

1           A.     Correct.

2                     MR. WENTZ:    Pass the witness, Your Honor.

3                     MS. COLLINS:   Nothing further, Your Honor.

4                     THE COURT:    You may step down, sir.

5                     Okay.   We're going to take an hour for  
6 lunch.

7                     (Lunch recess)

8                     (Open court, defendant present, no jury)

9                     THE COURT:    Call your next witness.

10                    MR. STAYTON:   State calls Mr. Jason  
11 Schroeder.   And this witness has not yet been sworn in,  
12 Your Honor.

13                    THE COURT:    Okay.

14                    (Witness sworn)

15                    THE COURT:    All right.   Go ahead.

16                                    **JASON SCHROEDER,**

17 having been first duly sworn, testified as follows:

18                                    **DIRECT EXAMINATION**

19 **BY MR. STAYTON:**

20            Q.    Good afternoon, sir.   Would you please  
21 introduce yourself for the Court?

22            A.    Good afternoon.   My name is Jason Schroeder.

23            Q.    How do you spell your last name, sir?

24            A.    S-c-h-r-o-e-d-e-r.

25            Q.    And as I ask the questions, I know you've

1 testified before in court, but just to remind you, so  
2 that we help out the lady that's sitting in front of  
3 you, if you will wait until I complete the question  
4 before you then respond. And I'll do you the same  
5 favor. Is that fair?

6 A. Yes, sir.

7 Q. Okay?

8 A. Yes, sir.

9 Q. All right. Mr. Schroeder, how are you  
10 employed, sir?

11 A. I am the trace evidence laboratory manager for  
12 the Harris County Institute of Forensic Sciences.

13 Q. And how long have you held that position?

14 A. That position, about two-and-a-half years, I  
15 believe.

16 Q. And prior to that, sir?

17 A. I've been with Harris County for about 15  
18 years.

19 Q. What are some of the other positions that  
20 you've held at Harris County?

21 A. Forensic chemist, forensic toxicologist, and  
22 trace evidence collection team leader. I've also -- I'd  
23 say in about 15 years, I've had two breaks in service  
24 due to military activations, military reserve duty.

25 Q. And did you do similar work during your time in

1 the military?

2 A. Military police work. No laboratory work.

3 Q. Can you tell briefly about your education and  
4 training that prepared you for the work that you do  
5 today?

6 A. Yes, sir. I have a bachelor of science degree  
7 in forensic science from Eastern Kentucky University, a  
8 masters of science degree in forensic science from  
9 University of Florida, and an MBA from Texas A&M  
10 Commerce.

11 Q. And does your current position require you to  
12 maintain any license or certification with the State of  
13 Texas?

14 A. No, sir, my current position does not.

15 Q. What position were you employed in in the year  
16 2013 and in the month of July, July 18th -- or --  
17 yeah -- in July of 2013?

18 A. July of 2013 was shortly after I was promoted  
19 to my current position of trace evidence laboratory  
20 manager.

21 Q. And, again, in -- for this entire year, the  
22 entire year of 2015, you've been in that position, also?

23 A. Yes, sir.

24 Q. Okay. I want to ask you some questions about  
25 an analysis that you were requested to do as part of the

1 capital murder investigation involving the defendant,  
2 Jamon Derrell Walker. Do you recall doing -- performing  
3 an analysis connected with that capital murder  
4 investigation?

5 A. Yes, sir, I do.

6 Q. Specifically, I want to ask you about three  
7 separate gunshot residue kits that were presented to you  
8 for your analysis. Do you recall three -- these three  
9 kits that were also connected with this capital murder  
10 investigation?

11 A. Yes, sir, I do.

12 Q. And subsequent to your work on this case, did  
13 you have an opportunity to put into writing a -- a  
14 report that documented what you did in connection with  
15 your work in this case?

16 A. Yes, sir, I did.

17 Q. And then prior to your testimony today, did you  
18 have an opportunity on one or more occasions to review  
19 your reports so that you could refresh your memory prior  
20 to testimony today?

21 A. Yes, sir, I did.

22 Q. On the -- do you have the reports there with  
23 you, sir?

24 A. I do.

25 Q. Okay. And they're there in front of you?

1           A.    Yes, sir.

2           Q.    Okay.  On the face of the reports, these three  
3 separate reports connected with these three gunshot  
4 residue kits that were submitted to you, is there  
5 something that connects it with -- is there a number, an  
6 offense report number or agency number, that connects it  
7 with this capital murder investigation?

8           A.    Yes, sir, there is.  And then it's reflected on  
9 the report as well.

10          Q.    And if you would, just read that number.

11          A.    The HPD number is 089033513 "E," echo.

12          Q.    And do you see that same agency number on all  
13 three of those reports?

14          A.    Yes, sir, I do.

15          Q.    Mr. Sosa, briefly, can you tell the Court -- I  
16 know the Court is familiar with this, but for the  
17 purpose of the record, can you say what is it that  
18 you're asked to do when a GSR kit is presented to you  
19 for analysis?

20          A.    We perform analysis on the evidence commonly  
21 referred to as a stub by scanning electron microscopy,  
22 which is a form of microscopy in which the beam of light  
23 is replaced by a beam of electrons.  And then the  
24 electrons provide us both elemental information or  
25 chemical information, as well as a picture of the

1 possibility of gunshot residue. And that's done via  
2 automated analysis. And then we go back as the analyst  
3 and confirm the presence or absence of any gunshot  
4 residue particles.

5 Q. And what are the three primary elements that  
6 you're looking for as a part of that analysis?

7 A. We're looking for barium, antimony, and lead,  
8 each of which are known to be free-standing in nature.  
9 So, if we see these particles in any form, it's not a  
10 concern to us for our analysis, but what we're looking  
11 for is when these three elements have been allowed to  
12 fuse into one compound or one particle, and we see,  
13 again, barium, antimony, and lead in one compound. And  
14 that's -- after a great deal of research, that's known  
15 to occur only with the rapid heating and cooling  
16 associated with the discharge of a firearm.

17 Q. Can you tell the Court the three GSR kits that  
18 were provided to you in connection with this capital  
19 murder investigation? What -- two of them were from the  
20 same general location or same object. Can you tell us  
21 about that?

22 A. Two GSR kits, for a total of four stubs, were  
23 received from what was reported to us as the vehicle  
24 Texas license plate 439-XDN.

25 Q. Okay. And if you would look to the screen, I

1 think it should appear to your left. Do you see it  
2 there?

3 A. Yes, sir.

4 Q. There is a photograph that's marked State's  
5 Exhibit 1 and there's a vehicle with a license plate.  
6 Is that license plate the same as the one you just read  
7 out from the face of those reports?

8 A. Yes, sir, it is.

9 Q. You never had anything to do with the  
10 examination directly of that vehicle; is that correct?

11 A. No, sir.

12 Q. That is correct?

13 A. I'm sorry. I've never seen the vehicle before.

14 Q. Okay. And now could you please tell the  
15 Court -- describe for us what you were asked to do and  
16 what you did in connection with the kits that were  
17 provided from that vehicle with that license plate.

18 A. Excuse me. Yes, sir. The evidence stubs were  
19 received March 24th. And that is for all three kits,  
20 were received at the same time. And the analysis --  
21 again, by the previously described analytical technique  
22 of scanning electron microscopy -- was performed within  
23 a few months after that. And then the report was  
24 generated on April 23rd of 2015. Again, by the same  
25 analytical technique that I mentioned briefly.

1 Q. And from where, if you know, were the two GSR  
2 kits taken in connection with that car?

3 A. It was described by the officer on the  
4 collecting notes as the driver's side and passenger side  
5 of the vehicle. Again, Texas license plate 439-XDN.

6 Q. And did you have specific information related  
7 to the location within that vehicle from which these  
8 kits were taken?

9 A. I don't believe so. It may have been in the  
10 notes, but I'm pretty sure that I did not.

11 Q. Can -- if you look at the report that's  
12 connected with the -- the passenger side of the vehicle,  
13 can you find that one first?

14 A. Passenger side?

15 Q. Yes, sir.

16 A. Yes, sir, I have it here.

17 Q. Can you tell us what you found in your analysis  
18 of that gunshot residue kit?

19 A. That report indicates no particles confirmed as  
20 having a composition characteristic with GSR were  
21 detected on Item No. 2, samples labeled passenger side  
22 headliner and passenger side visor.

23 So, in reference to your previous question,  
24 yes, sir, there is a further indication of a little bit  
25 more specific than passenger side.



1           Q.    So, there were two -- two places on the  
2 passenger side, the headliner and the visor, from which  
3 possible evidence was collected and submitted to you for  
4 analysis?

5           A.    Yes, sir, that's correct.

6           Q.    And your finding was that there were no  
7 particles?

8           A.    That's correct.  It was effectively negative  
9 for the presence of GSR.

10          Q.    In terms of the findings that you would make,  
11 the ultimate conclusion in these tests, are there  
12 certain standard conclusions or findings that you would  
13 make?  And then what is the range of those?

14          A.    Yes, sir.  For our purposes in my laboratory,  
15 very obviously zero would be reported out as negative,  
16 as we see here.  We require a threshold of three or more  
17 particles to be reported as positive for the presence of  
18 gunshot residue.  And then we have what I believe to be  
19 a conservative reporting methodology in that if there is  
20 one or two GSR particles identified, we report that out  
21 as being inconclusive.  And it's effectively a slight  
22 variation in the reporting language, where it says:  
23 These particles could have come from the firing of a  
24 weapon, transfer, things like that.  And it's in an  
25 effort to guard against any concerns of transfer or

1 things like that.

2 Q. So, your threshold is negative, inconclusive,  
3 and positive?

4 A. Positive at three or more, yes, sir.

5 Q. And on -- in your analysis from the gunshot  
6 residue kit taken from the passenger side of this  
7 vehicle was -- one more time?

8 A. Negative.

9 Q. Negative. On both headliner and visor,  
10 correct?

11 A. Correct.

12 Q. On the driver's side, if you would look at that  
13 report. Was the evidence, also, taken from -- or  
14 possible evidence also taken from the headliner and  
15 visor?

16 A. Yes, sir, that's correct.

17 Q. And what were the conclusions from your  
18 analysis?

19 A. I'll start with the driver's side headliner.  
20 And that has zero particles and we reported it out: No  
21 particles confirmed as having a composition  
22 characteristic with GSR were detected on Item No. 1,  
23 sample labeled driver's side headliner.

24 The second stub was received on the  
25 driver's side visor. And for that, it had two particles

1 characteristic of gunshot residue. Again, that contains  
2 barium, antimony, and lead. And that's in our  
3 inconclusive area. And for that I reported: Item No. 1  
4 sample labeled driver's side visor had two particles  
5 confirmed as having a composition characteristic of GSR  
6 which could have resulted from activities such as being  
7 in close proximity to a firearm during discharge, a  
8 fired cartridge, or some other surface-bearing GSR. The  
9 results of this examination are determined inconclusive.

10 Q. The third gunshot residue kit that was  
11 submitted for your analysis was not connected with a  
12 vehicle. Can you tell the Court, what was it connected  
13 with?

14 A. It was connected to an individual identified as  
15 Gerald Lynn Williams.

16 Q. And was there a particular body part or parts  
17 that was connected with the kit that was submitted for  
18 your analysis?

19 A. Yes, sir. There were two stubs received. One  
20 from the right hand and one from the left hand.

21 Q. And did you perform a similar analysis with  
22 that gunshot residue kit as you've already described in  
23 the other kits from the car?

24 A. Yes, sir, same analysis.

25 Q. And can you tell the Court what were your

1 findings?

2       A.    On the right hand, we identified one particle.  
3 On the left hand, we identified two particles, which are  
4 both in the area of the inconclusive reporting.  And  
5 I'll read the statement here in the report:  Item  
6 No. 3-A, sample labeled right hand, had one particle,  
7 and left hand had two particles confirmed as having a  
8 composition characteristic of GSR, which could have  
9 resulted from activities such as firing a weapon, being  
10 in close proximity to a firearm during discharge, or  
11 handling a firearm, a fired cartridge, or some other  
12 surface-bearing GSR.  The results of this examination  
13 are determined inconclusive.

14       Q.    Just a couple of quick questions about the  
15 nature of gunshot residue and what factors can impact  
16 whether -- following the discharge of a firearm, whether  
17 there would even be gunshot residue that could be  
18 observed, found, analyzed.

19                   What are -- briefly, what are some of the  
20 factors that impact that, the existence of gunshot  
21 residue following the discharge of a firearm?

22       A.    First, I think it's important to describe the  
23 fact that a gunshot is this small controlled explosion.  
24 It's not repeatable in any instance.  So, it's very  
25 quickly affected by wind, environmental conditions, is

1 it indoors, outdoors, persistence. It doesn't degrade,  
2 per se, like some other forms of evidence, but it does  
3 sluff off very easily after a short period of time. The  
4 type of weapon, the type of ammunition, the cleanliness  
5 of the weapon, any effort to mask GSR in terms of  
6 cleaning a surface, wearing gloves, washing hands. To  
7 your question, it's a large number of variables, a wide  
8 range of variables.

9 Q. What about the passage of time, how can that  
10 impact the availability of gunshot residue following the  
11 discharge of a firearm?

12 A. One of the studies indicates six to eight hours  
13 on a shooter's hands. After six to eight hours, we  
14 don't expect to see much gunshot residue. Very  
15 obviously that's quickened by an effort to wash hands,  
16 slowed by minimal interaction. That's something as easy  
17 as reaching into your pocket for car keys, the gunshot  
18 residue sluffs off.

19 Beyond that, it depends on the type of  
20 substrate or the surface that it's on. Is it carpet or  
21 is it fabric, is it a smooth surface, and how much of  
22 that surface is being used? There's not a lot of  
23 studies. So, without those studies it is an extremely  
24 wide range of time.

25 Q. You mentioned in one of your previous answers

1 the word "transfer." Is gunshot residue something that  
2 can be transferred from one surface to another, say from  
3 human skin to a -- another surface that a hand might  
4 come into contact with?

5 A. Yes, sir. That is common among many types of  
6 forensic evidence. It's very common with gunshot  
7 residue, so much so that we attempt to identify that in  
8 our reporting language in one of the variables that we  
9 put there, very common.

10 Q. And have you had the occasion and -- or  
11 opportunity as part of your work to examine gunshot  
12 residue kits that -- that were created or that came from  
13 the discharge of a shotgun as a firearm?

14 A. A few occasions, yes, sir.

15 Q. And you spoke in one of your previous answers  
16 about the factor of wind and the environment and how  
17 that can impact the availability of gunshot residue. If  
18 a gun, a firearm, is discharged in an enclosed  
19 environment, like the inside of a vehicle, where there  
20 isn't wind or the same amount of wind or sort of where  
21 the environmental factors are more controlled, what  
22 would you expect to see in terms of the availability of  
23 gunshot residue?

24 A. In very general terms, you can expect to see  
25 more gunshot residue in a smaller environment. We see

1 that indoors in a house, in vehicles, versus outdoors in  
2 some of the environmental conditions.

3 Q. Mr. Schroeder, would you have -- would you  
4 expect that if you had knowledge of -- prior to  
5 performing analysis on a gunshot residue kit, if you had  
6 knowledge that that kit had come from the inside of a  
7 vehicle in which a firearm was discharged, would you  
8 expect to receive a positive result or conclusion from  
9 your analysis, or what could you say about that?

10 A. The materials associated with headliners and  
11 sometimes seats are known to maintain gunshot residue  
12 for longer than certainly the six to eight hours that I  
13 described with hands, but the fabric is a difficult  
14 medium to collect it from, all of which goes back to the  
15 fact that there's just so many variables it's difficult  
16 to say.

17 The steering wheel, we can describe as  
18 hands -- similar to hands in terms of if it's going to  
19 sluff off of a steering wheel. In this case, we did  
20 not, but the officers will often do it from the  
21 gearshift, the drive shaft, in an effort to collect it  
22 from areas where it may persist. And there's just been  
23 no studies or no nothing to allow us to state with any  
24 degree of scientific certainty, other than in a  
25 contained area we would expect to see gunshot residue.

1 MR. STAYTON: Pass the witness.

2 THE COURT: Mr. Wentz.

3 MR. WENTZ: Very briefly, Your Honor.

4 **CROSS-EXAMINATION**

5 **BY MR. WENTZ:**

6 Q. You described these stubs as what you examined;  
7 is that correct?

8 A. Yes, sir.

9 Q. And can you physically describe what a stub  
10 looks like?

11 A. Sure. It's a contained collection medium about  
12 the size of a nickel, perhaps, between the size of a  
13 nickel and a dime. And it's a small carbon adhesive.  
14 The adhesive is very similar in nature to scotch tape.  
15 And it's collected or stubbed or dabbed over the area of  
16 interest and that will collect the gunshot residue. And  
17 once collected, it will preserve it for, in theory, just  
18 indefinitely. There's no degradation associated with  
19 that.

20 Q. Now, you talked about a driver visor, correct?

21 A. Yes, sir.

22 Q. And when there's an attempt to collect gunshot  
23 residue from a visor, it's my understanding that the  
24 person using the stub might attach it to multiple  
25 locations within the advisor. Is that your



1 understanding as well?

2 A. That's generally the collection efforts, yes,  
3 sir.

4 Q. So, something that might be in the upper  
5 right-hand corner might be the only particle there,  
6 nothing on the entire rest of it; you don't know where  
7 that gunshot residue came from on the visor; is that  
8 correct?

9 A. Correct. And to that point, gunshot residue  
10 cannot be used for any purposes of reconstruction.  
11 Again, it goes back to it's controlled explosion and it  
12 deposits very randomly. So, there's -- it doesn't tell  
13 us anything with any degree of specificity.

14 Q. And I think you've indicated that it is  
15 possible to have this substance transferred from one  
16 surface to another, correct?

17 A. That's correct.

18 Q. And it can go from hand to fabric, correct?

19 A. That's correct.

20 Q. And, certainly, where a motor vehicle has  
21 multiple users, it would be possible to have the gunshot  
22 residue transfer from a hand to a visor such as in a  
23 motor vehicle, correct?

24 A. That's correct.

25 Q. And you've given us an estimate with regards to

1 hands. You merely indicated that it might be longer on  
2 another type of surface, correct?

3 A. Yes, sir. Depending on how that surface is  
4 being disturbed, but there's nothing to allow us to  
5 speak to any degree of time.

6 MR. WENTZ: Pass the witness, Your Honor.

7 MR. STAYTON: Nothing further.

8 THE COURT: You may step down, sir.

9 THE WITNESS: Thank you, sir.

10 THE COURT: Call your next witness.

11 MS. COLLINS: State calls Officer Jesus  
12 Sosa to the stand.

13 MR. WENTZ: May we approach off the record?

14 THE COURT: Okay.

15 (At the Bench, off the record)

16 THE BAILIFF: Judge, this witness has not  
17 been sworn in.

18 (Witness sworn)

19 THE COURT: All right. Go ahead.

20 MS. COLLINS: Thank you, Your Honor.

21 **JESUS SOSA,**

22 having been first duly sworn, testified as follows:

23 **DIRECT EXAMINATION**

24 **BY MS. COLLINS:**

25 Q. Good afternoon.