IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF FLORIDA
TAMPA DIVISION

UNITED STATES OF AMERICA,	)	
Plaintiff,	)	
vs.	)	Case No.: 8:21-CR-348
JEREMY BROWN,	)	
Defendant.	)	

EXCERPT OF JURY TRIAL PROCEEDINGS
TESTIMONY OF TRAVIS MCCRADY, KERRI GIROUX, JILL CAPISTRANT, KRYSTAL BRESLIN, KIMBERLY REUBUSH
BEFORE THE HONORABLE SUSAN C. BUCKLEW

December 6, 2022
11:47 a.m. to 3:21 p.m.

APPEARANCES:

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BRETT LINDSEY, HSI AGENT

(Proceedings recorded by mechanical stenography, transcript produced by computer-aided transcription.)

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(Excerpt of Proceedings at 11:47 a.m.)

THE COURT: Call your next witness.

MR. GOEDMAN: United States calls FBI Forensic Examiner Travis McCrady.

THE COURT: Sir, if you'll come forward to be sworn.

THE COURTROOM DEPUTY: Please raise your right hand.

WHEREUPON,

TRAVIS MCCRADY,

was called as a witness and, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

THE COURTROOM DEPUTY: Please state your name for the record and spell your name.

THE WITNESS: Travis McCrady. Last name is spelled M-c-C-r-a-d-y.

THE COURTROOM DEPUTY: Thank you, sir. Please take the witness stand.

THE COURT: Mr. Goedman.

BY MR. GOEDMAN:

Q. Good morning.

A. Good morning, sir.

Q. Please state your name for the jury.

A. Travis McCrady. My last name is spelled, M-c-C-r-a-d-y.

Q. Mr. McCrady, where do you currently work?

A. I'm employed with the Federal Bureau of Investigation or

the FBI.

Q. Do you work in any part of the FBI?

A. The division I work for is the FBI laboratory. Specifically I'm assigned to a section within the FBI laboratory called the Terrorist Explosive Device Analytical Center. And within that, I'm assigned to the explosives unit.

Q. Within the explosive unit of the TEDAC lab, do you have any particular specialization?

A. Yes, I'm a explosives and hazardous devices examiner.

Q. Did you conduct an examination in connection with this case?

A. Yes, I did.

Q. We'll come back to that in a minute.

Let's talk a little bit about your background and career. Did you serve in the military?

A. I enlisted in the military in 1995 through 1999.

Q. In what branch did you serve in?

A. The U.S. Army.

Q. And what was your military occupation? What was your job in the Army?

A. My military occupation was infantry.

Q. And for those who don't know, what is the infantry?

A. The infantry is a combat arms occupation. Our job is to basically fight the enemy, engage and fight the enemy.

Q. In that role, did you ever physically handle explosives?

A. Yes, I did.

Q. Did you ever physically handle M67 hand grenades?

A. Yes, I did.

Q. Did you receive any training on explosives in that role?

A. Yes, I did.

Q. Receive any training on M67s in particular?

A. Yes.

Q. Throughout your four years in the military, where did you go next?

A. After my service, I went to college. I obtained my bachelor's of science degree from Shepherd University in Shepherdstown in West Virginia.

Q. When did you join the FBI?

A. I joined the FBI in 2006.

Q. Can you talk us through some of the roles you've held at the FBI?

A. When I first joined the FBI, I was a biologist. I performed serological examinations on items of evidence. Serology is, forensically speaking, the -- trying to find possible biological fluids that may contain DNA. And then after my work there, I became a physical scientist in the explosives unit.

Q. How long were you a physical scientist in the explosives unit?

A. For approximately two -- approximately two years.

Q. After those two years were up, where did you go next?

A. After those two years, I was promoted to an explosives and hazardous devices examiner within the explosives unit.

Q. As you're making that transition from physical scientist to forensic examiner, what sort of training did you have?

A. As a physical scientist, my responsibility was to receive items of evidence that are explosively related, inventory those items of evidence, develop an examination plan, basically how those items would be forensically exploited by other forensic disciplines, and then take detailed case notes on those items of evidence for the examiner.

When I became an examiner, I was now overseeing all those responsibilities that I just mentioned as a physical scientist, but now I was to form an opinion on the items of evidence that I looked at and then write a laboratory report and testify to those findings.

Q. And in making that transition, is there a -- any sort of training program for the forensic examiners?

A. Yes, the training process for explosives and hazardous devices examiners is approximately three years. Most of that I had received during my job as a physical scientist working in the explosives unit, handling evidence. But we received a lot of courses and classes on explosives and improvised explosive devices.

We also had a few milestones we had to reach that included

oral boards, which are tests on subject matter, such as explosives and explosive -- improvised explosive devices, subject matter oral board -- excuse me, an oral board or test on FBI policy and laboratory policies and procedures.

And then we also had two moot courts that we had to successfully pass. A moot court is when the examiner trainee is given evidence that's not real, but closely resembles evidence we would see in real casework, examine that evidence as we would in real life, write a laboratory report, and then testify to that in a mock courtroom setting.

Q. And did you successfully complete all those various requirements?

A. Yes, I did.

Q. And so at the end of that, you said, I think, a three-year process, what happened then?

A. After those three years, I became a qualified explosives and hazardous devices examiner.

Q. So that was in 2014?

A. Approximately, yes.

Q. Okay. And since you became a qualified explosive and hazardous device examiner, do you have any ongoing training or assessment requirements?

A. Yes. We have required continuing education that we must take yearly. But we also take any type of courses or classes that are related to our field, mine being explosives or

explosive devices.

Q. And in your nearly eight years of being a qualified explosive and hazardous device examiner, how many examinations have you taken part in, ballpark?

A. Examinations, hundreds of -- excuse me, thousands of examinations on items of evidence related to over hundreds of explosive devices.

Q. At the end of some of those examinations, do you write a report that summarizes your conclusions?

A. Yes, I do.

Q. How many reports would you say you've written?

A. Approximately a hundred forensic reports.

Q. And since you joined the FBI, have you ever testified as an expert witness before?

A. Yes, I have.

Q. How many times would you say?

A. Approximately ten times.

Q. And those -- that testimony was all in connection with your work at TEDAC as an explosive and hazardous device examiner?

A. Yes, all concerned my current role as an explosive and hazardous devices examiner.

Q. Those of us who might not be familiar with it, can you walk us through, kind of start to finish, the steps involved in a hazardous device examination?

A. Yes. As a explosive device examiner, I receive generally two types of evidence. I receive potential explosive devices that may be intact or relatively intact, and I also receive explosive-related evidence that's been blown up and no longer intact.

For the first part, if they are intact or relatively intact, they can be commercial, they can be military, they can be improvised. My job, if they're commercial or military, is to look at those items of evidence and try to identify what they are. Typically there are markings on those items to help that process along. If they're improvised, I look at all the parts and pieces of that device, try to identify what each of those pieces are, and then ultimately make a conclusion how they function -- would have functioned logically in an explosive device.

If I'm looking at the parts and pieces of a device that's been blown up, my job is to segregate out all the potential explosive-device-related pieces, try to recognize those pieces for what they may be, and then go a step further and try to identify exactly what those pieces are, and then to logically put those back together again. So it's for the latter -- for the latter part of that, I may -- essentially a bomb reconstruction specialest.

Q. So you receive evidence, you analyze it, and then you reach conclusions about what that -- you try and identify that

evidence?

A. Yes, sir.

Q. Okay. And then you might write a report that summarizes those conclusions?

A. Yes, I'll write a report on my opinion of what I concluded.

Q. Let's turn to the examination performed in this case. What items did you examine?

A. We received what we suspected to be two military grenades.

Q. Let me show you what has been previously admitted as Government Exhibit 3 and Government Exhibit 4, if I can get this to work.

All right. Can you see those all right on the screen, Mr. McCrady?

A. Yes, sir.

Q. Now, did these appear to be the items that you examined?

A. Yes, they do.

Q. And am I right that one of those grenades has tape around the pin and the other one doesn't?

A. It looks like on my image, the one on the right does not appear to have tape around the safety -- the safety pin and the one on the left does.

Q. Showing the witness what has previously been marked as Government Exhibit 13B and E.

Mr. McCrady, were there any markings on these grenades

that you saw during your examination?

A. Yes, along the equator of the grenades, of each grenade, there were two lines of marking and what looked to be yellow-type ink.

Q. So during your examination, were you able to figure out what it said, what those markings said?

A. Yes.

Q. And what was that?

A. The first line read "Grenade Hand Frag Delay M67."

Q. Let's take those pieces one at a time.

The words "Grenade Hand," what do those mean?

A. Yes. For this, I'll just keep it simple and use a soldier as an example. The markings on the grenade would tell a soldier what this item is. The military marks all their military ordinance items. So Grenade Hand tells that soldier that this item is a grenade and it is to be deployed by hand. In other words, it's not a rocket, it's not a missile. It's a grenade, and it's to be deployed by hand, thrown, rather than launched out of some other type of weapons system.

Q. And then the next two words, "Frag Delay," what do those mean?

A. Frag is short for fragmentation. So the design of this item is to fragment. It's going to explode and produce a lot of fragments. Delay means that the fusing system associated with this is -- has a delay into it. So once it's armed and

thrown, there will be a short delay, approximately four to five seconds before it actually functions.

Q. And then the last term there, "M67," what does that mean?

A. M67 is a designator that military gives everything that they have, munitions included, so for this -- this grenade was designated M67. There's been numerous types of fragmentation grenades throughout the history of the military. The M67 is the latest version.

Q. Were there any other -- in addition to the markings you just read, were there any other markings on the grenade that you were able to read?

A. Yes. There was a line below that that read "7-69 COMP" C-O-M-P, space, the letter "B," and then "MA-11-12F."

Q. The photos on the screen, that last part, the "MA-11-12," is that visible in the left-hand photo?

A. Yes, sir.

Q. And then you see the "PB" in that same photo is at the end of "COMP B?"

A. Yes. That would be the end portion of that.

Q. So what is "COMP B"?

A. COMP B is short for composition B, which is a high explosive military explosive.

Q. And -- sorry. What's a high explosive?

A. A high explosive is an energetic material that's designed to detonate. There's going to be a lot of energy associated

with that detonation.

Q. So after -- and the "MA-11-12F," what does that mean?

A. That is what's referred to as a lot number. The MA refers to the company that manufactured this for the Department of Defense. And then the rest of that, the -11-12F is more company specific. It's so they can go back and track how this item was made, precisely when it was made, and what equipment it was made on, and what materials went into it.

Q. At this point, after reviewing the markings on these two devices, did you have a hypothesis as to what they were?

A. That these were two M67 fragmentation grenades.

Q. Did you then go on to measure the devices?

A. Yes, we did.

Q. And were those measurements consistent with your hypothesis that these were M67 hand grenades?

A. Yes, they were.

Q. Did you x-ray the devices?

A. Yes, we did.

Q. Were the x-rays consistent with the hypothesis that these were M67 hand grenades?

A. They were consistent.

Q. Bring back what we were looking at a minute ago, Government's Exhibit 3 and 4.

See the markings visible at the -- in these pictures?

A. Yes, I can. There's kind of a glare, but I can make out

most of them.

Q. During your examination, were you able to decipher what these markings said?

A. Yes, I was.

Q. And what was that?

A. The markings read "Fuze M213" and then had a lot number after that, "MEI86A 009-001."

Q. What does "Fuze" mean?

A. Fuze, again, would tell the soldier that this is a fuse. This is designed to initiate -- initiate something, start a reaction.

Q. And what does "M213" mean?

A. M213 is a type of grenade fuse. This is the military designator that the Department of Defense gave this item, gave this item of ordinance.

Q. And is this the type of fuse that you would expect to find on an M67 hand grenade?

A. Yes, it is.

Q. So based on the totality of your examinations, the marking, the measurement, the x-rays, the fuse, did you reach an ultimate conclusion as to what these two devices were?

A. Yes, my conclusion was that these two devices were two U.S. military M67 fragmentation grenades.

Q. So based on your time in the military and your time in the FBI, do you know how M67 grenades are used by the U.S.

military?

A. Yes.

Q. And how is that? How are they used?

A. M67 fragmentation grenades are designed to be thrown toward the enemy. They explode. That explosion causes the steel body to fragment into hundreds of small metal pieces, which are projected out at very high velocities in a 360-degree pattern. So they're used to kill or cause casualties on the enemy.

Q. Is it fair to describe them as a weapon?

A. Yes, they are weapons.

Q. In your opinion, does -- do these two devices in the M67, do they meet the technical definition of destructive devices under federal law?

A. In my opinion, these two M67 fragmentation grenades meet the technical definition of a destructive device.

MR. GOEDMAN: Okay. I tender the witness for cross-examination.

THE COURT: All right. Thank you.

Mr. Futerman.

MR. FUTERMAN: No questions, Your Honor.

THE COURT: All right. Thank you, sir. You may step down.

You may call your next witness.

MR. GOEDMAN: Your Honor, the United States calls FBI

Forensic Examiner Kerri Giroux.

THE COURT: Come forward to be sworn, please.

THE COURTROOM DEPUTY: Please raise your right hand.

WHEREUPON,

KERRI GIROUX,

was called as a witness and, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

THE COURTROOM DEPUTY: Please state your name for the record and spell your name.

THE WITNESS: Kerri Giroux. First name is K-e-r-r-i. Last name is Giroux, G-i-r-o-u-x.

THE COURTROOM DEPUTY: Thank you, ma'am. Please take the witness stand.

BY MR. GOEDMAN:

Q. Good morning.

A. Good morning.

Q. Please state your name for the jury.

A. My name is Kerri Giroux.

Q. Ms. Giroux, where do you currently work?

A. I currently work at the FBI laboratory, specifically in the explosives unit.

Q. And do you have a particular specialization within the explosives unit?

A. Yes, I do. I work in the explosives chemistry portion of

the explosives unit. My title is a chemist forensic examiner.

Q. Did you conduct a explosive chemistry examination in this case?

A. Yes, I did.

Q. We'll come back to that in a minute.

Did you go to college?

A. Yes, I did.

Q. Did you graduate?

A. Yes.

Q. What did you study?

A. I received a bachelor's in chemistry from the College of New Jersey and had a minor in law and justice as well.

Q. What did you do after college?

A. After college, I started working at the FBI laboratory, not as an employee, but actually as a fellowship researcher within their research unit.

Q. And then when your fellowship was completed, where did you go next?

A. After that, I was hired by the FBI laboratory as a physical scientist evidence analyst in an in-processing group of the lab.

Q. How long were you in the role as physical scientist in the in-processing unit?

A. About two years.

Q. And where did you go next?

A. After that is when I started in explosives chemistry.

Q. So you've been there -- so you've been -- and you -- when you joined the explosive unit there, you came in as a forensic examiner?

A. That's correct.

Q. Were you qualified at that point or no?

A. No. After entering in as a forensic examiner position, I then went through about a two-and-a-half-year training period before I was a qualified examiner.

Q. And so you became qualified forensic examiner 2015?

A. Yes.

Q. So in the last seven years, since you became a qualified explosive chemistry examiner, how many examinations have you taken part in, roughly?

A. Hard to say specifically. I've written hundreds of reports, probably on thousands of items of evidence.

Q. So since becoming a qualified examiner, do you have in -- did you receive any ongoing trainings in your role?

A. Yes. Every year as part of my position, we have to take a certain amount of continuing education to keep up both with our administrative requirements as well as the tech -- any technical updates to our discipline.

Q. Do you have any annual assessments that you're required to complete?

A. Yes. Every year we have to take a proficiency test,

showing that we're still capable in our examination process.

Q. Have you passed all your proficiency tests?

A. Yes, I have.

Q. Have you ever served as an expert witness before?

A. Yes.

Q. And was that in your current role as a explosive chemistry examiner?

A. Yes, it was.

Q. And when was that?

A. That was August of 2021, last year.

Q. Okay. So can you just walk us through step-by-step, from start to finish on what a explosives chemistry examination actually involves?

A. Sure. Generally when we receive evidence into the laboratory and it's assigned an examination by us, we'll receive the evidence, take a look at it to make sure it's safe for us to do our examinations, and then begin with physical examinations, which can just be a visual looking at it, looking at it under a microscope, even a flame test or a thermal susceptibility test where we're just testing the properties of the material.

We then start with instrumentation, and we do instrumental analysis to detect any components of interest as well as, if possible, confirm the presence of those using instrumentation.

Q. And so after you've done the visual inspection and you've

done the instrumentation, you then put your conclusions in a report?

A. Yes, I do. We put it into a report, which is then technically and administratively reviewed by another qualified examiner.

Q. Like a peer-review system?

A. It is, yes.

Q. Let's turn back to this case, so did you perform an explosives chemistry examination in this case?

A. Yes, I did.

Q. And what items did you examine?

A. I examined Items 1 and 2 initially. We removed material from Items 1 and 2, which then became Item 1-4 and Item 2-4 respectively. And then the chemistry examinations were conducted on Item 1-4 and Item 2-4.

Q. I'm going to show the witness what has previously been admitted as Government Exhibit 62, the stipulation that we looked at earlier.

So, again, it says, "United States of America versus Jeremy Brown," first sentence, "United States of America, the Defendant Jeremy Brown, Defendant's undersigned Counsel agree that the following facts are true and correct."

As an earlier witness read, "The following are the item numbers assigned to the evidence at the laboratory."

Do you see -- so you said you looked at Items 1-4 and 2-4.

Is that correct?

A. That's correct.

Q. Can you just read what Item 1-4 are and 2-4 are on this chart?

A. Item 1-4, material from Item 1, grenade body interior. And Item 2-4 is material from Item 2, grenade body interior.

Q. And based on your examination, were you able to identify what those substances were?

A. Yes, I was.

Q. And what were they?

A. Each of those materials contained the high explosives TNT, RDX, HMX, and a component consistent with paraffin wax.

Q. And so if you look at Item 2 on this chart, you see the word and the letter "COMP B." Are you familiar with what COMP B is?

A. Oh, I see. Yes. COMP B is an explosive used in many military munitions that is comprised of TNT and RDX primarily, often with HMX and paraffin wax as well.

Q. Is the material that you examined in Items 1-4 and 2-4, is that consistent with the materials that would make up COMP B?

A. Yes, those materials would be consistent with COMP B material.

MR. MARCET: Thank you. No further questions. I tender the witness for cross-examination.

MR. FUTERMAN: No questions, Your Honor.

THE COURT: All right. Thank you. You may step down.

MR. MARCET: Want us to call another witness before lunch?

THE COURT: Another expert?

MR. MARCET: Yes, but these will be longer. I mean, but I'm happy to call. They're ready.

THE COURT: No. If it's longer, we'll go ahead and recess at this time.

MR. MARCET: They won't be done before lunch.

THE COURT: Yeah. That was my question.

All right. Ladies and gentlemen, we're going to recess for lunch at this time. It's 12:15. We'll be in recess until 1:30, an hour and 15 minutes. You're welcome to walk around if you would like. Please be back in the jury room so that we can start promptly at 1:30.

Leave your pads on your chairs. Please don't discuss the case either among yourselves or with anyone else, and I'll see you at 1:30.

THE COURT SECURITY OFFICER: All rise.

(Jury out at 12:14 p.m.)

THE COURT: All right. We're in recess until 1:30.

(Recess from 12:15 p.m. to 1:30 p.m.)

THE COURT: Anything before I bring the jurors in?

MR. FUTERMAN: Yes, Your Honor. I just have one

objection is that the rule was invoked, and there are some search witnesses or a search -- Mr. Sanchez specifically, I see, is in the courtroom, and because I don't know which way this case will definitely go, I'd ask that he not be allowed to sit in the courtroom until closing argument.

THE COURT: Okay. So, Agent, then, I'm going to ask you to step outside, if you will. And I noticed -- because I notice there was another witness in here too, after they testified, they sort of sat in the courtroom. So I just assumed that nobody was going to be recalling them, so --

MR. MARCET: Your Honor, I had understood from your order that if there was a request of continuing sequestration, that was on counsel to ask.

THE COURT: It is. The witness is under the control of the person who calls them.

MR. MARCET: Correct.

THE COURT: So once they call them, then they're free to go or they can sit in the courtroom. So if you don't want that, you need to --

MR. FUTERMAN: And I don't -- Ms. Giroux -- the persons I had no cross-examination of, obviously, the -- I don't mind that.

THE COURT: Okay. All right.

MR. MARCET: Judge, just to remind Your Honor, so we have the one witness who's out of the country till Thursday

night, he'll testify Friday morning, at this pace, we -- I would imagine we'll finish early on Thursday.

THE COURT: Hold on. We don't bring coffee in the courtroom. So you-all will need to step outside with your coffee, please.

I'm sorry, you'll have to start again.

MR. MARCET: Sure. We have the one witness, the last expert who's out of the country till Thursday night, will testify Friday morning. I just wanted to apprise the Court we're going pretty quickly, so we may well finish everyone else before that.

THE COURT: Okay. All right. That's a high-class problem.

MR. MARCET: Exactly.

THE COURT: All right. Let's bring the jury in.

Who's your next witness?

MR. MARCET: Jill Capistrant.

THE COURT SECURITY OFFICER: All rise.

(Jury in at 1:33 p.m.)

THE COURT SECURITY OFFICER: Please be seated.

THE COURT: Mr. Marcet. You may call your next witness.

MR. MARCET: The United States calls Jill Capistrant.

THE COURT: Come forward, please, to be sworn.

And, Ms. Black, if you'll swear her in.

THE COURTROOM DEPUTY: Please raise your right hand.

WHEREUPON,

JILL CAPISTRANT,

was called as a witness and, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

THE COURTROOM DEPUTY: Please state your name for the record and spell your name.

THE WITNESS: Jill Capistrant. First name is spelled J-i-l-l. Last name C-a-p-i-s-t-r-a-n-t.

THE COURTROOM DEPUTY: Thank you, ma'am. Please take the witness stand.

BY MR. MARCET:

Q. Good afternoon.

A. Hello.

Q. Would you please introduce yourself for the jury?

A. My name is Jill Capistrant. I'm a physical scientist forensic examiner.

Q. And where do you work?

A. I work at the FBI laboratory in Huntsville, Alabama on the Redstone Arsenal, specifically with TEDAC, which is known as Terrorist Explosive Device Analytical Center.

Q. We'll talk about what you do at TEDAC. But before we talk about that, tell us about your educational background. Did you graduate from college?

A. Yes. I received my bachelor's in biology from George Mason University, which is located in Fairfax, Virginia. I also received a graduate certificate from the University of Florida in forensic death investigation.

Q. And so after graduating from those programs, what did you do for work?

A. I was first hired as a contractor working as a latent print technician, where I processed items of evidence for latent prints. I did that for about a year and a half. I then attended a forensic examiner training program in Hattiesburg Mississippi with Ron Smith & Associates, where I had an intensive five-month training program where I learned the history, biology of the skin, everything that I would need to learn to become a forensic examiner. After that, I was hired in Syracuse, New York in Onondaga County, which I was a latent print examiner for approximately three years. Then I was hired by the FBI laboratory down in Huntsville, Alabama, where I've been working for about four years.

Q. Now, in your prior job in New York, did you receive any training in fingerprint examination?

A. Yes. So after I was -- I finished my five-month training program, I then underwent a nine-month training program with Syracuse. And then once I went to the FBI, I had a two-year training program.

Q. At the end of the FBI training program, is there some sort

of test that you have to pass?

A. Yes. After going through all of my moot courts, oral boards, comparison packets, case work under a mentor, I had to complete a qualification exam, which is a three-day test of written and comparisons that I successfully passed.

Q. And do you still undergo proficiency testing?

A. Yes. I am proficiency tested on an annual basis in latent-print comparison, and about every four years for latent-print processing.

Q. Do you undergo continuing education?

A. I do. It is required by our accreditation that I go through annual training every year, both externally and internally.

Q. In addition to your training and experience, are you a member of my professional organizations?

A. Yes. I'm a member of the international association for identification, and I'm also certified through them as well.

Q. And in your career, how many fingerprint analyses would you guess that you've conducted?

A. I would say upwards in the thousands.

Q. Now, let's just talk about general fingerprint analysis science, and then we'll talk about the work you did in this case.

So can you explain to the jury, what is friction ridge skin?

A. Friction ridge skin is specialized skin found on the palmar surface of the hands and the soles of the feet. It is made up of the raised portions known as ridges and valleys known as furrows. This specialized skin helps us grip and grasp onto items so they don't slip out of our hands.

Q. Can you use friction ridge skin to identify a particular person?

A. Yes. There are two premises behind using friction ridge skin as a means of identification, which are uniqueness and persistence.

Uniqueness means that the friction ridge skin is developed in utero during the third and fourth fetal month. Due to genetics and epigenetic factors, such as differential growth, the friction ridge skin is highly variable not only from person to person, but finger to finger. It is also been found that identical twins do not share is same friction ridge arrangement.

Persistence has do with the fact that the friction ridge skin is developed by the fourth fetal month, and it remains persistent throughout one's life after death until decomposition, barring any scarring. And this is due to the dermal layer where the friction ridge skin is held onto these peg-like formations. And as skin is sloughed off on the surface throughout the day, new cells are generated from this layer, and they create cellular attachments to one another, so

they communicate, but it also keeps them from staying in the same place so the friction ridge skin maintains its integrity.

Q. Now, what is a latent fingerprint?

A. So throughout the day, this friction ridge skin will get coated in residue, such as oils, sweat, or grease. And that will sit on the ridges of the friction ridge skin, and if it comes into contact with an object, that residue will get transferred, leaving behind a latent print. Latent prints are typically invisible to the naked eye. However, they can be visualized or processed through light sources, physical processes, or chemical processes.

Q. So these latent fingerprints, are they left behind every time someone touches something?

A. Not always. There's a lot of factors that can go into whether a latent print is developed or left behind. We can break these down into three different categories. Talking about pretransfer factors, so if you think of a friction ridge skin, there might be a barrier, such as glove on the hand preventing that friction ridge skin from coming into contact. Also the residue. There has to be enough residue on the skin to transfer onto a surface.

Next, we think about the actual transfer process itself. If there is a textured item, such as the cloth on your chair, that is textured and might not be conducive for leaving a latent print. However, items such as glass, plastic that are

nonporous leave behind really well latent print. If you think about your smartphones or maybe your stainless steel appliances in your house, you might often see latent prints left behind on those objects.

Lastly, after the fact, the environmental factors come into play. So if the item maybe is left out in the sun, latent prints are primarily made up of water, so a lot of that residue can be evaporated out or possibly frictioned. So if that item comes into contact with another item, it can cause friction and wipe away that fragile latent print.

Q. So you just explained the factors that make it more or less likely that a print will be left behind. You've seen me handling the pen this whole time we've been talking. If you took this to your laboratory and looked for my fingerprints, do you know if you'd find them?

A. I don't know if I would find any.

Q. Now, when your laboratory, TEDAC, receives an item, is it always sent for latent prints, or are there other types of testing your laboratory does?

A. Our laboratory has a lot of different disciplines, so it might, depending on the item, be appropriate for another discipline over the other.

Q. And is it the -- the investigators are the ones who direct what testing ultimately gets done. Correct?

A. They can ask for certain, but it's up to our laboratory to

determine whether that might be possible or not.

Q. All right. Now, can you walk us through when your laboratory gets a piece of evidence, and let's say the agents request that it be tested for fingerprints, where do you come into the process? What happens?

A. So if an item is submitted to be processed for latent prints, it will go to the back of the laboratory to be processed. Depending on the nature of the item, it can be processed in multiple different ways. For example, if the item is nonporous, think of glass, plastic, metal, anything like that, where if a drop of water were to fall on the item, it would roll off, it wouldn't be absorbed in, friction ridge impressions are similar, where that item -- the residue will sit on top of the surface.

So we will start with processes going from least invasive to most invasive or destructive, meaning we'll start with our visual and light sources, and then we will apply what's known as superglue fuming, where we put liquid superglue on a hot plate, which vaporizes and adheres to moisture in the latent print and creates sort of a plasticized print. Then we can apply a dye stain, which we use fluorescent lights to visualize that print.

If we have an object that is porous, such as paper or cardboard, that latent print residue will soak in, therefore we need to use chemical processes that will also soak in and react

to that residue within that latent print.

Q. So do you always find latent prints when you do these analyses?

A. No, I do not.

Q. So if you don't find any latent prints, is your work with that particular piece of evidence over?

A. Yes.

Q. What happens if you do find a potential latent fingerprint?

A. If latent prints are recovered, they will be photographed by our evidence management unit and then it will go to an examiner to conduct the examination process.

Q. Now, did you prepare a slide show for use as a demonstrative in order to explain the comparison process?

A. Yes, I did.

Q. And then at the very last slide of that, does it contain a photograph of a print that you recovered off of the rifle tape in this case?

A. Yes.

MR. MARCET: Your Honor, I would request to use Government's Exhibit 66 as a demonstrative and only to admit the last page of Government 66, which I'll relabel just as Government Exhibit 66 after this.

MR. FUTERMAN: No objection, Your Honor.

THE COURT: All right. Thank you. Then 66 is

demonstrative, and you're going to relabel the last page to introduce it?

MR. MARCET: Well, I'm only seeking to actually admit the last page, so I'll have to figure out a -- if it needs to be a separate exhibit number or if we can just only admit the last page.

THE COURT: 66A or something.

MR. MARCET: Something like that. Exactly, Your Honor. I'm going to publish Government's Exhibit 66 to the jury.

BY MR. MARCET:

Q. Okay. I'm showing you slide two of Government's Exhibit 66. What are we looking at here?

A. Here is the process that guides an examiner through the examination process, which is the acronym ACE. It stands for analysis, comparison, and evaluation.

Q. And so going to slide three, tell us about the analysis part of the process.

A. Analysis is the information-gathering phase, where I'm looking at the latent prints holistically, trying to gather enough information that I could potentially identify the print. So I'm starting from a larger scale, looking at broader information, and then zooming in further at the -- at the actual ridges themselves, looking at more minute details.

So on the right-hand side is a latent print that was

developed in our laboratory just for demonstrative purposes. It's a latent print that was left on a glass surface, and it was developed with black powder. So you might see some granules around the prints. That's usually an indicator of black powder.

Next, I want to determine the quality and the quantity of the print. This is a very nice high-quality latent print. We're lucky to get something like this in the laboratory. You can tell by the ridges which are in black and the furrows that are in white, there's a lot of contrast in high detail in between those. You may notice at the top-right portion, that that area is sort of smudgy and dark, and there's not a lot of contrast. That's an area we call distortion, and that could be due to movement when the finger was coming into contact with the surface. However, because the area is not very clear, we're going to avoid using that area for our analysis portion.

If there is an area that potentially does have some distortion, but it is -- you're able to work through it, you may assign what's known as tolerance to that area. So if the area is not as clear, I'm going to have a higher tolerance that it may look difference in the known. However, if I have very high clarity, I'm going have a lower threshold for that variation of the appearance.

And it's important to keep in mind that the skin is pliable, so there is usually a variation of appearance from

print to print.

Next, I'll go into the levels of detail during my analysis.

Q. Okay. Taking you to slide four, which says Analysis Level 1.

A. So level one detail is where we're looking at the overall ridge flow of the print. And this can help determine anatomical source or where it's found within the hand, and also orientation, so how does it look tip up.

There are three main pattern types that we can look for during analysis. The first is a loop where the ridges enter upon one side, make a recurve and exit out the same side they entered upon, a whirl or a circular type pattern, or an arch, where the ridges enter upon one side, make a rise or wave in the center and exit out the opposite side.

There are also focal areas that can be found in a print. So in the blue circle, you may note, these are the cords or the approximate center of the print.

And next -- next clip, please. There are deltas, which are triangular formations where the ridges are flowing together.

Q. Taking you to slide five.

A. Now, zooming in even further on these ridges, we can look at the minutia or the level two detail. There are also three main minutia that we look for. The first is an ending ridge.

If you would click. This is where a ridge is flowing around, along and stops suddenly, like a ending in the road. The next is when a ridge is flowing along and bifurcating, similar to a fork in the road. And the third is a dot, which is a ridge that is as wide as it is long. It's important to note there's also combinations of these. So, for instance, two bifurcations that are facing each other may create an enclosure, which is a more rare feature to see.

It's also important to note continuous ridges. These are ridges that are absent of ridge events, however, they help count from one ridge event to another. And also if there's a large area of continuous ridges, this can also be rare to see as well.

Q. Taking you to slide six.

A. So not only am I noting the type that I'm seeing -- would you click, please -- but I'm also noting the location where they're located within the print, which are highlighted in yellow here, in relation to the core and the delta, the direction that they're facing within the print, and also their spatial relationship to one another, which is located in blue.

Q. Okay. So you've done your analysis. What are the possible outcomes at that first phase, in the A phase? Is it possible that you don't have enough to move on?

A. That's correct. There has to be sufficient reliable information found during the analysis phase to deem that print

suitable for comparison and move on to the comparison phase.

Q. Okay. So what happens at the comparison phase?

A. So in the comparison phase, the latent print is placed side by side next to a known print, and I'm using all of the information that I gathered during my analysis phase to look for agreement or disagreement in the known prints.

Q. When you refer to a known print, you're not out in the field taking people's fingerprints. Right?

A. No.

Q. Where do you get the potential known prints from?

A. They can come through multiple ways. If I receive a laboratory examination request with a specific person to compare, I can look through their known card within NGI, which stands for next generation identification. This is our automated database that houses over 170 million known records, both civil and criminal. However, if I am not given a specific person to compare, I will encode my latent print and launch it within NGI, and it will bring me back a candidate list for me to compare to.

Q. Okay. So after you're at the comparison phase, what do you do next?

A. So once I've taken all the information gathered during my analysis and comparison phase, I will now take all this information and render a conclusion. There are three conclusions that can be reached, inconclusive, exclusion, and

identification.

An identification decision is the examiner's opinion that the two prints originated from the same source due to the amount of agreement between the latent and the known that I would not expect to see that amount of agreement in a print from a different source.

The next is exclusion. This is the examiner's opinion that the two prints did not come from the same source due to the amount of disagreement seen between the latent and the known. So if we think back to that slide with a loop and a whirl, those would easily be excluded due to the level one differences between those two prints.

The third is an inconclusive decision. This is the examiner's opinion that there is not enough supporting information or enough disagreement to render a conclusive decision. We often see this from tips of the fingers. They're not usually recorded well on known records, therefore an examiner will most likely be inconclusive until they can get a better known card for comparison.

Q. So in this case, United States of America against Jeremy Brown, did you and your laboratory receive items of evidence for testing?

A. We did.

Q. I want to show you what's already in evidence as Government's Exhibit 62. It starts, "The United States of

America, the Defendant Jeremy Brown, and the Defendant's undersigned Counsel agree that the following facts are true and correct." And then we go to Page 4. So will you just read the paragraph titled "Fingerprint Examination"?

A. "FBI forensic technicians processed several items of evidence for fingerprints. FBI Forensic Examiner Jill Capistrant then compared one fingerprint that was suitable for comparison to a known card bearing the Defendant Jeremy Brown's fingerprints. Ms. Capistrant is competent to testify to the preparatory work done by the technicians as well as her own analysis."

Q. Okay. So switching software again.

I'm showing you what's already in evidence as Government's Exhibit 3. Did your lab receive two grenades that looked like this for testing?

A. Yes.

Q. And were they processed for latent fingerprints?

A. Yes, they were.

Q. Both grenades?

A. Both grenades.

Q. Can you explain with a grenade how that process works?

A. Yes. So since this item is nonporous, I began -- or the technician began with the visual examination as well as the forensic light source. Then the item was superglue fumed and a dye stain was applied, known as RAM. There's also tape on this

item. So the tape was removed, and the nonporous side was processed the same way the grenade was. However, the adhesive side was processed with ABP, which stands for alternate black powder. It's a 50/50 mixture of black powder and a detergent known as Liquinox, and this is mixed up to a shaving cream consistency and painted on the adhesive side of the tape, left for about 30 seconds and rinsed off with cold water, leaving behind any latent prints that could have developed.

Q. Okay. So to make sure I'm following, you tested the grenade body, the part we see here, as well as the inside and the outside of the tape?

A. Yes.

Q. Did you -- what was the result of that test for both grenades?

A. There were no latent prints developed for either item.

Q. Does that mean that nobody ever touched this grenade?

A. It's possible that nobody touched it. But it's possible that somebody did.

Q. Did you also receive a short-barrel shotgun for examination?

A. Yes.

Q. Showing you what's already in evidence as exhibit -- sorry, Exhibit 11G. So what are we looking at -- did you examine this shotgun as part of your analysis?

A. The technicians did, yes.

Q. And can you explain how they did that?

A. So because this shotgun has a finish on the wood, it would be treated as nonporous. So, again, it would start with a visual examination, and using forensic light sources, the superglue-fuming process would be applied and then a dye stain, using a forensic light source to visualize. Because there's tape, I also did -- or the technician also processed the nonadhesive side the same way the gun was processed. However, the adhesive side was processed with ABP.

Q. So the same process you described for the grenades?

A. That's correct.

Q. And what was the result of the analysis of the shotgun and the tape in this picture?

A. No latent prints were developed on these two items.

Q. And then, finally, did you also process a firearm, a rifle, short-barrel rifle?

A. Yes, the technicians did.

Q. Showing you what's in evidence as Exhibit 12T. So how was this item processed for latent prints?

A. This item was processed in the similar way. Since the gun is nonporous, there was also duct tape wrapped around the gun, and that was processed with ABP on the adhesive side as well.

Q. Now, did you prepare further slides explaining the results of this processing?

A. Yes, I did.

Q. Showing you Government's Exhibit 66, and we'll resume where we left off in slide nine. So what are we looking at in slide nine?

A. So starting with the analysis phase, if you click on -- this item on the left is P1, which was a latent print developed on Item 6-1-1, green duct tape on the adhesive side that was indicated as being from the -- wrapped around the lower assembly.

So, again, this latent print was developed with ABP or alternate black powder. I'm looking at the surface type as being adhesive. You might notice some white lines running through the prints, and this is due to the substrate having kind of a woven pattern within the duct tape. So I'm noting that during my analysis as maybe a possible tolerance to have. If you would click one more.

I have traced through my ridges for my level one details, noting that I have an archetype ridge flow, indicating that this is coming from an end joint of a finger or fingerprint. I note downwards the bottom that I'm seeing a tight recurve, which indicates that this is the core or the approximate center of the print. However, because I don't have the lower half of the print, and I'm unable to see which way the ridges are flowing or if there are any deltas present, I am not sure of the pattern type of this print.

I then go on to mark my level two detail. Would you click

one more, please. I use what's known as GYRO, which stands for green, yellow, red, and orange. And this is simply a way to document my level two detail by my confidence. So if I mark something in green, that means I have high confidence that that minutia is there and should be in that exact spot. I have little tolerance for variation of appearance. If I mark it in yellow, that means that I have confidence that that point is there. However, it might be moved slightly up or down, because I have less clarity in that area. Lastly would be red, meaning that that point is either on the end or the edge of the print, and it could be there, but it also may not be there, so I have lower confidence. Orange comes into play during the comparison phase, and that is any additional information that I may note in agreement between the latent and the known print.

So I have fully marked up my level-two detail, and I've added a horseshoe over the top, indicating this is the orientation, tip up, and that is from an end joint of a finger. Because I found enough sufficient, reliable information within this latent print, I am then ready to move on to the comparison phase.

Q. Okay. We're looking at slide ten.

A. So on the left is my latent prints that I marked up during analysis, and on the right is a ten-print card bearing the name Jeremy Michael Brown. On the top, you may see ten boxes. This is where the finger is rolled nail bed to nail bed to encompass

all the friction ridge area. And below are the plain impressions where the fingers are taken simultaneous. This is to ensure that the fingers that were rolled in the boxes above are taken in the correct order and that they're in the correct box. It's also another area to use for my comparison if one of the fingers that were rolled above may be smudgy or not of a high quality.

So I will take the information and compare to each print in the boxes above, because I am not aware of my -- what pattern type that this latent print might be, I'm going take my time to look at each box until I see some sort of correspondence. So I moved all the way to finger number three, the right middle. If you would click. And one more time.

So I noticed that I had some agreement between my latent print and known print. However, if you notice in the tip area of the known print, there is not a lot of clear high contrast in this area, and that's the area that I need for my comparison. Therefore, I will move down to the plain impressions to see if that finger is more -- reported more clearly.

So I'll zoom in on the number three finger. And, here, you can see there's a loot more contrast between the ridges and the known. So I will move forward with my comparison using this particular finger.

Q. Okay. And then going to side 11, which I will renumber as

Government's Exhibit 66A, the last slide.

A. So on the left is my latent print that I have analyzed and on the right is the number three finger. If you click one more time, I have made it the same size as the latent print so it's one to one ratio. I have then started from the core, marking all of the points of the agreement that I see, using the colors that I assigned during the GYRO markup. And I'm also noting any additional points that I see in orange that are in agreement.

So I'm not, again, I'm not only noting the points, but I'm also ensuring that they're pointing in the same direction. They're in the same location in the print. And they also have the same spatial relationship from one point to another. And after I've gathered all of this information, I then can render my conclusion. And with the amount of agreement that I've seen between the latent and the known print, I came to the conclusion that the latent print found on Item 6-1-1 was identified to the prints on the number three finger of the known card bearing the name Jeremy Michael Brown.

MR. MARCET: Thank you. I have no further questions.

THE COURT: All right. Thank you.

Mr. Futerman.

MR. FUTERMAN: Thank you.

CROSS-EXAMINATION

BY MR. FUTERMAN:

Q. Good afternoon, Ms. Capistrant.

A. Good afternoon.

Q. Just to clarify the last answer, the comparison of the print that was found was found from Jeremy Brown to the rifle. Correct?

A. To the duct tape on the adhesive side that was removed from the rifle.

Q. From the rifle?

A. Yeah.

Q. So that we have a comparison from the rifle tape to Mr. Brown?

A. Yes.

Q. You tested the grenades, and no comparison could be made to Mr. Brown. Correct?

A. That's correct. There were no latent prints developed.

Q. And we talked about plastic being a good, I think you used the word porous. Is that the right word? A nonporous --

A. Nonporous.

Q. Nonporous, which is a really good surface for prints. Correct?

A. That is correct.

Q. And in this case, what you got asked to test was given by the investigative authority, the grenades to test, and the guns

to test. Right? And you did as what they asked to you to do. Correct?

A. That's correct.

Q. Did anyone ever send you a plastic CD or a plastic CD case?

A. I don't believe so.

Q. A plastic CD or plastic CD case would be a great item to get a print off.

A. It could be, yes.

Q. And another consideration, if we're able to get a print is if something is kept inside versus outside. Like you said, if it's kept in the sunshine or outside, you're less likely to get a print. Right?

A. That could be a factor that may cause that print to not be there.

Q. But there's some things kept in, say, a container in a briefcase in an RV, these are all circumstances in a plastic container that would be conducive to likely get a print. Correct?

A. It's possible, yes.

Q. Okay. And yet no one asked you in this case to print a CD or a CD case. Right?

A. I don't believe so, no.

MR. FUTERMAN: Your Honor, I have no more questions. Thank you.

THE COURT: All right.

MR. MARCET: No redirect.

THE COURT: All right. I'm not sure I received into evidence, but if I didn't, I'll receive into evidence 66A.

MR. MARCET: Thank you, Judge.

THE COURT: Thank you, you may step down.

(Government's Exhibit 66A admitted into evidence.)

MR. MARCET: May I call the next witness?

THE COURT: You may.

MR. MARCET: The United States calls Krystal Breslin.

THE COURT: If you'll come forward to be sworn, please.

THE COURTROOM DEPUTY: Please raise your right hand, please.

WHEREUPON,

KRYSTAL BRESLIN,

was called as a witness and, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

THE COURTROOM DEPUTY: Please state your name for the record and spell your name.

THE WITNESS: Krystal Breslin. K-r-y-s-t-a-l. Last name is B-r-e-s-l-i-n.

THE COURTROOM DEPUTY: Thank you, ma'am. Please take the witness stand.

THE COURT: Mr. Marcet.

BY MR. MARCET:

Q. Good afternoon.

A. Good afternoon.

Q. Would you please introduce yourself to the jury.

A. Yes. My name is Krystal Breslin, and I am a forensic biologist examiner at the FBI laboratory in Huntsville, Alabama, called the TEDAC laboratory.

Q. And we'll talk about what you do at the TEDAC laboratory, but let's talk about your background first. So did you attend college?

A. I did.

Q. And what did you study?

A. So I attended Indiana University-Purdue University Indianapolis, which is kind of a mouthful to say. We call it IUPUI. I got a bachelor in forensic biology. I went for my master's degree and got a master's of science and biology.

Q. Let's talk about your past work experience. Do you have any past experience relevant to your testimony today relating to DNA analysis?

A. I do. Prior to working at the FBI laboratory, I worked at IUPUI running a laboratory that performed different research products for something called forensic DNA phenotyping. That is predicting what an individual looks like from their DNA. So it was my job to manage the students that work in the

laboratory to perform the research projects and determine what we would test in that laboratory.

Q. Now, in your current position, what do you do?

A. It is my job as a forensic examiner to determine what items of evidence we're going to test in a case. When a case comes into the laboratory, we're going to have different information from the case agent or whoever may be submitting the evidence to let us know what they would like DNA tested on. We're going to then determine if that item is indeed suitable for DNA testing. I'm going to then determine how that testing should take place, and then I'm going to direct a team of biologists to perform that testing.

So then the biologists are going to collect the DNA from the item of evidence. So this could be swabbing the item of evidence. So essentially taking what looks like a giant Q-tip and rubbing it on the item of evidence or cutting the item of evidence and then it's going to go through the rest of the laboratory processes to produce a DNA profile.

Q. Now, in order to get your current job with the TEDAC, did you have any training?

A. Yes, I did.

Q. Can you tell us about that training?

A. Yes. So as part of being a forensic examiner at the FBI laboratory, we go through an extensive training program. So this includes written, oral, and moot court examinations, as

well as monitored or supervised casework to make sure that we are confident to be able to do our job function. At the end of our training, our training is summarized in a competency examination that is evaluated by our technical lead before we are determined to be qualified.

Q. And after passing that testing, do you undergo continued training -- or sorry, training, yes?

A. Yes, we do. We are required to complete at least eight hours of continuing education each year.

Q. And in addition to the ongoing training, do you undergo proficiency testing?

A. Yes. We are required to complete a proficiency test every six months.

Q. Do you have any past publications regarding DNA identification?

A. Yes. I have five fully published publications that have to do with different types of forensic DNA testing.

Q. In your career, how many times would you estimate that you've analyzed DNA for the purpose of making identification?

A. Thousands of times.

Q. Okay. So we're going to get to the results in this case, but let's talk a little bit about the science of DNA identification and analysis.

So let's start simple. What is DNA?

A. DNA stands for deoxyribonucleic acid. It is the basic

building block of life. So it is something that makes you and I who we are as people. 99 percent of the DNA is the same. It's what makes us human. It what makes you have two arms, two legs, eyes, nose, things like that. But about 1 percent of your DNA between individuals is different from one another, with the exception of identical twins. That 1 percent is what we look at in forensic DNA testing to compare different individual DNA profiles to items of evidence.

Q. Okay. And so you talked about DNA. Now, where is it located within a person's body?

A. DNA is located in what's called the nucleus of the cell, which is, essentially, if you think of like an egg, it would be in the yolk part of that egg, that's where the DNA is located.

Q. Is it in every type of cell that we have?

A. It's not in every type of cell, but it is in majority of types of cells that make up different body fluids and skin cells.

Q. So what types of DNA, meaning what types of cells are you encountering in your work at the TEDAC?

A. So majority of the evidence that we look at at the TEDAC laboratory is DNA from what we would consider to be touch samples or samples that are from items of evidence that were handled by an individual.

Q. And what type of factors affect whether and how much DNA someone leaves behind when they touch an item?

A. So the length of time the individual is in contact with the item. So if you touch something briefly, that can make a difference versus some prolonged touch on an item, how long that item may have been exposed to external environments, such as heat, like the sun, or water, things like that can affect it.

Q. Okay. So you see me handling this pen without gloves the whole time we've been talking.

A. Yes.

Q. If you tested it in a laboratory, would you find my DNA on it?

A. I would expect to find your DNA, but I can't be a hundred percent certain unless I tested the item.

Q. And if I then drop this pen and left it in the courtroom and no one else touched it for ten years, would that make it more or less likely that you'd find my DNA on it?

A. It is possible it could be less likely. And that's simply because over time and being exposed to the external environment, DNA can degrade, which is -- essentially means that it can break down into littler pieces and make it so that it's harder for us to obtain a DNA profile. But, again, I would have to test the item to be sure.

Q. And so when you test an item in the laboratory, can you walk us through, if you receive this pen or some other item of evidence, how would you test it to look for touch DNA?

A. Absolutely. So I'm going to look at the items of evidence that are brought into the laboratory, and I'm going to direct a team of biologists to collect the DNA from that item of evidence.

So, for example, if we're looking at, per se, this pen, I would have directed a team of biologists to swab, which is essentially take a giant Q-tip and rub it on that item of evidence. From there, they're then going to move that swab through the extraction process. So extraction is a fancy way of basically saying we're going to break that DNA out of that cell so that we can look at it.

From there, we're going to quantify it, which means we're going to estimate how much DNA there is, and then we're going to make millions upon millions of copies of it called amplification. Once those millions of copies have been made, then we're going to put it on an instrument that allows us to visually look at that DNA profile and make any comparisons as necessary.

Q. Where do you get the DNA sample to compare it to?

A. Typically, I will look at items of evidence first. I will determine however many individuals may have contributed to that sample and make all my interpretations on that sample first. And then if a reference sample, which is essentially a sample that is taken directly from an individual, is submitted in the case, then I'm going to take those DNA results and compare them

to the DNA results from the item of evidence.

Q. Can you talk us through that comparison? What are you specifically comparing in order to make your ultimate conclusion?

A. So in forensic DNA analysis, we look at something called STR or short tandem repeats. They are specific areas in the genome that repeat over and over again, and so we give them a specific number based on how many repeats there are.

So, for example, at one specific location, you might have 13 repeats on one chromosome and 12 on another. So your genotype at that location would be a 13, 12. So from there, I'm going to have those numbers for all the different locations in the evidence profile. I'm then going to compare the DNA profile from the reference samples, so directly from that individual, and look at those numbers.

So if, for example, the individual is an 11, 10 at that location, I'm going to compare that 11, 10 to the 13, 12. And at that point, I would say it's what's called an exclusion, they're not the -- the numbers are not the same at that location.

Q. Now, in processing evidence, is it also possible that you simply don't find any DNA?

A. Yes, that is possible.

Q. And if you don't find any DNA on a piece of evidence, is your work done?

A. Yes. At that point, we cannot make any comparisons.

Q. So in this case, the United States against Jeremy Brown, did you receive items of evidence that were requested for DNA testing?

A. Yes, I did.

Q. All right. Go back to Government's Exhibit 62.

So we've seen this several times. It begins, "The United States of America, the Defendant Jeremy Brown, and The defendant's undersigned Counsel agree that the following facts are true and correct."

We have here a chart that we'll go through in a moment. And can you please read this portion titled "DNA Examination"?

A. "FBI biologists processed several items of evidence for the presence of deoxyribonucleic acid, or DNA. FBI forensic examiner Krystal Breslin compared results for these DNA samples to a DNA sample from the Defendant Jeremy Brown. Mr. Breslin is competent to testify to the preparatory work done by the biologists as well as her own analysis."

Q. Okay. So let's look at Government's Exhibit 3 as an example. Okay. So we're looking here at Government's Exhibit 3. Did you receive -- sorry, this is Government's Exhibit 4. Did you receive two grenades like this for testing?

A. Yes, we did.

Q. Actually, let's go the Government's Exhibit 3. We'll start there. Okay. So Government's Exhibit 3. Can you just

walk us through this as an example of how you tested all the items in this case? Just walk us through once this item gets to the lab, what happens?

A. So the -- in this case, this item was looked at under the presence of both myself as well as a latent-print examiner and a trace examiner.

And so what I would have done is looked at the areas that would have been extensively handled by the individual. So where would you have had a lot of contact with your hands on the items. I'm going to try to avoid areas that are smooth, so like the body of the grenade, because those areas are more suitable for latent-print analysis.

So, for example, on this grenade, if you take a look -- maybe. Right here in this area is the grenade pin. The grenade pin is the area in which you would have had a lot of contact with the pin, should you be preparing to pull it. So I had the biologist swab that area as well as look at the tape on the item of evidence. And when we look at tape from the item of evidence, we don't just look at any specific part of the tape, we look at a very important aspect of the tape. So we're going to identify areas that are what are called protected.

So if you think of a piece of tape, if the tape overlaps on top of the other piece of tape, that piece of tape underneath is protected from the external environment. We want to look at the DNA results from that protected piece of tape,

because that's not going to have extraneous DNA from the environment or from people around, but it might have DNA from the individual who handled the tape or who may have put it on the grenade.

So we looked at both that tape as well as the swabbing of the pin of the grenade.

Q. So your -- just so I understand, so you're looking at the swabbing of the entire outer area, correct, or just of the pin?

A. Of the pin itself, just the pin.

Q. And then in terms of the inside versus the outside of the tape, you're looking at the inside, the sticky part of the tape?

A. So we actually put the entire piece of tape into a tube and extract the DNA from it. So we would get the DNA from both sides, both the adhesive and nonadhesive side.

Q. Okay. All right. So also looking at Exhibit 12T.

I'll clear your markings.

Did you also perform a similar analysis on this rifle?

A. Yes, we did.

Q. And which portions of the rifle were you looking at to examine for DNA?

A. So on this rifle, we swabbed the areas that were handled that were textured, so this includes the grip, the trigger, and as well as the strap that would have been placed over an individual to hold the firearm. We also looked at the tape

that secured some of the modifications on the firearms, and we looked at the protected ends of those tapes.

Q. And then finally did you look at -- did you analyze this shotgun as well?

A. Yes. We did.

Q. Which areas of the shotgun did you look at?

A. We looked at, again, the handle, the grip and trigger area and the tape as well.

Q. All right. Returning to Government's 62, let's talk to through your results.

All right. So I'm going to try to make this a little bigger. All right. So starting with Item 1-1, which you labeled "A cutting of tape from grenade pin." What was your result for the DNA analysis from the cutting of tape from the grenade pin?

THE WITNESS: Your Honor, may I reference my report?

THE COURT: You may.

THE WITNESS: Could you repeat your question?

BY MR. MARCET:

Q. Yes. Item 1-1, subparentheses 1, "Cutting of tape from grenade pin," what was your result as to that item?

A. No conclusion regarding the sex typing results could be provided for Item 1-1(1). So this item, the cutting of tape from the grenade pin, was interpreted as originating from two individuals, and Mr. Brown was excluded as a the possible

contributor to the DNA profile from the cutting of tape from the grenade.

Q. So it was not his DNA on the tape of the grenade?

A. He was excluded as a possible contributor.

Q. Now, when you say there's no conclusion regarding sex typing, what does that mean?

A. So as I discussed earlier, sometimes DNA is broken down or degraded, and that can limit the results that we get from an item of evidence. And because of that, we might not be able to determine whether an individual may be male or female that contributed to the DNA profile. So in this case, there just was not enough information at that location.

Q. And what factors contribute to the degrading of the DNA sample?

A. So heat, for example, water, things like that, any sort of external environment that's not in like a cool, dry place can affect it as well as time.

Q. So let's talk about that same grenade, which is Item 1. But Item 1-2, subparentheses 1, which is "Swabbing from Item 1 grenade pin ring."

A. Yes. So no DNA or sex-typing results were obtained from Item 1-2(1), therefore no comparisons could be made.

Q. So there was no DNA or insufficient DNA to do a comparison?

A. That is correct.

Q. Does that mean that nobody ever touched that area of the grenade?

A. No. I can't say that for certain. It just means that there wasn't enough DNA present in the areas that we tested for us to produce a DNA profile.

Q. Okay. Let's move on to the second grenade, Item 2-1, "Cutting of tape from grenade body." So that's not the grenade -- that's not the pin ring. That's the grenade, the tape around the body. Correct?

A. Uh-huh, that is correct.

Q. That's on the second grenade?

A. Yes, that's correct.

Q. What was the result of your analysis for that?

A. Male DNA was obtained from Item 2-1(1). The cutting of tape from the grenade body was interpreted as originating from two individuals, and Mr. Brown was excluded as a potential contributor to the DNA profile from the cutting of tape from the grenade body.

Q. So that's the same result as the first grenade, not Mr. Brown's DNA on the tape?

A. Yes. Mr. Brown was excluded as a potential contributor.

Q. Now, Item 2-2, "Swabbing from Item 2, grenade pin ring." Did you also conduct a test on that, the swabbing from the second grenade?

A. Yes, I did.

Q. And what was the result of that test?

A. No DNA or sex-typing results were obtained from the swabbing of the grenade pin of the second grenade, and therefore no comparisons could be made.

Q. Okay. So same as the first grenade, insufficient DNA to do any testing?

A. Yes, that is correct.

Q. All right. So let's move on to Item 6, which you have labeled here, "Palmetto Armory Rifle Model PA-15."

So we'll start with the swabbing from the surface area of the fabric strap and the entire area of the gun. So what was the result of the DNA analysis of that portion of the rifle?

A. So this is the swabbing of the fabric strap in the textured areas of the gun, and these items, male DNA was obtained from the swabbings, and it was interpreted as originating from three individuals. The DNA results from Item 6(1) are 1.2 octillion times more likely if Mr. Brown and two unknown unrelated individuals are contributors than if three unknown unrelated individuals are contributors. This provides very strong support for the inclusion of Mr. Brown as a possible contributor to the DNA profile from the swabbings from the rifle.

Q. That number you mentioned, octillion, do you know how many zeros that is?

A. It's 12 followed by 26 zeros.

Q. And so what does the number mean? Before you said excluded. Here you're giving a number. What is the higher versus the lower number mean versus interpreting the result?

A. We use a statistic called a likelihood ratio. Essentially, the larger the likelihood ratio, sort of if you think of it like a scale. If you have a likelihood ratio of ten, for example, that might be like adding a rock on the inclusion side of the scale. It's going to tilt the scale slightly toward an inclusion, but it's not going to move it drastically. In this case, the 1.2 octillion would be like adding a car to that side of the scale. It's going to massively tilt the scale toward the side of inclusion.

Q. So let's move on to Item 6-1(1), cutting of tape from rifle. So is that the same way you've tested the protected areas of the tape for DNA?

A. Yes. That is correct.

Q. And what was the result of that analysis?

A. Male DNA was obtained from the cutting of tape from the rifle, and it was interpreted as originating from two individuals. The DNA results from the cutting of tape from the rifle are 730 sextillion times more likely if Mr. Brown and an unknown unrelated person or contributor than if two unknown unrelated people are contributors. This provides very strong support for the inclusion of Mr. Brown being a possible contributor to the DNA profile from the cutting of tape from

the rifle.

Q. Did you test several other pieces of tape on the rifle?

A. Yes.

Q. Was it similar results?

A. Yes. Again, I would have to go through each of them, but, yes, they are all -- they all fall in that very strong support for inclusion category.

Q. Finally, let's look at Item 7, which is the CBC Industries shotgun, 410-gauge, Model SB42Y. Did you test that item for DNA?

A. Yes, we did.

Q. First, the swabbing of the textured area of the guns, what was the result of that DNA analysis?

A. Male DNA was obtained from the swabbing of the textured areas of the gun and was interpreted as originating from two individuals. The DNA results from Item 7(1) are 32 times more likely if Mr. Brown and an unknown unrelated person or contributors than if two unknown unrelated people are contributors. This provides limited support for the inclusion of Mr. Brown as a possible contributor to the DNA profile from the swabbing of the textured areas of the shotgun.

Q. And then the cutting of tape from the shotgun, did you also test the tape on the shotgun?

A. Yes, we did.

Q. And what was the result of that analysis?

A. No conclusion regarding the sex typing results could be provided for Item 7-1(1). Item 7-1(1), the tape from the shotgun was interpreted as originating from two individuals. The DNA results from Item 7-1(1) are two times more likely if Mr. Brown and an unknown unrelated person or contributors than if two unknown unrelated people are contributors. This provides limited support for the inclusion of Mr. Brown as a possible contributor to the DNA profile from the tape from the shotgun.

Q. So before you were -- for the rifle, you were giving very high numbers in the septillions and octillions. Here, it's much smaller numbers, 32 and 2. What is the difference in terms of the meaning of those results?

A. So as we discussed earlier, sometimes there are different factors that can affect the amount of DNA we get from an item of evidence. So sometimes we just don't get a lot of those specific STR locations that I talked about earlier in a DNA profile. So if you sort of think of it like a phone number, if I have the area code of a phone number, for example, my area code, 805, there are going to be several people that are going to have that 805 area code that live in the area that we live in. But as you become more and more specific, you get more and more locations in that phone number, it's going to narrow down the amount of people who have that specific phone number.

It works the same way with a DNA profile. So if we get

more and more of those locations, it becomes more and more specific to this specific person that it belongs to. And so in this case, it would be like having just the area code of a DNA profile. We don't have a lot of that information, and so our results that we can provide are very limited.

MR. MARCET: Thank you, Ms. Breslin. I have no further questions.

THE COURT: Mr. Futerman.

MR. FUTERMAN: Thank you.

CROSS-EXAMINATION

BY MR. FUTERMAN:

Q. Good afternoon, Ms. Breslin.

A. Good afternoon.

Q. You're doing an excellent job testifying, and I just have a request for you. I don't have many questions for you. But when I ask the questions, is it possible just to slow down a little bit as you answer them?

A. Absolutely.

Q. Just so that the -- it doesn't get lost on any of us. Thank you very much.

So in simple terms, to get the DNA on the grenades, the grenades and tapes, DNA was collected in this case and was suitable for comparison. Correct?

A. That is correct.

Q. And on the grenades, there's two specific findings. On

one, we know it's definitely not Mr. Brown. It could be a male, it could be a female, but definitely not Mr. Brown. Correct?

A. He was excluded as a possible contributor, yes.

Q. And then on the other grenade, we also know it's definitely not Mr. Brown. We know it's two male contributors to that -- to that grenade, but he's not one of them. Right?

A. He was, again, excluded as a possible contributor.

Q. Okay. You then did the rifles and the -- excuse me, the rifle and the shotgun?

A. That is correct.

Q. And on both those situations to a varying degree, one by millions or sextillions, one of the items, he was -- his DNA was on the gun. Right?

A. He was included as a possible contributor.

Q. And then the other one to a lesser degree, his DNA was on the gun. Right?

A. Yes. His DNA was included.

Q. Do you ever get a CD, a compact disc or its cover to test for DNA?

A. No, we did not receive any sort of CD.

Q. The DNA swab that Mr. Brown in this particular case that was used for his exclusion on the grenades and his inclusion in the guns was known as a buccal swab. Right?

A. Yes.

Q. And a buccal swab is taken from the inside of your cheek, basically?

A. Typically it is done by sticking the swab inside the inner part of your cheek and swabbing the inside part of your cheek, yes.

Q. Once you let -- I guess it was Case Agent Lindsey or other people with the FBI, various law enforcement know that there was two male DNAs found on the grenade and it wasn't Mr. Brown, did you ever receive from the FBI or the government any other buccal swabs for comparison?

A. No, I did not.

Q. So you didn't get buccal swabs from any of the agents or law enforcement that were at the scene of the search. Correct?

A. That is correct. I did not.

Q. And had you have received that buccal swabs or their comparison, you could have compared to the two male DNAs that were found in the grenade to these other individuals. Correct?

A. Correct. If I had received other buccal swabs or reference samples, I could have compared them as well.

Q. You didn't get anything?

A. I did not receive any other buccal swabs in this case.

Q. You would agree, of course, that's not something Mr. Brown can do; he can't get the buccal swabs of the agents and send them to you. Right?

A. No. I don't believe so.

Q. Okay. And special supervisor Christopher Franck, who we heard before you testified, testified before the jury today, he was in contact with you through communication about these results. Is that correct?

A. Yes. I did provide him what we call preliminary results. So our reports go through a review process by another set of qualified examiners, so there's what's called a technical review and an administrative review. After the technical review, I am able to provide those preliminary results, and so I did so in this case.

Q. Okay. So the person that you were communicating with in this particular case was the supervisor Christopher Franck, right, at the results?

A. Yes.

Q. He wanted to know the results. Right?

A. Yes.

MR. FUTERMAN: Your Honor, that's all the questions. Thank you.

THE COURT: Any redirect?

REDIRECT EXAMINATION

BY MR. MARCET:

Q. So you mentioned there's preliminary results that in essence say you found DNA, and you're asking the agents is there anyone that they want it to be compared to. Correct?

A. Typically, it depends on if a reference sample was

submitted in addition to the items of evidence. In this case, we received the items of evidence first, and then the reference sample at a later date. So I provided Mr. Franck with the preliminary results of the fact that we did have DNA profiles and requested if he had a known that he would like to submit, to go ahead and submit.

Q. And so it was the local agent who then requested that you do the follow-on comparison to the defendant. Correct?

A. That is correct.

MR. MARCET: No further questions, Your Honor.

THE COURT: All right. Thank you. You may step down.

THE WITNESS: Thank you.

THE COURT: Ladies and gentlemen, we're going to recess for the -- take an afternoon recess. It's 20 minutes of three. We'll take about 15 minutes. We'll be in recess until five minutes of three. You're welcome to walk around. Please don't discuss the case, and leave your pads on your chairs.

THE COURT SECURITY OFFICER: All rise.

(Jury out at 2:41 p.m.)

THE COURT: All right. We're in recess until five minutes of three.

(Recess from 2:41 p.m. to 2:56 p.m.)

THE COURT SECURITY OFFICER: All rise.

(Jury in at 2:57 p.m.)

THE COURT SECURITY OFFICER: Please be seated.

THE COURT: Mr. Goedman, you may call your next witness.

MR. GOEDMAN: Thank you, Your Honor. United States calls FBI forensic examiner Kimberly Reubush.

THE COURTROOM DEPUTY: Please raise your right hand.

WHEREUPON,

KIMBERLY REUBUSH,

was called as a witness and, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

THE COURTROOM DEPUTY: Please state your name for the record and spell your name.

THE WITNESS: Kimberly Reubush. K-i-m-b-e-r-l-y. Last name is R-e-u-b-u-s-h.

THE COURTROOM DEPUTY: Thank you, ma'am. Please take the witness stand.

THE COURT: Mr. Goedman.

BY MR. GOEDMAN:

Q. Good afternoon.

A. Good afternoon.

Q. Can you please state your name for the record.

A. Kimberly Reubush.

Q. Ms. Reubush, where do you currently work?

A. I work at the FBI laboratory in the scientific and

biometrics analysis unit.

Q. What's your position there?

A. I'm a supervisory physical scientist forensic examiner.

Q. And do you have a particular specialization?

A. I'm in trace evidence, specifically hairs and fibers.

Q. And did you conduct a trace evidence examination in this case?

A. I did.

Q. Come back to that in a minute.

Let's talk a little bit about your background and career. Did you go to college?

A. I did. I have a bachelor's and master's of biology, both from Virginia Tech, as well as a master's in science in technical intelligence from the National Intelligence University.

Q. And what did you do after college?

A. Right after college, I actually went and worked at Sea World.

Q. Sounds fun. When did you join the FBI?

A. In January of 1999.

Q. Can you walk us through the various roles you've held at the FBI?

A. Sure. I was hired as a physical science technician, which is an entry-level position. Physical science technicians, or PSTs at the time, were responsible for checking in evidence

inventorying it, conducting, processing on the items of evidence as well as moving the evidence around the laboratory.

Q. After you were -- how long were you a physical science technician?

A. I was a physical science technician for two years.

Q. And what did you do after that?

A. I was promoted into the physical scientist forensic examiner position, and I held that until 2015.

Q. And are you still in that role today?

A. I am, except I'm also now a supervisor.

Q. And when were you promoted to the supervisory position?

A. In 2015.

Q. At some point during your career, did you become a qualified forensic examiner for trace evidence?

A. I was. I was qualified in February 2002.

Q. So you've been a qualified trace evidence examiner for almost 20 years?

A. Little bit more, but yes.

Q. During that time, how many examinations do you think you've taken part in?

A. I have examined over 12,000 cases.

Q. Have you written reports in each one of those cases?

A. I have.

Q. So 12,000 reports. Going back to 2002, when you started becoming -- or when you became a forensic examiner, what sort

of training did you receive at that point?

A. Training took approximately one year. That was split between hairs and fibers, about six months each. It required first being assigned to a qualified examiner as a mentor and then conducting thousands of examinations on hairs and fibers, taking tests, having oral boards and moot courts, and then at the end of it, having a final competency test to ensure that I was able to accurately examine hairs and fibers.

Q. Assume you passed all those exams?

A. I did.

Q. Since becoming a qualified examiner, have you had any ongoing training?

A. Yes, we're required at the FBI laboratory to have at least eight hours of continuing education each year.

Q. Do you have any annual or ongoing assessments?

A. So we -- every year we're also proficiency tested to ensure our continued proficiency. So I am proficiency tested once a year, once in hairs and once in fibers.

Q. Since you've been at the FBI, have you ever testified as an expert on trace evidence?

A. I have.

Q. Roughly how many times?

A. Approximately ten.

Q. And have you received any awards for your service to the FBI?

A. Yes. Both in 2018 and this year, I received the FBI's exceptional performance award.

Q. Okay. Let's talk a little bit about what a trace evidence examination entails. Can you walk us through from start to finish how that process goes?

A. Sure. Trace evidence exams are conducted in three sections. The first is collection, the second is identification, and then finally examinations and comparisons.

Q. So why don't we take those one at a time, starting with collection. What's that about?

A. Collection is actually processing the items of evidence for the hairs and fibers. This is typically done with a stereo microscope, which allows us to visualize the hairs and fibers on that piece of evidence. They're then removed from it and mounted on glass microscope slides.

Q. So after you've mounted the evidence on slides, did you go on to the identification step?

A. That's correct.

The identification step is at a much more high-powered microscope, typically 100 to 400 times magnification. It allows me to identify if what has been mounted on the slide is a hair or a fiber. And then if it's a hair, I can determine if it's human or animal. If it's animal, I can potentially determine the species, such as a cat or a dog. If it is human, I will determine the ancestry of the hair, the somatic origin

or body area that it came from, if there's any kind of artificial treatment, if there's any disease or artifacts attached to it, and then determine if it's suitable for comparison purposes.

Q. So after you've done that initial identification, what's the next step?

A. The next step with hairs is the comparison portion if we have received a known hair sample. And then there are three conclusions I can draw from that comparison. And the identification, where the hair has the same microscopic characteristics as those present in the known head hair or pubic hair sample, and accordingly that person can be included as a possible source of the hair.

The second is an exclusion that based on that known hair sample, I cannot include the individual as the source of the hair.

And then, finally, there is an inconclusive conclusion, which means that there are similarities and differences that cannot be explained and therefore I cannot draw a conclusion.

Q. And are there similar -- a similar set of conclusions for fibers that you examine?

A. There are.

Q. I'm going to show the witness what has previously been admitted as Government's Exhibit 62. This is a stipulation that the jury has seen a few times. Just as a reminder, the

first few sentences say, "United States of America, Defendant Jeremy Brown, and the Defendant's undersigned Counsel agree that the following facts are true and correct."

Ms. Reubush, I'm just going to have you read this section right here. Blow it up for you.

A. "Trace Evidence Examination. FBI Forensic Examiner Kimberly Reubush and FBI physical scientists processed several items of evidence for trace evidence. Ms. Reubush then analyzed the trace evidence in comparison to fibers and hairs seized during the investigation. Ms. Reubush is competent to testify to the preparatory work done by the physical scientists as well as her own analysis."

Q. Thank you. So let's talk about your examination. Did you examine two grenades that was received by the lab?

A. I did.

Q. All right. I'm showing the witness what has previously been admitted as Government's Exhibit 13H and 13I.

Do you recognize these pictures and these images?

A. I do.

Q. Are these the two grenades that you reviewed as part of your examination?

A. They appear to be.

Q. So -- and just to note a difference, can you see that the photo on the left has tape around the ring?

A. Yes.

Q. And that the photo on your right does not have tape around the ring?

A. Correct.

Q. Starting with the grenade at the left, did you locate any hair on this grenade?

A. I did.

Q. What type of hair?

A. There was a human body hair recovered from under the tape on that item.

Q. And were you able to compare that human body hair to any known sample?

A. I was not. It was not suitable for meaningful comparison purposes.

Q. And were there any fibers found on that grenade?

A. There were. There were several fibers, including a beige carpet-type fiber that were recovered from under the tape.

Q. Were you able to run that beige carpet fiber against a known sample?

A. Yes. I compared it to multiple carpet samples that were recovered from the house and RV.

Q. And was it a match to the known sample?

A. No. It was an exclusion.

Q. Were there any other hairs or fibers on that grenade on the left-hand side that you were able to run a known -- compare against the known sample?

A. No.

Q. Let's turn to the second grenade on your right. Did you receive -- did you recover, or find any hairs or fibers on this grenade?

A. Yes, I did.

Q. And where were those hairs or fibers found?

A. Under the adhesive portion of the tape down on the grenade.

Q. And what kind of hair was this?

A. There were dog hairs recovered as well as fur fragments and a human head hair fragment as well.

Q. Let's start with the human head hair. Were you able to compare that to a known sample?

A. No. Since it was a fragment, it was not suitable for meaningful comparison purposes.

Q. And what about the dog hair, were you able to run a comparison on those?

A. The dog hair was compared to two known dog hair samples that were submitted as being Mr. Brown's.

Q. And were those a match?

A. They were not.

Q. You also mentioned there was some fur recovered. Is that right?

A. That's correct.

Q. And was that suitable for comparison?

A. It was not.

Q. Just to make sure I understand, so all the fibers and hairs you obtained from either of these grenades, it came from the adhesive side of the tape, sticky side of the tape?

A. Correct. And was prior to my removal unexposed.

Q. Okay. So based on your experience, when do you believe that the hair and fibers that you recovered from that sticky side of the tape would have adhered to the tape? When would they have gotten stuck there?

A. Most likely as the tape was being put down on the grenades.

Q. And do you have any way to determine when these grenades were taped?

A. I do not.

Q. And can you explain why you only look at -- you only look for trace evidence from the sticky side of the tape? Why don't you look at the rest of the grenade?

A. So the grenade itself is not a surface that is really going to hold trace evidence. It's metallic. If hair or fiber was to drop onto the grenades, I do not expect it to stay there, especially if the grenades are moved in any way. Tape is an excellent vehicle for picking up hairs and fibers and trapping them in the adhesive. In this case, by only looking at the adhesive surfaces that were still down on the grenade itself or the ring, I can hopefully determine that it was not

added at some point past collection, and then being submitted to the laboratory.

Q. Okay. Can you use your expertise to tell us what the green stuff in these photos is?

A. It's duct tape.

Q. Sorry. I mean, the green --

A. Oh, the grass?

Q. Yes, the grass. So these grenades in these pictures are sitting in grass. Right?

A. Yes.

Q. Did you find any grass during your examination?

A. I did not.

Q. Do you have a theory as to why you wouldn't have found any grass, even though we're looking at a picture of the grenades sitting in grass?

A. Because the surfaces that I looked at were adhering already to the grenade, the adhesive was not available to pick up grass.

Q. I'm going to show the witness what has been previously marked as Government's Exhibit 11G.

Ms. Reubush, do you recognize this photo?

A. I do.

Q. What are we looking at here?

A. You're looking at a shotgun.

Q. Was this one of the items that you examined in the course

of your examination?

A. It is.

Q. Did you find any hair or fibers or any other trace evidence from the -- on the shotgun?

A. I did. I recovered a hair consistent with a cat hair as well as fibers and additional animal fur fragments.

Q. And where were those -- where was that trace evidence found on this gun, on the shotgun?

A. Under the tape on the butt of the gun.

Q. So with respect to starting with the cat hair, were you able to compare that to a known sample?

A. No. I did not receive any cat hair knowns.

Q. And what about the additional fur fragments, were you able to compare those to a known sample?

A. No. They were not suitable for meaning comparison purposes.

Q. Were there any other fibers found on the shotgun?

A. There were. But no comparisons were conducted because none of them were carpet type.

Q. I'm showing the witness what has previously been admitted as Government's Exhibit 12T.

Do you recognize this picture?

A. I do.

Q. What is this a picture of?

A. The rifle that was submitted.

Q. Did you find any trace evidence on this rifle during your examination?

A. I did. Textile fibers and animal fur fragments were recovered.

Q. Before we talk about those, can you point out on this picture where you found that trace evidence?

A. So it's almost impossible to see, but there was actually tape in the area of -- okay. That's not working. There we go. Very bad circle of the light assembly and then down as well on the folding stock.

Q. Kind of towards the front of the gun where the barrel is?

A. Yes.

Q. And you said you found some fur fragments. Is that correct?

A. Yes.

Q. Were those suitable for comparison?

A. They were not.

Q. And you found some fibers?

A. Yes.

Q. Were those suitable for comparison?

A. They were. But, again, none of them were carpet-type fibers, so there was nothing to compare them to.

Q. Again, just so I understand, was everything that -- all the trace evidence that you recovered from the shotgun and from the rifle, that was found on the inside adhesive part of the

tape -- of the tape?

A. Correct.

Q. And so when, in your opinion, did that trace evidence adhere to the tape?

A. When it was being placed on the rifle.

Q. And, again, do you have any way of knowing when the rifle or shotgun were taped?

A. No.

Q. If I were to handle these guns after they've been taped, would you be likely to find hair or fiber evidence connecting me to these guns?

A. Not if the adhesive surface was down on the tape. Potentially on any adhesive surface that was exposed.

Q. Okay. Thank you.

MR. GOEDMAN: No further questions. I tender the witness for cross-examination.

THE COURT: Mr. Futerman.

MR. FUTERMAN: Thank you.

THE COURT: Can you erase those markings?

MR. GOEDMAN: Sorry about that.

CROSS-EXAMINATION

BY MR. FUTERMAN:

Q. Good afternoon, Ms. Reubush.

A. Good afternoon.

Q. There was a dog fiber found underneath the tape of the

grenade. Correct?

A. Yes.

Q. And Mr. Brown's dogs, because I just want to make sure this is clear -- trying to get the name, Ranger and Liberty -- was compared to see if the dog hair under the grenades matched his dogs. Right?

A. Correct.

Q. And they were excluded. That dog hair didn't match his dog hairs. Right?

A. Based on the known hair samples that were provided, that's correct.

Q. And you received a lot of samples. I think there was communication where you wanted to make sure when the samples were taken from the dogs, that you had sufficient comparison, over 50 samples of something. Is that correct?

A. Correct. We asked for at least 50 hairs from various locations on the dog to ensure that we have a representative sample of the hairs present on the dog.

Q. So you get over 50 samples from the dogs, you compare to it the dog, excluded Mr. Brown. Right?

A. Yes.

Q. Now I want to go through the extent on the textile and carpet comparison to Mr. Brown's carpets and what was presented to you. And I -- if you have your report, I don't know if you'll need to refer it or not, but I'm sure the Court will

allow you to refer to it.

Can you go through the list of what you received on all the specific textile and carpet fibers from where and as it relates to the RV and house of Mr. Brown?

THE WITNESS: Your Honor, may I look at my report, please.

THE COURT: You may.

BY MR. FUTERMAN:

Q. And if you could go through slowly, one by one, specifically from where and what samples you received.

A. So I received a carpet sample that was identified as being collected from 4804 10th Avenue South, Room B. I also received a carpet sample, same location, Room F, and a bath mat from the RV bathroom floor.

Q. And then you have -- if I understand, this was item carpet yarn -- Item 9, carpet yarn, one, multicolored and twisted. Is that correct?

A. Yes.

Q. And then you have Item 2, carpet yarn, two. Is that correct?

A. Yes.

Q. Then you have in addition to what you said, Item T, vacuum filter from carpet, 4804 10th Avenue South, Room 10F. Correct?

A. Yes. However, the vacuum filters were not examined.

Q. Carpet sample from Item 11, Room F from 4804 10th Avenue

South. Correct?

A. Yes.

Q. Item 11, carpet yarn, one. Is that correct?

A. Yes.

Q. So you got all these carpet and textile fibers, and you compared that to the carpet, the beige textile fiber that was found under the grenade. Correct?

A. Uh-huh.

Q. And his carpet from where he was living in the RV was excluded. Correct?

A. That's correct, based on the known samples that were submitted.

MR. FUTERMAN: No more questions. Thank you.

THE COURT: Redirect, Mr. Goedman.

MR. GOEDMAN: No further questions, Your Honor.

THE COURT: Thank you. You may step down.

You may call your next witness.

(Excerpt of Proceedings concluded at 3:21 p.m.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA

COUNTY OF HILLSBOROUGH

I, Rebekah M. Lockwood, RDR, CRR, do hereby certify that I was authorized to and did stenographically report the foregoing proceedings; and that the foregoing pages constitute a true and complete computer-aided transcription of my original stenographic notes to the best of my knowledge, skill, and ability.

I further certify that I am not a relative, employee, attorney, or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand at Tampa, Hillsborough County, Florida, this 26th day of January 2023.

Rebekah Lockwood

REBEKAH M. LOCKWOOD, RDR, CRR
Official Court Reporter
United States District Court
Middle District of Florida