157/12 157/14 162/18 163/5  weapons [3] 127/14 148/2 148/8  wear [1] 143/5  wearing [3] 112/13 142/25 143/2  week [2] 7/6 16/25  weeks [1] 19/22</p>	

**X**

x-rays [14] 216/14 216/15 219/25 220/1  
220/12 220/18 220/21 220/24 221/19  
221/20 221/21 221/22 231/7 231/14  
XY [3] 53/8 53/10 66/15

**Y**

Y-K-K [1] 196/12  
yard [3] 41/5 183/2 183/4  
year [5] 25/10 65/5 146/23 173/10  
173/17  
year-long [1] 25/10  
years [17] 23/14 30/6 30/12 31/14 31/18  
124/17 124/18 125/14 125/15 125/17  
126/6 146/15 146/17 146/20 182/6  
182/15 211/17  
yellow [1] 39/8  
Yep [2] 179/9 199/14  
yourselves [1] 234/3

**Z**

Zhang [1] 194/11  
zipper [3] 195/16 196/3 196/9  
zoom [2] 134/13 138/13  
zoomed [2] 132/21 229/4