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MS. BAILY: And, Judge, just briefly for
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   the record, the State would reoffer State's Exhibit 202
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   at this point and tender to defense counsel for any
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   objections.
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                 (State's Exhibit No. 202 Offered)
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                 MR. LOPER: Judge, we'd just renew our
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   previously stated objections.
                 THE COURT: That will be overruled. 202 is
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   admitted.
10
                 (State's Exhibit No. 202 Admitted)
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                 MS. BAILY: Thank you.
12
                          MARK POWELL,
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   having been first duly sworn, testified as follows:
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                       DIRECT EXAMINATION
   BY MS. BAILY:
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16
        Q.
            Can you begin by stating your name for the
   record, please?
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             Sure. It's Mark Powell.
        Α.
            And, Mr. Powell, what is it that you do for a
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        Q.
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   living?
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        Α.
             I'm a DNA -- forensic DNA analyst.
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            And where is it that you work?
        Ο.
23
            At the Harris County Institute of Forensic
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   Sciences.
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        Q. Can you give us, I guess a brief overview of
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- 1 the educational background that you have that qualifies
 2 you as a DNA analyst?
- A. I have a bachelor's of science in microbiology
 and immunology from McGill University in Canada and a
 master's of science in forensic science from the
 University of London in London, England.
- Q. After schooling, was there additional training that you received?
- A. Yes. As part of working at any -- in the crime lab, you get on-the-job training before you're authorized to start working on real case work. So, at every job I've held, I've had some sort of training.

 And in addition, we have continuing education. As new technologies come upon us, we get trained on that as well.
 - Q. And do you hold any certifications?

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- 17 A. Yes. I'm certified by the American Board of 18 Criminalistics.
 - Q. And how do you maintain that certification?
 - A. We have to either perform some research and get it published or attend trainings, attend conferences.
- 22 And those all -- we have to do a certain amount per 23 year.
- Q. And are you, I guess at this point today, certified and in good standing?

- 1 A. Yes.
- Q. And back in December of 2009 and the beginning
- 3 | half of 2010, were you certified then as well?
- 4 A. Yes.
- Q. Have you attended few or many courses involving
- 6 DNA analysis?
- 7 A. Courses -- I mean, just courses or courses and
- 8 | conferences?
- Q. I guess courses and conferences.
- 10 A. Many.
- 11 Q. And have you testified as an expert before in
- 12 the field of forensic DNA analysis?
- 13 A. Yes, I have.
- 14 Q. Have you done so on few or many occasions?
- 15 A. Many occasions.
- Q. And, I guess, let's get down to the obvious.
- 17 What is DNA?
- 18 A. So, DNA is known as the blueprint of life.
- 19 It's -- you get half your DNA from your mother and half
- 20 | your DNA from your father. And it's basically what
- 21 | makes you, you. Like the DNA in a dog will make it a
- 22 dog. The DNA in a human will make it a human.
- Q. And where is it that we find DNA in people?
- 24 A. DNA is found in almost every cell in your body.
- 25 | The cells make up all the components of your body.

- Q. Does DNA vary from person to person?
- 2 A. Yes, it does.

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- Q. Are there components of our DNA between us all that are the same?
 - A. Yes. Most of the DNA from person to person will be the same. There's a small portion that varies greatly from person to person, and that's what we're interested in in forensic DNA analysis.
 - Q. And what are those differences referred to as?
 - A. The differences we look at are known as short tandem repeats, or STRs. And they're small repeating units of DNA that occur throughout the DNA of a person.

 And we look at a portion of those STRs.
- Q. Is there a set number of how many of these STRs that you look at?
 - A. There are 13 that are mandated by the FBI that we're to look at. There are -- there are new technologies where you can look at a couple more, but there's a core 13 that we must look at.
- Q. So, as I understand it, it's these 13 places
 where I am different from you, from the Judge, from each
 member of the jury?
- A. Those are the areas that we look at so we can try to individualize an evidence stain to a person.
- 25 | There's the potential that if you looked at one area

- that a person could be the same, but when you look at all 13 areas, it's very -- extremely rare that somebody would have the same DNA profile and the DNA profile is iust those 13 areas all together.
 - Q. And is it possible, Mr. Powell, to take a known sample from a person and compare that to physical evidence in a case such as this?
 - A. Yes, it is.

- O. And how is that done?
- A. So, what we generally do is perform the DNA analysis either on something from the crime scene or something that was collected, submitted to us as an unknown sample. They want to see who -- what the DNA profile is, who it could possibly belong to. So, we perform that analysis. And then we perform the same analysis on a sample that's submitted to us from a person. So, it would be a known or a reference sample. We perform the same analysis. We generate a DNA profile from the evidence, DNA profile from the reference sample, and we compare it and see if they are the same or if they're excluded.
- Q. And, I guess, around here we call those reference samples what?
- A. So, a reference sample would be like a swab of the inside of the mouth or a blood sample from a person.

- So, these are collected from people.
- Q. And those are typically collected from police officers and submitted to your lab, right?
 - A. Yes.

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- Q. Okay. In this case -- I guess, can you tell us how DNA analysis actually works?
- A. So, the first part is we need to see if we -
 8 we have anything that we can perform DNA analysis on.

 9 So, that's what's known as screening the evidence.

 10 We're looking for possible biological material, like

 11 blood or semen. Sometimes we're just looking to see if
- 12 we can find somebody that has been touching an item or
- 13 been in contact with it. That's called like touch DNA.
- 14 | So, that's the first step.
- want to look for touch DNA, they're submitted for DNA

 analysis. The first step is to -- we're just interested

 in the DNA, so we do what's called extraction or

 extracting the DNA, taking the DNA out of the blood

 sample, out of those cells that may be on the item being

 touched. We find out how much we have. And then from

Those samples, if we find anything or if we

- 22 there, we generate a DNA profile. And so, we're not
- 23 looking at all the DNA, just those areas that vary
- 24 greatly from person to person.
- 25 And how we do that is we make lots of

- copies of just those particular areas. And when we have the copies made, we run it on an instrument and we generate the DNA profile.
 - Q. And then it's that DNA profile that you compare to your known profile?
 - A. Correct.
 - Q. Okay. And was that done in this specific case?
- 8 A. Yes.

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- 9 Q. Can you give us an overview of -- you don't
 10 have to say everything, but the kinds of evidence that
 11 were submitted to you in this case to do DNA analysis
 12 on?
- A. Sure. We had some reference samples. We also had what looked to be swabs from a car, swabs from a bottle, swabs from some weapons, swabs from some cell phones, some items of clothing. And that's about it.
 - Q. Can you tell me -- these known swabs from people, what people were you given known DNA samples from?
 - A. We had a blood sample from the decedent, Juan Rodriguez. And then we had some mouth swabs from Crystal Scott, Willard Singleterry, Charles Mack, Larry Wyatt, and Jesse Butler and Theadric Lee.
- Q. And you actually received Theadric Lee's buccal swab well after you received everybody else's; is that

true?

- A. That's correct. His came in May of 2010 and the rest of the evidence came in December of 2009.
- Q. Okay. Now, once you develop your DNA profile from evidence and you compare it to the -- these known people, what are you actually looking to do?
- A. So, when we generate a DNA profile from evidence and we're making a comparison, our goal is to -- the easiest -- the most definitive answer we can give is, is the person excluded, meaning he couldn't have contributed to that DNA. So, that's what we set out to do. We look at the profile, we see can that person be excluded. And if they can't be excluded, then what we have to do is give an estimation of how common or rare it is of that DNA evidence that we've found.
- Q. So, in your terms, you're either excluded or included?
- 18 A. Excluded or not excluded. Not excluded is the 19 same as included.
 - Q. Okay. So, when you're doing a DNA analysis in a case like this, you're not actually looking for matches, you're looking to exclude people?
- A. Right. How we set about it is to see can that person be excluded. And if they can't be excluded, then we have to generate some statistics.

- Q. I want to talk about briefly -- you mentioned that you did some DNA analysis on some weapons. In this case, you were given swabs from a Tec-9 pistol?
 - A. That's correct.
 - Q. Were you able to reach any conclusions or results in terms of people that may have touched that weapon?
 - A. So, there is a Tec-9 magazine swab and there wasn't enough DNA on that item to perform any analysis. So, we checked to see if there was DNA. There wasn't enough, so we couldn't generate a profile.
- And from the Tec-9 pistol swab, there

 13 was -- we didn't obtain any DNA profile from that item.
 - Q. So, Tec-9 and the magazine, no profiles?
- 15 A. Correct.

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- 16 Q. Okay. What about the pump shotgun, the swabs 17 from the pump shotgun?
- A. So, on that item there were -- we did obtain a little bit of DNA. However, there wasn't enough to do any comparisons to it. So that means that's an inconclusive result.
 - Q. So, no real results from this pump shotgun?
 - A. Right, not enough results to make any comparisons to the references.
- Q. Okay. Now, let's talk about the Mossberg

- 1 shotgun swabs, 9-A. Were you able to reach any 2 conclusions regarding the Mossberg shotgun swabs?
- A. Yes. We obtained a partial profile from that

 item and it was consistent with a mixture of DNA from at

 least two individuals.
- Q. Okay. Were any of those individuals our known reference samples?
 - A. Well, Larry Wyatt cannot be excluded as a possible contributor to that mixture.

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- 10 Q. Okay. And when you say "mixture," what does 11 that mean to us?
- A. That means you have DNA from more than one individual on that item or the swab that was taken, so you're seeing DNA from at least two people.
 - Q. Now, I want to talk about -- I guess let's move aside from the weapons. Let's move specifically to Theadric Lee and the items in which he could not be excluded. What are the items where Theadric Lee could not be excluded?
 - A. So, from items, the Coke bottle swabs, black do-rag, and one of the samplings of the black do-rag, and a sampling of the black sweatshirt jacket, Theadric Lee cannot be excluded as a possible source of the DNA from those items.
 - Q. You say Coke bottle swabs, black do-rag, black

sweatshirt. Anything else?

- A. On our Items 17 and 18, which were said to be a rifle swab and a 223 magazine swab, those were some partial DNA profiles and Theadric Lee could not be excluded as a possible contributor on those as well.
- Q. So, fair to say all the other physical evidence that came to you in this case he was excluded?
 - A. Correct.
 - Q. Except for these, I guess, five or six items?
- 10 A. That's right.
- MS. BAILY: Permission to approach, Your
- 12 Honor?

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- THE COURT: All right.
- Q. (By Ms. Baily) Mr. Powell, I want to show you what have been marked as State's Exhibits 205, -6 and
- 16 -7. Do you recognize these items (indicating)?
- 17 A. Yes. These were swabs that were collected.
- 18 Q. Okay. And how is it that you can tie these to 19 your case?
- 20 A. They have our case number as well as our item 21 numbers, date and initials.
- Q. Okay. And these swabs, were they provided to you by a police officer or were they actually done at your lab?
- 25 A. These were collected at our lab from the item.

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1
        Ο.
             Okay. And do they appear to have been altered
2
   in any way?
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            No.
        Α.
             I want to show you also State's Exhibit 208.
4
        Ο.
   Do you recognize this chart (indicating)?
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6
        Α.
             I do.
7
        Ο.
             Is this a chart that you helped me prepare for
   your testimony today?
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        Α.
             Yes.
             Okay. And is it a fair and accurate depiction
10
   of the results from these five or six items?
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        Α.
             It is.
             Okay. And would it be helpful in your
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        Q.
   testimony to this jury if you were able to refer to it?
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        Α.
            Yes.
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                 MS. BAILY: Your Honor, at this time I'll
   offer into evidence State's Exhibits 205, 206, -7 and
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   -8.
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                  (State's Exhibit No. 205 through 208
                  Offered)
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                 MR. GRABER: No objection, Judge.
22
                 THE COURT:
                              State's 205, 206, 207, and 208
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   are admitted.
                  (State's Exhibit No. 205 through 208
24
25
                  Admitted)
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- Q. (By Ms. Baily) So, we have these items where Mr. Lee could not have been excluded, right?
 - A. Correct.

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- Q. Okay. So, then what is the next -- I guess, what's the next thing we need to know about the fact that he can't be excluded?
- 7 Α. So, we want to see how common or rare those profiles from the evidence are in the general 8 population. So, it's one thing to say that he cannot be excluded, but if it's -- if you were to test somebody at 10 11 random, you know, how common or rare is it to see if 12 they could be a possible contributor to that item as 13 well. So, you'd want to give some weight to the evidence. 14
 - Q. So, it wouldn't make much of a difference, I guess evidentiary speaking, if everybody in this room couldn't be excluded, right?
- A. That's correct. So, that's -- you want to -you know, is everybody going to be consistent with that
 DNA profile or is it a very rare thing to be consistent
 with the DNA profile.
- Q. Okay. And let's, just to be clear -- I don't
 want to have any misgivings about this -- you can
 never -- I guess can you tell me in any one of these
 items that it is, in fact, Theadric Lee's DNA and no one

else's? 1

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- 2 No, we can't. We can only give you an estimate Α. of how common or rare the DNA evidence profile is. 3
- 4 Ο. But I want to know that it's him. Why can't you just tell me that?
 - Well, the reason is we haven't tested every single person in the world. So, all we can give is an estimation of how common or rare the evidence profile is. If we had a DNA profile from everybody in the entire world, then we could exclude or include definitively, but we don't, so we can give you an estimation.
- 13 Q. And it's because you guys are scientists and want to be exact, right? 14
 - Right, as accurate as possible. Α.
 - Okay. Let's look at this chart. And I'll try Ο. to zoom in to different sections. What are we looking at here in this row that we've color-coded blue (indicating)?
- 20 So, that row is the results at the areas that 21 we test. So, on top of the column, that's just the name 22 of the area of the DNA that we're testing. Below it, 23 the 14, 17 on the first one, is just the results that we 24 obtained at those locations that we're testing. 14 and 17 stand for the number of repeats. So, there would be 25

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1 14 short tandem repeats and 17 short tandem repeats at
2 that location. And there's two because you get one
3 piece of DNA from your mother and one from your father.
4 So, that's why there's a 14, 17. So, the 14 could have
5 come from the mother and the 17 from the father, or the
6 other way around.
7 O. And so, this top row in blue, this is whose
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- Q. And so, this top row in blue, this is whose profile (indicating)?
 - A. This is the DNA profile of Theadric Lee.
- Q. Now, Mr. Powell, when we get over to, let's say, this section that I'm pointing to, in the middle of his profile there's one box, the D5S818, that only has a number 10 in it, why is that (indicating)?
 - A. In that case the mother and the father contributed the same form of DNA. So, he really has two 10's, one from the mom and one from the dad.
- Q. Okay. And when it's two of the same number, it only appears once?
- 19 A. That's how we represent it on our chart.
 - Q. Okay. So, the box next to it where the 12
- 21 is --

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- 22 A. That's the same scenario.
- Q. He received a 12 from his mother, 12 from his 24 father?
- 25 A. Right.

- Q. Now, let's take a look at this -- this first box here is Coke bottle swabs. What is significant about what we see as we go through the chart here?
 - A. So, the DNA profile from the Coke bottle swab is consistent with Theadric Lee's DNA profile. So, at all the locations that we're looking at, it's consistent. We can't exclude him.
 - Q. And that's because as we go along, the Coke bottle swab numbers match everywhere with Theadric Lee?
- 10 A. Correct.

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- Q. What about the next section where it says "from 12 grips and trigger of rifle swab"?
- A. So, that's, again, we had the results. Now,
 this is a little different because it's a partial
 profile, meaning we don't have results at all the areas
 that we were testing. That can come about because
 there's just not enough DNA there to get a full result.
- Q. Okay. So, as we look across, the first two boxes appear to match, right?
- 20 A. Correct, they're the same.
- Q. What does it mean here in this third FGA box where we have a 19 star (indicating)?
- A. So, that 19 star means that there's a 19 that
 we're detecting and the star indicates that there's also
 something there but it's below the threshold that we --

- 1 our analysis threshold. So, it's below a cutoff point.
- 2 | So, it's indicating that there's possible other results
- 3 there.

- 4 Q. So, something other than a 19 is there?
- 5 A. Correct.
 - Q. We just don't know what it is?
- 7 A. Right.
- Q. What is -- the fact that this star that you know something else is there but you don't have enough to know what it is, what does that do to the results of the DNA?
- So, it's -- you know, we have to be a bit more 12 cautious in our interpretation for samples like this. 13 That particular location would not be included in our 14 15 statistical analysis. There's nothing exclusionary there. It's just not something that we can rely on as 16 far as statistics go. So, a profile like this will 17 actually be more common because there's less places to 18 match in the general population. So, the less locations 19 20 that you have results for, the more common the DNA 21 profile is in the general population.
- Q. So, essentially, you have to throw 19 star out of the equation?
- 24 A. Yes.
- Q. Okay. Do we have any mixtures in any of these

samples?

- A. Nothing to indicate a mixture for those two partial profiles. They were partial to the point where we couldn't tell if they were from a single source or if they were mixed. So, that's just to be cautious and conservative. So, we say that they're partial. We can't tell if it's a mixture or not. And so, that also changes the way we do our statistical analysis.
- Q. All right. A mixture is two or more people, right?
- 11 A. Right.
 - Q. Okay. And then if you have a mixture, ultimately the way the statistics work out, does that mean that just more people can be included?
 - A. Correct. So, even if you just were to look at one location here, maybe a 14, 15, when it's a single source, that person, if you're going to be comparing, they have to be a 14, 15, too. If they're not a 14, 15, it's an exclusion. With a mixture, you could have a mixture of two people who are 14, 15, you could have a mixture of a person who's a 14, and a person who's a 15, or a mixture of a person who's a 14 with a 14, 15. So, it just makes more possibilities of how that DNA profile came to be.
 - Q. And so, what is the "ND" on the 223 magazine

swab mean to us?

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- A. That means we have no results whatsoever at that location.
 - Q. So, of the items tested, the Coke bottle, the swabs from the grips and trigger, the swab from the magazine, the do-rag swabs and the black sweatshirt swabs, you said there was only two that were --
- A. None that we can call a mixture. There was two
 that were partial to the point where we couldn't
 determine definitively whether it was a single source or
 a mixed sample.
- 12 Q. Which two were the partial profiles?
- 13 A. They were 17 and 18.
- Q. Okay. Once -- once we know this and we have it charted out, then you do this statistical analysis,
- 16 right?
- 17 A. Correct.
- Q. Okay. Can you walk us through your results in terms of statistics for the coke bottle?
- 20 A. Sure.
- Q. Let me phrase it, can you just walk us through your results?
- A. So, just tell you the statistics?
- 24 | O. Sure.
- 25 A. Okay. So, the combination of DNA alleles from

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1 Item 8A is expected to occur approximately in 8A, the
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- 2 | Coke bottle swabs, 1 in 42 quintillion Caucasians; 1 in
- 3 | 640 quadrillion African-Americans; or 1 in 26
- 4 quintillion Hispanics.
- Q. Okay. So, what items were those again?
- A. That was the Coke bottle and also it's the same statistics for one of the do-rag swabs.
- Q. Okay. Now, if we know that Mr. Lee is an African-American, can you tell us the statistics there?
- 10 A. So, for the African-Americans, it would be 1 in 11 640 quadrillion African-Americans.
- 12 O. That's how rare it is?
- 13 A. That particular statistic means if you were to
- 14 just go about testing people to see if you could find
- 15 | that evidence profile, how many would you expect to have
- 16 to test before you'd see that profile representing that.
- 17 | And you would have to test about 640 quadrillion
- 18 | African-Americans.
- 19 Q. Okay. How many people are on earth,
- 20 Mr. Powell?
- 21 A. About 7 billion.
- 22 O. So, what does that mean to us?
- 23 A. That means you'd need -- you'd need at least a
- 24 | million worlds before you'd expect to see this DNA
- 25 profile again.

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1 Q. So, that's pretty rare?
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- A. That's very rare.
- Q. Okay. So, 1 million worlds before you would expect to see another profile like this, like Mr. Lee's?
- A. Right. Just, you'd need to test about a
- 6 million worlds worth of people before you'd expect to 7 see this profile.
- 8 Q. Okay. And that is for which items?
- 9 A. That is for 8A and 29A.
- 10 Q. Okay. Are there other statistics for 29C and
- 11 | 30C-1?

- 12 A. Yes. Those are a little bit -- those are
- 13 lower.
- Q. And are those -- can you tell us those
- 15 statistics for an African-American?
- 16 A. So, for 30C-1, it would be 1 in 18 quadrillion
- 17 | African-Americans. And for 29C, it would be 122 -- 1 in
- 18 | 122 trillion African-Americans.
- 19 Q. Okay. So, 18 quadrillion?
- 20 A. Yes.
- 21 Q. How many -- that would be multiple earths as
- 22 | well?
- 23 A. Right. Greater than a million.
- 24 O. Okay. And what about the 122 trillion?
- A. Greater than 100,000 worlds.

- So, in all fairness, in the Coke bottle swabs, 1 Ο. 2 the do-rag swabs, and the black sweatshirt, you wouldn't
- 4 Α. Well, I mean, it's -- it's very, very rare.
- This is just an estimate, though. I mean, rare things 5

expect any other person on this earth to have that?

- do happen. The statistics are indicating that it would 6
- be unlikely, but it doesn't make it impossible. 7
- Then the results, I believe, you said are 8 Ο. different for 17 and 18 because of the mixture. What are those results?
- 11 A. So --

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- 12 Q. The partial profile.
- For 17-1, it would be 1 in 425 million 13 Α.
- African-Americans. And for 18-1, it would be 1 in 14
- 18 million African-Americans. 15
- 16 Okay. So, off of the grip swabs, you said 1 in Ο.
- 425 million? 17
- 18 Α. Right.
- 19 Ο. Okay. Explain that to us. Can you quantify
- 20 that?
- 21 Α. So, that would be -- you'd have to test -- the
- 22 U.S. has about 300 million. So, maybe one U.S. and a
- 23 little less than a half of a U.S. before you'd expect to
- find someone. 24
- 25 Q. All right. And then in 18?

- A. So, maybe one in about half of Texas.
- Q. So, it's still fairly rare in terms of you're just concerning Houston, right?
 - A. Right.

5 MS. BAILY: I'll pass the witness, Your

6 Honor.

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7 THE COURT: Mr. Graber.

MR. GRABER: Thank you, Judge.

CROSS-EXAMINATION

10 BY MR. LOPER:

- Q. Mr. Powell, would you agree with me that 17 and
- 12 18, meaning the rifle swabs -- excuse me -- the DNA from
- 13 the rifle swabs, that those are just partial matches?
- 14 A. Yes. They're partial profiles and Theadric Lee 15 cannot be excluded.
- Q. And the reason for that is because there's -17 at some of the locations, at some of the markers, the
- 18 alleles do not match the defendant's; is that correct?
- 19 A. No, not to my knowledge.
- Q. On -- let me rephrase that for you.
- 21 If you look at -- if you look at the
- 22 defendant's profile and you look at 17 and 18 -- let me
- 23 rephrase that.
- The reason that those are just partial
- 25 profiles, is that because there are numerous locations

where there's no DNA?

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- Right. So, the reason they're partial is we don't have information in all the areas we test.
- And is it also because at some of those Ο. locations either there's no DNA to compare or that the DNA that is there at those -- at those locations is that the allele is below threshold so you can't use that in your statistical analysis?
- Α. That's correct. So, either nothing is represented or there are some indications that we're not 11 getting all the information that may be there.
 - For instance, like on 17 at the location TPOX, Q. for instance, that there's an 8, but it has a star by it, meaning that's below threshold so you can't put that in your statistical analysis; would you agree with that?
 - That means that there's a possible allele there Α. below our detection threshold. And it also can indicate that it's partial, too.
- And so, as a scientist, as you've indicated, 19 0. 20 you want to be conservative and not use that in your statistical analysis; is that correct? 21
 - Α. Correct.
- 23 Your reports also indicate that there was some 24 testing that was attempted to be done on three different 25 cell phones; is that correct? Items, at least, in your

- report, the laboratory items would be 24, 25, and 26; is that correct?
 - A. That's correct.
 - Q. Okay. And would you agree with me that on 24 and 26, on those two separate cell phones, that the swabbing, the analysis of the swabbing from those phones indicates that there's insufficient DNA to do an analysis and a comparison?
 - A. Correct.

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- Q. Regarding cell phone Item No. 25, which is a
 Motorola I776 cell phone swab, would you agree with me
 that there was sufficient DNA on that swab to do a
 comparison?
- 14 A. That's correct.
- Q. 25; is that correct?
- 16 A. Right.
- Q. And would you agree with me that the
 defendant's DNA profile, when compared to the DNA
 profile of that one cell phone, No. 25, that the
 defendant was excluded, meaning that DNA biological
 material on that cell phone was not the defendant's?
 - A. That's correct, he was excluded.
- Q. As a scientist in performing this analysis, if there is a determination that there is -- a certain person cannot be excluded as being the source of that

- biological material, that DNA, would you agree with me
 that you as a scientist -- we're not there, I don't know
 if we'll ever get there, you can answer this -- but you
 can't time-stamp when that biological material that you
 - A. That's correct.

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Q. You hope to get there one day?

got the DNA from was placed upon that item?

- A. It would be good.
- Q. Would you, as a scientist, someone -- an expert in DNA, the analysis and all of that, you would expect to see somebody's biological material where you can determine their DNA from that biological material, sweat, epithelial cells, whatever, from an item that -- for instance, a gun that was purchased by a person the day before it was recovered by the police?
 - A. It depends who was handling it, how they were handling it, what happened from the point that it was discarded to when the sample was collected. So, there is a lot of factors that go into it, especially with touch DNA.
 - Q. And when you speak about touch DNA, you're speaking about biological material that comes from our fingers on things that we touch, correct?
- A. Correct.
- Q. Sweat, epithelial cells, et cetera, correct?

A. Right.

- Q. And would you expect those items to remain on a surface for more than a couple of hours?
- A. Again, you know, if I -- so, say I touched something and then I dropped it outside and it started to rain, then, you know, it's potential that it could be washed away. Or there's also the potential that I touch something and I just happen to not leave anything that time when I touched it. Maybe I just washed my hands or I'm wearing gloves or -- so, there's a lot of factors that go into it. So, we just kind of -- there's a lot of different ways to explain how touch DNA can get somewhere.
 - Q. But it doesn't just evaporate?
- A. No, but you could touch something and then the next person touches something and when they're touching, they remove the cells that I had previously left behind. So, if you were to just touch something and leave it and it was undisturbed, then assuming you had touched it and deposited enough material in the first place, then you should be able to detect it.
- Q. Assuming that something -- that touch DNA was not altered, tampered -- tampered is not a word I like, but wiped away by something, caused to be removed by something, you would expect that touch DNA to be on that

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item for more than just a couple hours until it was
1
2
   recovered by the police, correct?
            Right. And with the assumption that you've
3
        Α.
   touched it initially to leave something that could be
4
   detected.
5
        Ο.
            Yeah. You may not leave anything anyway?
6
7
        Α.
            Correct.
8
                 MR. GRABER: That's all I have, Judge.
9
                 THE COURT:
                             Ms. Baily.
                             Thank you, Your Honor.
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                 MS. BAILY:
11
                      REDIRECT EXAMINATION
   BY MS. BAILY:
12
            Just quickly, Mr. Powell. Is it possible for
13
        Q.
   somebody to touch and use a cell phone and not leave
14
15
   DNA?
16
        Α.
            Yes.
17
            And is there anything specific to firearms that
   may affect the ability to detect DNA off of a firearm?
18
19
            To my knowledge, no. I mean, I guess you could
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   have different grip textures that may inhibit the way
   you can collect it from the grip, but if there is enough
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22
   there and you can collect it, you should be able to get
23
   some results.
24
                 MS. BAILY: No further questions, Your
25
   Honor.
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                 MR. GRABER: Same here, Judge.
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                 THE COURT: You may step down, sir. You're
   free to go.
3
 4
                 Call your next witness.
 5
                 MS. DEVINE: State calls Dr. Roger Milton.
                 THE BAILIFF: Your Honor, this witness has
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   not been sworn.
7
                 (Witness sworn)
8
9
                 MR. GRABER: Judge, may we approach the
   bench?
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11
                 THE COURT:
                             Okay.
12
                 (At the Bench, on the record)
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                 MR. GRABER: Judge, the defense is going to
   object to this medical -- assistant medical examiner
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15
   testifying. He was not the medical examiner who
   performed the autopsy upon the complainant and we would
16
   object under the United States and Texas Constitution
17
18
   confrontation clause.
19
                 THE COURT: That will be overruled.
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                 MR. GRABER: Thank you, Judge.
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                 Can we have a running objection to all of
22
   his testimony regarding that objection?
23
                 THE COURT: Yes.
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                 MR. GRABER: Thank you, Judge.
25
                 (Open court, defendant and jury present)
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