

Case No. 19-56004

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In the United States Court of Appeals  
for the Ninth Circuit

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STEVEN RUPP, et al.,  
*Plaintiffs-Appellants,*

v.

XAVIER BECERRA,  
in his official capacity as Attorney General of the State of California,  
*Defendant-Appellee.*

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On Appeal from the United States District Court  
for the Central District of California  
Case No. 8:17-cv-00746-JLS-JDE

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**APPELLANTS' EXCERPTS OF RECORD  
VOLUME XVII OF XXII**

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January 27, 2020

Under Federal Rules of Appellate Procedure for the Ninth Circuit, rule 30-1, Plaintiffs-Appellants Steven Rupp, Steven Dember, Cheryl Johnson, Michael Jones, Christopher Seifert, Alfonso Valencia, Troy Willis, Dennis Martin, and California Rifle & Pistol Association, Incorporated, by and through their attorney of record, confirm to the contents and form of Appellants' Excerpts of Record.

Date: January 27, 2020

**MICHEL & ASSOCIATES, P.C.**

s/ Sean A. Brady

Sean A. Brady

*Attorneys for Plaintiffs/ Appellants*

*Steven Rupp, et al.*

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### **CERTIFICATE OF SERVICE**

I hereby certify that on January 27, 2020, an electronic PDF of APPELLANTS' EXCERPTS OF RECORD, VOLUME XVII OF XXII was uploaded to the Court's CM/ECF system, which will automatically generate and send by electronic mail a Notice of Docket Activity to all registered attorneys participating in the case. Such notice constitutes service on those registered attorneys.

Date: January 27, 2020

**MICHEL & ASSOCIATES, P.C.**

s/ Sean A. Brady

Sean A. Brady

*Attorneys for Plaintiffs-Appellants*

*Steven Rupp, et al.*

## **Exhibit 12**

UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA  
SOUTHERN DIVISION

-----  
STEVEN RUPP, et al., :  
Plaintiffs, :  
v. : Case No.  
XAVIER BECERRA, in his official : 8:17-cv-00746-JLS-JDE  
capacity as Attorney General of :  
the State of California, :  
Defendant. :  
-----

DEPOSITION OF CHRISTOPHER B. COLWELL, M.D.

CORRECTED TRANSCRIPT

DATE: Thursday, December 20, 2018

TIME: 11:04 a.m.

LOCATION:

Department of Justice  
Office of the Attorney General  
455 Golden Gate Avenue, Suite 11000  
San Francisco, CA 94102

REPORTED BY:

Erik Parker, Notary Public

JOB No. 3135720

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A P P E A R A N C E S

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C O N T E N T S

WITNESS: DX CX RDX RCX

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P R O C E E D I N G S

COURT REPORTER: Good morning, everyone.

MR. BRADY: Good morning.

COURT REPORTER: We are going on the record at 11:04 a.m. on December 20, 2018. Please note that the microphones are sensitive and may pick up whispers and private conversations. Please turn off all cell phones, or place them away from the microphones as they can interfere with the deposition audio. Audio and video recording will continue to take place, unless all parties agree to go off the record.

This is media unit one of the video-recorded deposition of Dr. Christopher B. Colwell, taken by counsel for Plaintiff in the matter of Steven Rupp, et al., v. Xavier Becerra, et al., filed in the United States District Court, Central District of California, Southern Division. This deposition is being held at the Department of Justice, Office of the Attorney General, located at 455 Golden Gate Avenue, Suite 11000, San Francisco, California, 94102.

My name is Erik Parker from the firm Veritext Legal Solutions and I'm the videographer. I'm not related to any party in this action, nor am I financially interested in the outcome. Counsel and all present in the room and everyone attending

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1 remotely will now state their appearances and  
2 affiliations for the record. If there are any  
3 objections to proceeding, please state them at the  
4 time of your appearance, beginning with the noticing  
5 attorney.

6 MR. BRADY: Sean Brady appearing on behalf of  
7 Plaintiffs.

8 MR. ECHEVERRIA: Jon Echeverria for the  
9 Defendant, Xavier Becerra.

10 COURT REPORTER: Thank you, counsel.  
11 WHEREUPON,

12 CHRISTOPHER B. COLWELL, M.D.,  
13 called as a witness, and having been sworn by the  
14 notary public, was examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. BRADY:

17 Q Good morning, Dr. Colwell.

18 A Good morning.

19 Q My name is Sean Brady. I am an attorney for  
20 the Plaintiffs in the matter of Rupp v. Becerra. You  
21 have been designated as an expert witness by the  
22 California Attorney General in this matter; is that  
23 your understanding?

24 A Yes.

25 Q We have marked as Exhibit 100, your Notice to

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1 So I know there are weapons mentioned in the  
2 California assault weapons law that I don't have any  
3 knowledge of and don't have any -- don't know that I  
4 have treated victims of those particular weapons. So  
5 I wouldn't say my feeling -- my definition of assault  
6 weapon mirrors the California law, specifically, but  
7 the weapons that I think of as assault, I believe, are  
8 covered under the California law.

9 Q Now, you mentioned a TEC-9; is that right?

10 A Yes.

11 Q And you talk about TEC-9 in your report,  
12 right?

13 A Yes.

14 Q Is your understanding of a TEC-9 that it is a  
15 rifle or a handgun?

16 A My understanding is it could be either and  
17 that law enforcement has used that term with either  
18 of -- the specific weapon in Columbine was more of a  
19 handgun, but my understanding is that, specifically,  
20 the TEC-DC9 could be either.

21 Q Do you know what ammunition a TEC-9 uses?

22 A Not specific -- not specifically the  
23 limitations of what ammunition, no.

24 Q So do you know that -- is it your  
25 understanding that firearms are chambered for a

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1 particular cartridge?

2 A Yes, although I wouldn't have used that  
3 particular term. Yes. It is my understanding, yes.

4 Q Okay. And you do not know what cartridge a  
5 TEC-9 is chambered for?

6 A No.

7 Q Okay. Do you know what cartridge an AR is  
8 chambered in?

9 A No. I have had the opportunity to shoot an  
10 AR, so I have handled one, but I wouldn't know the  
11 name of that cartridge.

12 Q Is it your understanding that an AR is --  
13 only shoots one particular type of cartridge?

14 A No, but I could be wrong about that. I  
15 wouldn't put myself out as a weapons expert, so it is  
16 not my understanding that there was only one type of  
17 ammunition that could be used in that.

18 Q So you understand that you can -- or it's  
19 your understanding that you can use multiple types of  
20 ammunition in an AR?

21 A Yes.

22 Q Okay. What about an AK? Do you know what  
23 type of ammunition an AK is chambered in?

24 A I don't know the limits of that ammunition.  
25 It is my understanding that you could use different

Page 13

1 types of ammunition for that as well.

2 Q Okay. Do you know whether they use  
3 centerfire ammunition?

4 A It's my understanding they do. If you told  
5 me I was wrong, I couldn't argue with you, but yes,  
6 that is my understanding.

7 Q And is your understanding, when you use the  
8 term, "assault rifle," are you talking about firearms  
9 that only use centerfire ammunition?

10 A I don't -- I don't think of it as -- in that  
11 way. Again, I think of it more in terms of the  
12 specific weapons and as they are designed for rapid  
13 fire and -- in a combat situation.

14 Q Okay. Going back to the statement on page  
15 three of your report, you state that, "Assault rifles  
16 cause far greater damage to the muscles, bones, soft  
17 tissue and vital organs." How does the rapid fire --  
18 excuse me -- definition apply to causing the greater  
19 damage?

20 MR. ECHEVERRIA: Objection. Vague.

21 DR. COLWELL: It's more in terms of the  
22 numbers of injuries when we talk about the rapid-fire  
23 aspect of it and, again, this is based on my  
24 experience, that injuries that occur from these  
25 weapons are more likely to be more extensive and

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1 multiple. And so, with the -- the rapid-fire aspect  
2 would be the fact that there are multiple injuries,  
3 either to the same person or multiple different  
4 people.

5 BY MR. BRADY:

6 Q So, when you say more extensive and multiple,  
7 the more extensive is -- are you saying that each  
8 individual shot from an assault rifle is more damaging  
9 than from a non-assault rifle?

10 A Yes, in general, and that multiple injuries  
11 tend to be more damaging than single injuries.

12 Q And is it -- are you basing that on your  
13 opinion of -- in your report going from page three,  
14 line three -- I'm sorry. Page three the last line, on  
15 to page four where you say, "The greater complications  
16 are likely due to the higher muzzle velocity and  
17 higher caliber of rounds involved in assault rifle  
18 shootings"?

19 A I'm not sure I understand the question.

20 Q Sure. So the last line of your report on  
21 page three says, "The greater complications," and I  
22 assume you're talking about the complications you  
23 explained above that, the "they cause far greater  
24 damage to muscles, bones, soft tissue and vital  
25 organs," is that right?

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1           A     Yes. I think in terms of injury, but yes.

2           Q     Okay. So the "greater complications," those  
3     injuries, "are likely due to the higher muzzle  
4     velocity and higher caliber of rounds involved in  
5     assault rifle shootings;" is that -- did I quote you  
6     accurately?

7           A     Yes.

8           Q     And is that -- is it your opinion that the  
9     more extreme injuries that you -- say that you've  
10    witnessed from assault rifles are a result of them  
11    having higher muzzle velocity and higher caliber of  
12    rounds?

13          A     In general, yes.

14          Q     Okay. What is muzzle velocity?

15          A     I view that as velocity of bullet and,  
16    specifically, the -- the weapon -- well, the speed  
17    at -- that the bullet is coming out of the weapon.

18          Q     Do you know how muzzle velocity is measured?

19          A     No.

20          Q     Do you know what affects muzzle velocity;  
21    what affects the speed of the round coming out of the  
22    barrel?

23                MR. ECHEVERRIA: Objection. Vague.

24                DR. COLWELL: Not every aspect of it. It is  
25    my understanding that, for example, a rifle tends to

1 have a higher velocity than a handgun, but I don't  
2 know all of the detail -- or all of the impact on the  
3 muzzle velocity. No.

4 BY MR. BRADY:

5 Q Is it -- in writing this, were you assuming  
6 that assault rifles have a particular muzzle velocity?

7 A Not a particular muzzle velocity, no.

8 Q Do you know whether non-assault rifles can  
9 have the same or higher muzzle velocity than assault  
10 rifles?

11 MR. ECHEVERRIA: Objection. Vague.

12 DR. COLWELL: As I understand it, they can.  
13 My experience has been that they haven't, but I do  
14 understand that they can.

15 BY MR. BRADY:

16 Q Have you treated anybody who has been shot by  
17 a rifle that was not an assault rifle?

18 A Yes.

19 Q Do you know what type of rifle it was?

20 A So in some cases, the term that had been used  
21 was a hunting rifle, in other words, a shotgun. I  
22 don't always know what type of weapon it is,  
23 certainly.

24 Q Okay. And so, the hunting rifle, you don't  
25 know what type of cartridge that that particular rifle

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1 was chambered in?

2 A No.

3 Q Do you know how long the barrel was on that  
4 rifle?

5 A No.

6 Q Are we talking about a single incident of a  
7 hunting rifle, or were there multiple?

8 A There were multiple over years. I haven't  
9 had an incident where there was a hunting rifle and  
10 multiple injuries from that.

11 Q Are injuries from what you described as,  
12 "hunting rifles," usually accidents?

13 A In general, yes.

14 Q Have you ever seen an injury from a, what you  
15 describe as a "hunting rifle," where the shooting, to  
16 your knowledge, was intentional?

17 A Yes.

18 Q Remind me not to go hunting with that guy.

19 A As a side note, I wouldn't ever go hunting  
20 with your father-in-law.

21 Q Good.

22 A Based on experience.

23 Q I appreciate the advice. I was already well-  
24 aware of that one. So when you've seen these wounds  
25 from what you describe as "hunting rifles," it is your

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1 experience that those wounds were not as significant,  
2 or not as serious as the wounds from what you  
3 described as "assault rifles?"

4 A Some of them were. They were much less  
5 likely to be multiple and so damage, from my  
6 perspective, comes from the combination of the impact  
7 of that particular bullet and the number of bullets  
8 that impact. And so, when I think of greater damage  
9 by assault weapons, it's a combination of the impact  
10 velocity and the number of wounds. So it's true that  
11 a hunting rifle, from my experience, can cause  
12 significant damage; I have not experienced the same  
13 degree of damage, in general, from a hunting rifle or  
14 non-assault weapons as with assault weapons.

15 Q Even for an individual wound?

16 A So there have been individual wounds that  
17 have been devastating, yes.

18 Q Worse than an assault rifle?

19 A I wouldn't say worse, but as bad.

20 Q And in coming to your opinion on the -- that  
21 assault rifles produce worse wounds than non-assault  
22 weapons, are you operating under the assumption that  
23 non-assault weapon rifles are incapable of firing at  
24 the same rate as an assault rifle?

25 A No. I'm not operating on that assumption.

1 I'm operating on the experience that it hasn't been  
2 multiple wounds, as it has been with the assault  
3 weapons.

4 Q Have you ever, in the cases of gunshot wounds  
5 that you've treated -- how many gunshot wounds have  
6 you been involved in treating?

7 A I don't know the number. Quite a few.

8 Q Could you estimate?

9 A So, if I would estimate, I would say it's one  
10 to two a week, an estimate of 50 weeks a year and a  
11 estimate of 25 years at a level -- Urban Level One  
12 trauma center, so that type of math would say in the  
13 neighborhood of 50 to 100 a year for 20 years.

14 Q Okay. That sounds like a lot more than  
15 the -- over a thousand that you indicate on page two  
16 of your report.

17 A A lot more than that?

18 Q So, it's -- unless my math is off, yeah. It  
19 sounds like you've treated more than a thousand, or is  
20 that -- does the math work out to be about over a  
21 thousand?

22 A Well, it's over a thousand, I think.

23 Q What you just said and my -- and trust me,  
24 don't trust my math skills. It sounded to me like  
25 what you just said would be well over a thousand. It

Page 20

1 would be multiple thousands now.

2 A Well, I just -- yeah --

3 Q So, I mean, I'm not saying you're -- I just  
4 wanted to know --

5 A Right. No. Fifty to 100 a year, for 20  
6 years comes to somewhere between 1,500 and 2,000.

7 Q Okay.

8 A And it's so inexact, I'm a little hesitant  
9 to -- it sounds dramatic, "thousands," but it's not  
10 unreasonable at all to see one or two a week and I  
11 generally work somewhere in the neighborhood of 48 to  
12 50 weeks a year, so that's how I came up with that  
13 number.

14 Q Got it. So you've seen a lot of gunshot  
15 wounds?

16 A Yes.

17 Q Okay. And in all those gunshot wounds, have  
18 you ever treated somebody that, to your knowledge, had  
19 been shot by a semi-automatic rifle that was not an  
20 assault weapon?

21 A Yes.

22 Q Do you recall what rifle that was?

23 A I don't.

24 Q How did you know that it was a semi-automatic  
25 rifle that was not an assault weapon?

Page 21

1           A     The police officer told me.

2           Q     What did he -- how did -- what did he tell  
3     you to let you know that?

4           A     He told me the weapon and I asked what type  
5     of weapon that is, and he said, "It's a semi-  
6     automatic, non-," -- I walked away from that  
7     discussion very clear that it was not an assault  
8     weapon. And, at the time, this was in Colorado, we  
9     worked very closely with police and talked about  
10    assault weapons, primarily in terms of an AR-15 or an  
11    AK-47. So I don't remember that -- enough of the  
12    specifics of that conversation to say, "was it just a  
13    rifle that was not an AR-15 or an AK-47," but I do  
14    have a memory of a discussion with that law  
15    enforcement officer and he said, "Yes, this was semi-  
16    automatic and it was not assault."

17          Q     And he said it was a rifle?

18          A     Yes.

19          Q     And you don't recall what cartridge it was  
20    chambered in?

21          A     I don't.

22          Q     And do you recall whether the wounds from  
23    that rifle were worse, not as bad or the same as the  
24    wounds that you see from assault rifles?

25                MR. ECHEVERRIA: Objection. Compound.

Page 22

1 DR. COLWELL: It was a single wound. This  
2 particular one wasn't as bad. It had hit his upper  
3 leg and had missed the bone. I have seen bad wounds  
4 from non-assault weapons.

5 BY MR. BRADY:

6 Q When you say non-assault weapons, are you  
7 talking about handguns, shotguns and rifles, or are  
8 you just talking about non-assault weapon rifles?

9 A All of them; handguns, shotguns and rifles.

10 Q So, when you're comparing assault rifles to  
11 non-assault weapons, the non-assault weapon category,  
12 it includes handguns?

13 A Yes. I could take them out, but I didn't.  
14 I'm just thinking in general terms. Yes.

15 Q Okay. Would it -- and is it your  
16 understanding that a wound from a rifle is generally  
17 going to be worse than a wound from a handgun?

18 A Generally, yes.

19 Q So a non-assault weapon rifle is generally  
20 going to cause a worse wound than a handgun; is that  
21 fair to say?

22 A Again, thinking in terms of worse wounds  
23 being both the wound itself and the numbers of those  
24 wounds, yes. Any weapon can cause a bad injury. My  
25 experience is that the assault weapons cause more bad

Page 23

1 injuries and, typically, worse injuries.

2 Q So going back to the sentence on page four of  
3 your report, where you explain what you think the  
4 reasons for the worse wounds from assault rifles, you  
5 say, "higher muzzle velocity and higher caliber of  
6 rounds." What do you mean by that?

7 A Again, in general, my experience has been  
8 that speed and size of the bullets have been more in  
9 the assault weapons and assault rifle shootings. I  
10 incorporate the overall extent of injury, both the  
11 individual and the number of them.

12 Q Do you know what caliber of rounds an AR-15  
13 uses?

14 A Specifically, no.

15 Q Do you know what caliber of rounds an AK-47  
16 uses?

17 A No.

18 Q Do you know whether the caliber of rounds  
19 used in an AR-15 are on the low end or high end of the  
20 caliber range?

21 MR. ECHEVERRIA: Objection. Vague.

22 DR. COLWELL: Do I -- I don't know, in  
23 general, based on the weapon. My experience has been  
24 that they've been on the higher side, but I don't know  
25 based on the weapon itself.

Page 24

1 BY MR. BRADY:

2 Q Do you -- are you looking at the actual  
3 projectile that is retrieved from these wounds when  
4 you're making your -- in forming your opinion?

5 A Sometimes. Also, we will do x-rays or CAT  
6 scans of wounds that will sometimes have the bullets  
7 in them, but not always. Certainly, not always.

8 Q Do you know what caliber means?

9 MR. ECHEVERRIA: Objection. Vague.

10 DR. COLWELL: I equate it to size.

11 BY MR. BRADY:

12 Q When looking at the projectiles that you are  
13 able to retrieve from gunshot victims, do you do any  
14 analysis of the projectile to determine what type it  
15 is?

16 A No.

17 Q So you couldn't say whether a projectile  
18 was -- had a full metal jacket on it?

19 A Unless somebody showed it to me, no.

20 Q Would you know whether a projectile had a  
21 full metal jacket, if somebody showed you the  
22 projectile?

23 A I have seen bullets with a full metal jacket,  
24 so I guess I -- I wouldn't say I -- if you handed me a  
25 number of bullets and said, "Which of these are full

Page 25

1 metal and which isn't," I might get that wrong, but I  
2 have been shown that.

3 Q So you wouldn't know whether it was a hollow  
4 point round?

5 A No, I'm not an expert in ballistics. No.

6 Q So you don't know whether a particular  
7 projectile can make a difference in the wounding  
8 ability of a round?

9 A So, I have a basic understanding of what  
10 types of things can and can't cause some injury. As  
11 an example, you said a "full metal jacket," -- I have  
12 a basic understanding that that is intended to allow a  
13 bullet to go through tissue, more so than, say other  
14 designs, but I would not call myself an expert in  
15 bullet design, by any means.

16 Q But you -- it is your understanding that  
17 there are different types of projectiles that can  
18 produce different types of wounds; is that fair to  
19 say?

20 A Yes. Yes.

21 Q And is it your understanding that -- do you  
22 know whether the wounding effect of that round is  
23 impacted by the firearm from which it is discharged?

24 MR. ECHEVERRIA: Objection. Vague.

25 DR. COLWELL: It would be my understanding

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1     that it would be -- there's the potential for impact  
2     based on the firearm, yes.

3     BY MR. BRADY:

4           Q     So the firearm can affect the wounding -- the  
5     wound that results in the tissue?

6           A     I guess, the firearm can affect the speed.

7           Q     How so?

8           A     Well, different firearms fire at different  
9     speeds, correct?

10          Q     I don't know. I'm asking you.

11          A     That's my understanding; that different  
12     firearms can fire at different speeds and, therefore,  
13     the firearm could impact the wound.

14          Q     How do firearms fire at different speeds?

15          A     How specifically? I'm not -- as somebody who  
16     is not a weapons expert, I couldn't explain how a  
17     different weapon might fire at a different speed.

18          Q     If it was due to the ammunition used, and not  
19     the rifle -- or not the firearm, would that in any way  
20     impact your opinion on whether assault rifles have a  
21     particular muzzle velocity?

22                 MR. ECCHEVERRIA: Objection. Vague.

23                 DR. COLWELL: So, when I -- from my  
24     perspective, when I'm thinking about the wounds, the  
25     combination of the -- the velocity, the caliber and

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1 the numbers of wounds where it hits. All those things  
2 come into play. So I think the answer to your  
3 question would be no, on that caveat, that I think the  
4 bullet, the weapon, the speed, all would impact,  
5 potentially, the wound itself.

6 BY MR. BRADY:

7 Q So is it your understanding that a non-  
8 assault weapon rifle can have the same -- shoot the  
9 same caliber round as an assault weapon?

10 A I believe it can, yes.

11 Q And an assault weapon is semi-automatic,  
12 correct?

13 A To my definition it would include automatic  
14 also, but knowing that automatic are generally not  
15 what we're talking about, yes. I would say that --  
16 what we've talked about are semi-automatic.

17 Q Well, let me ask you this. If you include  
18 automatic, are some of the victims that you refer to  
19 in your report as "having more and worse wounds," were  
20 they people who were shot by fully automatic guns too?

21 A Not that I know of.

22 Q Okay. So, when -- how did you learn that a  
23 particular victim is shot with, say an AK-47?

24 A Usually, it is through law enforcement.  
25 Occasionally, it's been the media.

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1 department as a result of those, yes.

2 Q Okay. So you've testified previously that  
3 you don't really have a -- an expert background in  
4 firearms, right?

5 A That's correct.

6 Q So you wouldn't really be able to say, other  
7 than -- you have no expert opinion on whether Rifle A  
8 or Rifle B is more capable of putting rounds on target  
9 quickly; is that fair to say?

10 A That is fair.

11 Q Okay. So setting that aside, and let's just  
12 assume that these two rifles are capable of putting  
13 rounds on target, and that equal -- in an equal  
14 manner, if they shoot the same ammunition at the same  
15 speed, and they're both hitting their target, do you  
16 have an opinion on whether on a -- whether there would  
17 be any difference in the wounds between these two  
18 rifles?

19 MR. ECHEVERRIA: Objection. Incomplete,  
20 hypothetical.

21 DR. COLWELL: So I don't have an opinion as  
22 to what those wounds would look like, because,  
23 obviously, it depends on the manufacturers that we've  
24 talked about. If you wanted me to render an opinion  
25 on that, I would show these weapons to people that I

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1 know that have combat experience and/or are trained in  
2 that and say, "Which of these could get more bullets  
3 off more quickly in that scenario?" That is what  
4 would worry me most. But, of course, that's not the  
5 area that I'm an expert on.

6 BY MR. BRADY:

7 Q Precisely, and that's why I tried to limit  
8 it. So I'm asking you if these two rifles hit their  
9 targets, will there be a difference in the wounds that  
10 result?

11 MR. ECHEVERRIA: Objection. Incomplete,  
12 hypothetical.

13 DR. COLWELL: I don't know that. If you were  
14 to tell me that there was an ability of one of these  
15 weapons to get off more in a shorter period of time,  
16 then I would change that opinion. I don't know enough  
17 about just looking at the weapons to say that about  
18 these weapons.

19 BY MR. BRADY:

20 Q Exactly, which is why I'm trying to just  
21 focus in on -- I understand your premise that more  
22 rounds getting off is -- could potentially result in  
23 more wounds, and getting shot more times is bad,  
24 right?

25 A Yes.

1           Q    I think we can all agree that you don't want  
2   to get shot once; you definitely don't want to get  
3   shot two or three times, right?

4           A    Yes.

5           Q    Okay.  So, because you're not a -- what we  
6   would call a "gun person," right?

7           A    Yes.

8           Q    I'm trying to focus in on your expertise,  
9   which is the wounding side, right?

10          A    Yes.

11          Q    So do you have any reason to believe that a  
12   wound resulting from Rifle A would be any different  
13   than a wound resulting from Rifle B?

14          A    I don't have any reason believe that a single  
15   wound from either of these weapons would necessarily  
16   be different, no.

17          Q    Okay.  So other than being informed by police  
18   officers or reading news accounts of what firearm is  
19   used in a shooting, would you be able to tell just by  
20   looking at a wound what type of firearm was used?

21               MR. ECHEVERRIA:  Objection.  Vague.

22               DR. COLWELL:  The other way I sometimes get  
23   information is, actually, either victims or  
24   perpetrators will tell me, but if you just showed me a  
25   wound and said, "What weapon created this wound," by

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1     itself, I would be guessing. I don't -- I couldn't  
2     tell you for fact.

3     BY MR. BRADY:

4             Q     Would you be able to tell whether it was a  
5     rifle or a handgun?

6             A     I could guess and I feel like I would have a  
7     chance of being right, however, I would not be able to  
8     tell you, definitively, "this is a rifle wound. This  
9     is a handgun wound."

10            Q     So going to page five of your report, in the  
11     final or, I'm sorry, in the first sentence of the  
12     final paragraph --

13            DR. COLWELL: Did you want to put the sticker  
14     on this? Just for this --

15            MR. BRADY: I can, yeah. I wrote on there so  
16     I could recall, but --

17            DR. COLWELL: I'm assuming I'm returning  
18     these to you afterwards, or?

19            MR. BRADY: No, you're giving them to --

20            DR. COLWELL: Oh, okay.

21            MR. BRADY: -- well, actually, that's a good  
22     question.

23            MR. ECHEVERRIA: That is a very good  
24     question.

25            DR. COLWELL: That's why I wanted to be sure

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1 a number of rifle and a number of handguns and I  
2 remember, specifically, an AR-15 and an AK-47. I  
3 don't remember the name of the non-assault weapons  
4 that I used.

5 Q Was it a semi-automatic rifle?

6 A Yes.

7 Q Did it look like Rifle A?

8 MR. ECHEVERRIA: From which exhibit?

9 MR. BRADY: From Exhibit 97?

10 DR. COLWELL: One of them did. One of them  
11 did, yes.

12 MR. BRADY: Okay.

13 DR. COLWELL: Yes.

14 BY MR. BRADY:

15 Q Do you recall whether you were using the same  
16 ammunition for that rifle as you were for the AR-15?

17 A As I recall, we were.

18 Q Okay. Does the name, "Mini-14," sound  
19 familiar?

20 A Yes. I don't remember specifically -- the  
21 two people that took us out to the shooting range, and  
22 I don't know how much you want to know about what  
23 prompted that, but specifically, we have -- we educate  
24 our EMS fellows in a variety of different things. One  
25 of them is on weapons, so two of the Denver police

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1 officers would take us to the police -- Denver Police  
2 shooting range up in Idaho Springs, once a year. And  
3 I was able to go on that five or six times and they  
4 would give us a discussion of the weapons and talk  
5 about each one and then have us fire each one. And  
6 so, yes, that does sound familiar, I just don't recall  
7 enough to say, "Did I associate that with that  
8 particular weapon," or not.

9 Q And did they indicate whether the AR-15 could  
10 fire more shots faster than the non-assault weapon  
11 rifle?

12 A That was my sense of having shot it. They  
13 did not indicate that, no.

14 Q So you're just basing that statement on your  
15 personal experience?

16 A Yes, including in that experience my seeing  
17 these patients in the emergency department.

18 Q But, again, you can't tell how fast shots  
19 were fired just by looking at wounds, right?

20 A No. I think that's fair. I associate what  
21 I've seen and the extent of the damage with what  
22 weapons they have said were used.

23 Q When you say in that sentence, "causing more  
24 injuries per victim and, thus, more complications,"  
25 are you saying causing more injuries than a non-

1 assault weapon would?

2 A In general, yes.

3 Q But you can't say whether an assault rifle --  
4 you cannot confirm with any certainty, whether an  
5 assault rifle would shoot more shots faster than Rifle  
6 A; is that fair to say?

7 MR. ECHEVERRIA: Objection. Vague.

8 DR. COLWELL: With certainty? No.

9 BY MR. BRADY:

10 Q The second part of that sentence, there's an  
11 "and," and you say, "many of the most devastating  
12 injuries I have managed in my over 25 years of  
13 experience treating gunshot wound victims." So, I  
14 guess, what is the modifier of that in the first  
15 sentence? It would be "causing," right? So, let's  
16 use the word, "causing many of the most devastating  
17 injuries I have managed in my over 25 years of  
18 experience treating gunshot wound victims." Is that a  
19 fair characterization?

20 A Yes.

21 Q So when you say "many," were there some  
22 others that were more devastating?

23 A I wouldn't say more, but as devastating, yes.

24 Q And do you recall what firearms caused those  
25 wounds?

1 MR. ECHEVERRIA: Objection. Vague.

2 DR. COLWELL: There have been equally  
3 devastating injuries caused by both assault and non-  
4 assault, and unknown weapons. In other words, I don't  
5 pretend to know always which type of weapon was used,  
6 and so, there were times a devastating injury occurred  
7 and I don't know whether it was assault or non-  
8 assault.

9 BY MR. BRADY:

10 Q For what percentage of the gunshot wounds  
11 that you've treated would you say you know what  
12 firearm was used?

13 A I'd say about 30 to 40 percent. It's not  
14 quite half, but it's a fair number of them. We do  
15 have discussions with law enforcement on a lot of  
16 these cases.

17 Q So going back to page four of your report,  
18 the last sentence of the paragraph in the middle of  
19 the page state, "These weapons cause significantly  
20 more damage and have resulted in higher morbidity and  
21 mortality than other weapons." Is that right?

22 A Yes.

23 Q And that's your opinion as you sit here  
24 today?

25 A Yes.

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1           Q    How do you know that these weapons cause more  
2    damage?

3           A    In general, they have been associated with  
4    more damage and more wounds, and sometimes those  
5    are -- those specifically go together -- than the non-  
6    assault weapons.

7           Q    So, forgive me for getting a little technical  
8    on you, but unfortunately, that is the nature of the  
9    law in California; how California defines an assault  
10   weapon. And you understand that we are here talking  
11   about California's definition of assault weapon,  
12   correct?

13          A    I do.

14               MR. BRADY:   Okay. So what has been  
15   previously marked as Exhibit 21, if I can find it,  
16   let's look at it. Okay. So this has been previously  
17   marked in a previous deposition as Exhibit 21. Let me  
18   make sure, John, that that's --

19               MR. ECHEVERRIA:   30515?

20               MR. BRADY:   Yeah. Okay. 30515.

21               MR. ECHEVERRIA:   Yes. Yeah.

22               MR. BRADY:   So did I give myself one? Yes, I  
23   did. All right.

24               MR. BRADY:   Okay. So Exhibit 21 is the text  
25   of California Penal Code, Section 30515.

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1 (Whereupon, Exhibit 21 was identified.)

2 BY MR. BRADY:

3 Q Have you ever seen this before?

4 A I have seen this before, yes.

5 Q And so, is it your understanding that this is  
6 the -- one of the definitions of assault weapon under  
7 California law?

8 MR. ECHEVERRIA: Objection. Calls for a  
9 legal conclusion.

10 DR. COLWELL: Yes. I mean, if there were  
11 others that -- I wouldn't argue with that. As I  
12 understand it, yes, this is the California law.

13 BY MR. BRADY:

14 Q Okay. And is it your understanding, or do  
15 you know whether Plaintiffs are challenging the  
16 restriction on what California deems as assault  
17 weapons entirely, or just the rifles that are -- have  
18 been defined as assault weapons?

19 A Actually, I don't know. The language has  
20 always been rifles, so if you asked me to -- to -- I'm  
21 assuming it's rifles, but I don't know that for sure.

22 Q Okay. So subsection (a)(1) -- do you know  
23 how to read statutes? So if you look at the first  
24 line, it says, "Subsection (a), --

25 A Yep.

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1     when a shotgun is used very close the damage is  
2     dramatically more.

3           Q     Dr. Colwell, do you have any published papers  
4     on treating bullet wounds?

5           A     I know you have my list of publication and we  
6     have talked about treating bullet wounds in some of  
7     those talks. I have not done a randomized, controlled  
8     trial on bullet wounds, no.

9           Q     Okay. And have you done any studies on -- or  
10    strike that. Have you -- have any of those papers  
11    discussing wounds, discuss assault weapon -- wounds  
12    caused by assault weapons, specifically?

13          A     I don't recall any specific discussion on  
14    assault weapons, other than that they would be  
15    incorporated in wound management, in general.

16          Q     Are you aware of any peer-reviewed study on  
17    the subject of wounds caused by assault weapons?

18          A     I'm not aware of one, no.

19          Q     Are you familiar with the name, Martin  
20    Fackler [ph]?

21          A     No.

22                MR. BRADY: I believe that concludes my  
23    questioning. Mr. Echeverria, if you have any  
24    questions?

25                MR. ECHEVERRIA: I do have a few.

CROSS-EXAMINATION

BY MR. ECHEVERRIA:

Q Dr. Colwell, you testified today that you were involved in the treatment of victims at both the Columbine and Aurora Theater shootings; is that correct?

A Yes.

Q Were there any other shooting incidents involving indiscriminate victims in a public place that you've been involved in?

A Yes.

Q Can you describe those incidents?

A There was a shooting in 2006 -- I believe it was 2006, at the Safeway Receiving Center in Denver that I actually responded to the scene for. There's also the UPS shooting here in San Francisco that I just happened to be on in the emergency department for, as two other examples of events that were more noted in the media. Obviously, day-to-day occurrences happen, and they sometimes show up in the media, as well, but those events got quite a bit of media coverages, as well, that I was directly involved with, as two other examples.

Q So the first example that you referenced, where did that occur, again?

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1           A    It was at a receiving center for Safeway in  
2   Denver; a warehouse type of a thing.

3           Q    And how -- how many fatalities occurred at  
4   the shooting at the Safeway that you're referring to?

5           A    There was at least one, plus the shooter.

6           Q    And how many injured were involved in the  
7   Safeway shooting that you're discussing?

8           A    I remember there were eight, but I don't  
9   remember specifically enough to say that definitively.

10          Q    Do you recall what weapon was used in the  
11   Safeway shooting?

12          A    I don't.

13          Q    And for the second shooting that you're --  
14   that you discussed, I believe you referenced the, was  
15   it UPS?

16          A    The UPS shooting here in San Francisco, yes.

17          Q    How many fatalities to your knowledge were  
18   involved in that UPS shooting in San Francisco?

19          A    There were three that included the shooter,  
20   if I remember correctly. One of the victims that  
21   ended up dying, plus the shooter who ended up dying,  
22   were both transported to San Francisco General. I  
23   don't believe the third fatality was transported and  
24   we did see other victims that were not fatalities.

25          Q    And do you know how many injured victims

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1       there were in the UPS shooting?

2           A     I want to say four, but I'm not certain about  
3       that.

4           Q     Do you know what type of firearm or firearms  
5       were used in the UPS shooting?

6           A     I don't remember specifically right -- today.

7           Q     I'd like to reference you to page 28 of  
8       Exhibit 102, which is your expert report. This is a  
9       page from your Curriculum Vitae.

10          A     You said 22?

11          Q     Twenty-eight. If you look at item number  
12       133, the title of this is, "The Colorado Shootings;  
13       Lessons Learned from Mass Casualty Events;" do you see  
14       that title?

15          A     I do.

16          Q     And there's a similar title with item 34,  
17       correct?

18          A     One thirty-four, yes.

19          Q     Sorry. One thirty-four on page 28 of Exhibit  
20       102?

21          A     Yes.

22          Q     And also, that's repeated at item 135 on page  
23       28 of Exhibit 102?

24          A     Yes.

25          Q     And this is a presentation that's actually

Page 72

1 repeated elsewhere in your Curriculum Vitae; is that  
2 correct?

3 A Yes.

4 Q Can you briefly describe what the nature of  
5 that presentation was?

6 A So those are geared towards discussions with  
7 other medical providers of all levels, the management  
8 of mass casualty, disaster scenarios and,  
9 specifically, how to manage those scenes. How to  
10 manage multiple victims, how to prioritize, what types  
11 of things to think about and how to think about these  
12 things differently than you would an everyday  
13 occurrence. And, specifically, as it relates to the  
14 shootings in emergency medicine, particularly at Urban  
15 Level One trauma centers. Unfortunately, a shooting,  
16 itself it not unusual, so how do we know when to and  
17 how to transition to a more mass casualty situation.  
18 So those are, typically, the focus of those talks.

19 Q In connection with the shooting at the Aurora  
20 Theater on July 20, 2012, did you have occasion to  
21 speak with the shooter who perpetrated that mass  
22 shooting?

23 A Yes.

24 Q Without disclosing any confidential  
25 patient/medical information, can you describe the

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1 nature of your conversation with James Holmes? If you  
2 are able to?

3 A I mean it was as a treating physician. I  
4 treated him.

5 Q Okay.

6 A And we focused our discussion on how I could  
7 treat him, how I could care for him.

8 Q Okay. So you didn't discuss the shooting  
9 incident with Mr. Holmes at that time; is that right?

10 A I did not.

11 Q Okay. Can you please turn to page two of  
12 Exhibit 103, which is a document that's been marked as  
13 an exhibit in this deposition titled, "Jefferson  
14 County, Colorado Sheriff: How They Were Equipped That  
15 Day," which describes the weapons used in the  
16 Columbine shooting. Do you see that?

17 A I do.

18 Q And on page two, opposing counsel referred  
19 you to a table that is titled, "Shots Fired by Klebold  
20 and Harris." Do you see that?

21 A I do.

22 Q And if you refer to the line, "9-millimeter  
23 rounds," do you see that it indicates that 96 rounds  
24 were fired by Harris, and 55 were fired by Klebold?

25 A I do.

1           Q    Is it also your understanding, based on your  
2    testimony today that Harris was the one who fired the  
3    high-point, 9-millimeter Carbine rifle?

4           A    So I wouldn't base that on my testimony  
5    today. I would base that on this document and, yes,  
6    it is my understanding.

7           Q    Okay. So the individual who was firing the  
8    rifle in the Columbine shooting, according to this  
9    document, fired more rounds than the other individual  
10   who was firing with different weapons that were not  
11   rifles?

12          A    Yes.

13               MR. ECHEVERRIA: I have no further questions.

14               MR. BRADY: Done? Okay. Off the record?

15               MR. ECHEVERRIA: I think we should put on the  
16   record -- are we on the record now?

17               COURT REPORTER: Yeah.

18               MR. ECHEVERRIA: Okay. So I think we should  
19   put on the record a discussion of what happened with  
20   the reporter and what our arrangement is.

21               MR. BRADY: Sure. So Plaintiffs' counsel  
22   arranged for a court reporter to be here today at  
23   10:00 a.m. That court reporter indicated that she  
24   would not be able to make it until around 10:30. We  
25   all convened at 10:30, at which time we learned that

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1 the court reporter would not be able to make the 10:30  
2 time. We waited until, approximately, 11:00 a.m. to  
3 see if she would become available or if the service  
4 could provide a court reporter via telephone or an  
5 alternative individual, none of which were available.

6 So counsel for Defendant, Attorney General  
7 Xavier Becerra, and myself, attorney for Plaintiffs,  
8 stipulated to move forward with the deposition via  
9 video -- videography alone. We also agreed that we  
10 will turn over the video to the attorney service with  
11 a court reporter to subsequently transcribe this  
12 deposition from the video at a later time.

13 There has been exhibits marked today by the  
14 individual who is the videographer, who is able to  
15 administer oaths and mark exhibits as a public notary.  
16 We will also put into his care the exhibits marked  
17 today, which are Exhibits 100, 101, 102, 103, and 104.

18 Did I get everything?

19 MR. ECHEVERRIA: You did, Counsel.

20 COURT REPORTER: And, just to state on the  
21 record, I, Erik Parker, the videographer will submit  
22 the said exhibits to the Veritext firm in San  
23 Francisco.

24 MR. ECHEVERRIA: Very good.

25 MR. BRADY: Sounds good.

CERTIFICATE OF TRANSCRIBER

I, KANDEE WALTERS, do hereby certify that  
this transcript was prepared from audio to the best of  
my ability.

I am neither counsel for, related to, nor  
employed by any of the parties to this action, nor  
financially or otherwise interested in the outcome of  
this action.

DATED: 1/21/2019

<%17929,Signature%>

KANDEE WALTERS

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# Exhibit 13

1 UNITED STATES DISTRICT COURT  
2 CENTRAL DISTRICT OF CALIFORNIA  
3 SOUTHERN DIVISION

-----x  
4 STEVEN RUPP, et al.,  
5 Plaintiffs,  
6 vs. Case No.  
7 8:17-cv-00746-JLS-JDE

8 XAVIER BECERRA, in his  
9 official capacity as Attorney  
10 General of the State of  
11 California,  
12 Defendants.  
13 -----x

14 DATE: Friday, December 14, 2018  
15 TIME: 10:30 a.m.

16 Video deposition of the Defendant's Expert,  
17 LUCY P. ALLEN, taken by Plaintiff, pursuant to  
18 notice, held at the offices of NERA ECONOMIC  
19 CONSULTANTS, 1166 Sixth Avenue, New York, New  
20 York 10036, before Elizabeth Willeski,  
21 RPR, of Veritext Legal Solutions, a Notary Public  
22 in and of the State of New York.

23 Job No. 3135717  
24 Pages: 1-119  
25

Page 1

A P P E A R A N C E S:

On behalf of Plaintiffs:

SEAN A. BRADY, ESQ.

MICHEL & ASSOCIATES, P.C.

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(526)216-4444

On behalf of Defendant:

JOHN D. ECHEVERRIA, Deputy Attorney General

STATE OF CALIFORNIA DEPARTMENT OF JUSTICE

300 S. Spring Street, Suite 1702

Los Angeles, California 90013

(213)897-4902

Also present: Deverell White, Videographer

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WITNESS	EXAMINATION BY	PAGE
Lucy P. Allen	Mr. Brady	5

(Exhibits are attached to transcript.)

E X H I B I T S

EXHIBIT	DESCRIPTION	PAGE
Exhibit 80	Updated Appendix B to Lucy Allen's expert report	21
Exhibit 81	Congressional Research Service paper	41
Exhibit 82	Article by James Fox	46
Exhibit 83	Citizens Crime Commission June 2016	64
Exhibit 84	Citizens Crime Commission Mass Shootings In America	66

1 VIDEOGRAPHER: We are going on the 10:30  
2 record at 10:30 a.m., December 14th, 2018. 10:31  
3 Please note that the microphones are 10:31  
4 sensitive and may pick up whispering or 10:31  
5 private conversations. Please place all cell 10:31  
6 phones away from the microphones, as they can 10:31  
7 interfere with the deposition audio. 10:31  
8 Audiovisual recording will continue to take 10:31  
9 place unless all parties agree to go off the 10:31  
10 record. 10:31  
11 This is Media Unit 1 of the video 10:31  
12 recorded deposition of Lucy P. Allen, taken 10:31  
13 by counsel for the Plaintiff in the matter of 10:31  
14 Steven Rupp, et al vs. Xavier Becerra. This 10:31  
15 case is filed in the U.S. District Court for 10:31  
16 the Central District of California, Southern 10:32  
17 Division. 10:32  
18 We're here at the office of NERA 10:32  
19 Economics Consulting, located at 1166 Avenue 10:32  
20 of the Americas, New York, New York. My name 10:32  
21 is Deverell White representing Veritext Legal 10:32  
22 Solutions. The court reporter is Elizabeth 10:32  
23 Willeski from Veritext Legal Solutions. At 10:32  
24 this time, will counsel please enter their 10:32  
25 appearances and information for the record. 10:32

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1 MR. BRADY: Sean Brady for the 10:32  
2 Plaintiffs. 10:32  
3 MR. ECHEVERRIA: John Echeverria for the 10:32  
4 Defendant. 10:32  
5 VIDEOGRAPHER: Will the reporter please  
6 swear the witness.  
7 L U C Y A L L E N, called as a witness, having  
8 been first duly sworn by a Notary Public of  
9 the State of New York, was examined and testified  
10 as follows:  
11 EXAMINATION BY BRADY: 10:32  
12 Q Good morning, Ms. Allen. My name is 10:32  
13 Sean Brady. I am an attorney for the Plaintiffs 10:32  
14 in the matter of Rupp v. Becerra. Have you been 10:32  
15 designated as an expert by the Defendant, 10:32  
16 California Attorney General, in the matter of Rupp 10:32  
17 v. Becerra? 10:33  
18 A Yes. 10:33  
19 Q And what exactly were you asked to do as 10:33  
20 an expert witness in this case? 10:33  
21 A I believe my report summarizes my scope. 10:33  
22 And I'm referencing a copy of my report here. 10:33  
23 MR. BRADY: Why don't we go ahead and 10:33  
24 mark as Exhibit 1 your report. 10:33  
25 MR. ECHEVERRIA: Sean, pardon me. Are

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1 rifle. It bolds, puts in bold what was the weapon 11:00  
2 that was determined to be that. And then the 11:00  
3 information about how -- what were the news 11:00  
4 stories or the detail that enabled us to determine 11:00  
5 that is both something that we turned over. We 11:00  
6 turned over all the stories that we looked at for 11:00  
7 every mass shooting as well as I believe we've put 11:00  
8 in the footnote, what is it, you know, 11:00  
9 specifically, that allowed us to, you know, what 11:01  
10 news stories gave us that detail. 11:01  
11 Q Understood. So -- 11:01  
12 A And I should note that I actually 11:01  
13 brought -- I have done -- since the time of my 11:01  
14 report, there was a police report that came out 11:01  
15 about one of the mass shootings that had updated 11:01  
16 information about the mass shootings and I have 11:01  
17 updated my Appendix B as well as a table that 11:01  
18 summarizes some of the information in Appendix B. 11:01  
19 I have updated it for that as well as a couple 11:01  
20 other issues that were -- confusions that were 11:02  
21 raised in Dr. Kleck's report that was in response 11:02  
22 to my report. 11:02  
23 Q So you've seen Dr. Kleck's report? 11:02  
24 A Yes, I have. 11:02  
25 MR. BRADY: Will we be getting copies of 11:02

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1           these? 11:02

2           MR. ECHEVERRIA: We can mark it. 11:02

3           MR. BRADY: Yeah, we might as well mark 11:02

4           it as 81. I guess we'll call it the 11:02

5           supplemental exhibit to the report. 11:02

6           MR. ECHEVERRIA: Sure. Just a point of 11:02

7           clarification. I did mark Ms. Allen's report 11:02

8           as an exhibit during the deposition of Gary 11:02

9           Kleck, and that was Exhibit No. 44. So I'm 11:02

10          wondering if it would be possible to just 11:02

11          make this 80. We can just fix that right 11:03

12          now. 11:03

13          MR. BRADY: So we're going to change 80 11:03

14          to 44 because it has already been entered 11:03

15          into the record in a deposition previous to 11:03

16          this, and now we will be marking as Exhibit 11:03

17          80 what Ms. Allen has described as an updated 11:03

18          version of her Appendix B to her report. 11:03

19          (Plaintiff's Exhibit 80 was marked for 11:03

20          identification.) 11:03

21          A Appendix B and the table on page -- I 11:03

22          think it's 7 -- 7. And then the news item that 11:03

23          came out about the Yountville mass shooting. So a 11:03

24          news story. 11:04

25          Q Does Exhibit 80 change your opinions in 11:04

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1 any way, that you included in your report? 11:04

2 A Well, it does change the specific coding 11:04

3 of the Yountville mass shooting. So now I have 11:04

4 additional information based on a new police 11:05

5 report that came out that an assault weapon was 11:05

6 used and that a large capacity magazine was 11:05

7 involved, when previously I did not have that 11:05

8 information. So that's one. 11:05

9 Q Just so I'm clear, you added a shooting 11:05

10 that did involve the use of an assault weapon and 11:05

11 large capacity magazine? 11:05

12 A Correct. I didn't add a shooting. The 11:05

13 mass shooting is already on the list. It was 11:05

14 previously unknown whether an assault weapon was 11:05

15 involved or whether a large capacity magazine was 11:05

16 involved, and now additional information has come 11:05

17 out that shows that an assault weapon was involved 11:05

18 and that a large capacity magazine was involved. 11:06

19 Q Got it. 11:06

20 A So this is this new news story that was 11:06

21 a result of a police report that came out after my 11:06

22 report was written. And in addition, two other 11:06

23 things that I have done differently with regard to 11:06

24 the table and Appendix B, both in response to 11:06

25 Dr. Kleck's report. So Dr. Kleck seemed to be 11:06

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1 under some confusion on what the criteria was for 11:06  
2 a mass shooting in my report, and he thought that 11:06  
3 because I had included the shooter in the count of 11:06  
4 casualties that I was including that in my 11:07  
5 definition of a mass shooting and that is not 11:07  
6 correct. 11:07

7 Q Okay. 11:07

8 A But just to -- I think it's clearer, I 11:07  
9 have now just reproduced those columns and I'm not 11:07  
10 including the fatalities with the shooter. 11:07

11 Q Okay. So -- 11:07

12 A So I had previously just -- as I had 11:07  
13 footnoted in my report, the column says I'm 11:07  
14 including the shooter. Now I'm reporting the 11:07  
15 numbers excludeing the shooter, just for ease. 11:07

16 Q Okay. 11:07

17 A So that's another update. In addition, 11:07  
18 Dr. Kleck had mentioned in his report that he had 11:07  
19 reviewed my classification of large capacity 11:07  
20 magazines by going to additional Google and 11:08  
21 Factiva or news sources, and he said he had 11:08  
22 reviewed them all over a certain number of years. . 11:08  
23 I believe he did that in a biassed way and only 11:08  
24 reviewed the ones that had large capacity 11:08  
25 magazines and tried to show that they didn't have 11:08

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1 large capacity magazines rather than reviewing the 11:08  
2 ones that -- rather than doing it in a systematic 11:08  
3 way. So I have instead done what he said he has 11:08  
4 done and done that in an unbiassed way and rather 11:08  
5 than just relying on Mother Jones, information in 11:08  
6 Mother Jones and Citizens Crime Commission for the 11:08  
7 classification of large capacity magazines, I have 11:08  
8 done what Dr. Kleck has claimed that he has done 11:09  
9 but instead -- I don't believe he's done -- and 11:09  
10 gone and looked at other news sources to see what 11:09  
11 news sources say about large capacity magazines, 11:09  
12 and I have also updated the number of fatalities 11:09  
13 and injuries based on those news stories. 11:09  
14 Q Okay. 11:09  
15 A So -- 11:09  
16 Q There was a lot said, and I appreciate 11:09  
17 all the explanation. It actually clarifies some 11:09  
18 things. But I just want to ask a few questions to 11:09  
19 break down what you just said. I think I 11:09  
20 understand, but I want to confirm. So you did not 11:09  
21 include the shooter -- if the shooter died, if the 11:09  
22 bad guy died, you did not include that to meet the . 11:09  
23 standard of four or three -- whichever one you're 11:10  
24 using, we'll get to that in a second -- whether it 11:10  
25 met the definition of a mass shooting, right? 11:10

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1           A       Correct. So the definition of a mass       11:10  
2       shooting is as stated in my report. It is not       11:10  
3       based on whether the shooter died. The table, as       11:10  
4       also stated in my report, included casualties       11:10  
5       including the shooter.       11:10

6           Q       Got it. So it doesn't change the number       11:10  
7       of mass shootings, it just changes the amount of       11:10  
8       casualties in those mass shootings because you're       11:10  
9       taking out the bad guy?       11:10

10          A       That's right. I have now reported the       11:10  
11       casualties two different ways: One is including       11:10  
12       the shooter and one is excluding the shooter. I       11:10  
13       think that it may be less confusing to exclude the       11:10  
14       shooter in the casualties.       11:10

15          Q       Got it. Thank you for the       11:10  
16       clarification. Now --       11:10

17          A       And just to make it a little easier to       11:10  
18       understand, in the updated table, I now call it       11:10  
19       fatalities excludeing the shooter. And the other       11:11  
20       one was footnoted as including the shooter, but it       11:11  
21       wasn't in the heading.       11:11

22               MR. ECHEVERRIA: Ms. Allen, can I see a       11:11  
23       copy of Exhibit 80, just so I can read along.       11:11

24               MR. BRADY: I don't know how much more       11:11  
25       I'm going to be asking about Exhibit 80, but       11:11

1	you should have it just in case.	11:11
2	Q What I did want to ask about is your	11:11
3	response to Dr. Kleck's criticisms that you didn't	11:11
4	do something, some research, and that he did do it	11:11
5	and you stated that he did it in a biased way.	11:11
6	Can you explain what you mean? What is your	11:11
7	understanding of what he did, and then I'll ask	11:11
8	you why you think it's biased, but if you can	11:11
9	explain your understanding of what he did, what he	11:12
10	claims he did.	11:12
11	A Sure. He says in his report: Finally,	11:12
12	after checking on all of Allen's Appendix B	11:12
13	incidents that occurred in 2013 to 2017, I found	11:12
14	that her claims that incidents, specific incidents	11:12
15	-- he says -- involved 10, 30, and 35 involved	11:12
16	LCMs cannot be confirmed by news accounts.	11:12
17	MR. BRADY: Can we mark this as Exhibit	11:12
18	81. This is Dr. Kleck's rebuttal report,	11:12
19	just so the record shows what you're talking	11:12
20	about.	11:12
21	MR. ECHEVERRIA: This was previously	11:12
22	marked as Exhibit 30 during Kleck's .	11:12
23	deposition. It did include your disclosure	11:12
24	of rebuttal witnesses. So there were	11:12
25	additional pages at the beginning of 30. It	11:12

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1 looks like your copy excludes the disclosure 11:12  
2 and the slip sheet for Exhibit 30. 11:13  
3 MR. BRADY: Do you think that would make 11:13  
4 a difference. 11:13  
5 MR. ECHEVERRIA: I don't think it does. 11:13  
6 Q So you're referring to Exhibit 30 you 11:13  
7 have in front of you. 11:13  
8 MR. ECHEVERRIA: Hopefully this won't 11:13  
9 happen very much more. Apologies. 11:13  
10 MR. BRADY: I appreciate you keeping 11:13  
11 track of that. 11:13  
12 MR. ECHEVERRIA: We'll probably have to 11:13  
13 clean it up after the fact anyway. 11:13  
14 Q Can you let me know what -- 11:13  
15 A Page 23. 11:13  
16 Q Of Exhibit 30, page 23. Okay. And 11:13  
17 you're talking about the paragraph that begins 11:14  
18 "finally"? 11:14  
19 A Correct. 11:14  
20 Q And he says that incidents 10, 30, and 11:14  
21 35 involved LCMS cannot be confirmed by news 11:14  
22 accounts. 11:14  
23 A That's what he says. 11:14  
24 Q And so what did you do in response to 11:14  
25 that? 11:14

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1           A       I looked first at 10, 30, and 35. In 11:14  
2       addition, I did what he said he did, which I 11:14  
3       checked on all the incidents using the additional 11:14  
4       information of additional news reports. So he's 11:14  
5       looking at news reports other than those that I 11:14  
6       had looked at to analyze whether they are large 11:14  
7       capacity magazines. 11:14

8           Q       How do you know that? 11:14

9           A       Because he says that. 11:14

10          Q       Where? 11:15

11          A       "Either those cited in her two sources 11:15  
12       or in any I located using the news bank database." 11:15

13          Q       Okay. And you said that his process was 11:15  
14       biassed. Can you explain? 11:15

15          A       Well, he says he checked on all of the 11:15  
16       incidents in Appendix B, and when I do a news 11:15  
17       search and check on all the incidents in Appendix 11:15  
18       B, when I use additional news stories, I not only 11:15  
19       find that -- I did find that one of the incidents 11:15  
20       that he mentioned which appear to have an LCM, 11:15  
21       based on the information that I had, when you look 11:15  
22       at additional news stories appeared not to have an 11:16  
23       LCM. But I also found, going the other way, that 11:16  
24       there were, when I looked at additional news 11:16  
25       stories, I found that there were mass shootings 11:16

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1       aware that Dr. Kleck has a definition of a mass       11:42  
2       shooting, which doesn't involve fatalities at all,       11:42  
3       it only depends on injuries. And I'm not aware of       11:42  
4       anyone else that uses his definition.       11:42

5               Q       It's your understanding that Dr. Kleck       11:42  
6       uses a definition of mass shooting in which       11:43  
7       there's only injuries, no fatalities?       11:43

8               A       It does not depend on fatalities. It       11:43  
9       only depends on injuries.       11:43

10              Q       So is it your understanding that       11:43  
11       Dr. Kleck's definition of mass shooting is four or       11:43  
12       more injured, shot, not necessarily fatally?       11:43

13              A       I think it's more than six injuries.       11:43  
14       People shot, I believe. I don't believe I've seen       11:43  
15       anyone else use his definition. So he appears to       11:43  
16       have a definition that nobody else has ever used.       11:43

17              Q       So you referred to the Congressional       11:44  
18       Research Service paper. Is this the one you're       11:44  
19       referring to?       11:44

20              A       Yes, it's something that Dr. Kleck       11:44  
21       relied on in his rebuttal report.       11:44

22                      MR. ECHEVERRIA: Should we mark this?       11:44

23                      MR. BRADY: Yeah, I'm going to.       11:44

24                      MR. ECHEVERRIA: Okay. I previously       11:44  
25       marked an excerpt. If this is the complete       11:44

1 document, I think we should mark it. 11:44

2 MR. BRADY: We'll mark the whole one. 11:44

3 We'll mark it as 81. 11:44

4 (Plaintiff's Exhibit 81 was marked for 11:44

5 identification.) 11:44

6 Q We'll actually get back to that in a 11:45

7 second. I want to ask you some questions about 11:45

8 the Mother Jones article first. Do you know 11:45

9 whether the Mother Jones article that you relied 11:45

10 on has been peer reviewed? 11:45

11 A Well, the Congressional Research Service 11:45

12 says that they had reviewed it. They mention that 11:46

13 in one of their footnotes I believe. 11:46

14 Q Do you recall where that is? 11:46

15 A I don't. 11:46

16 Q Do you recall whether that report relies 11:46

17 on the Mother Jones piece or just cites to it? 11:46

18 A I think they say they try to be 11:46

19 consistent with Mother Jones. 11:46

20 Q Other than this report, are you aware of 11:47

21 any other academic papers about mass shootings 11:47

22 that cite to the Mother Jones piece? 11:47

23 MR. ECHEVERRIA: Objection. Vague. 11:47

24 A I think there are others that cite to 11:47

25 it. I'm pretty sure I've seen that. There's 11:47

Page 41

1 quite a few references -- 11:47

2 Q Any that rely -- sorry. 11:47

3 A -- to Mother Jones. I do recall in 11:47

4 the -- I had relied and analyzed on Mother Jones 11:47

5 in a Maryland case, and I believe the Court in the 11:48

6 Maryland case had mentioned that another academic 11:48

7 and his graduate student had reviewed the data in 11:48

8 some sort of -- or reviewed my analysis and the 11:48

9 data and found that to be helpful or a peer review 11:48

10 or something to that effect, as I recall the Court 11:48

11 in the Maryland case saying. So that would be 11:48

12 another -- I believe it was an academic. I think 11:48

13 it was an academic because the judge mentioned a 11:48

14 graduate student. I'm not sure how you can have a 11:48

15 graduate student without being an academic, but... 11:48

16 Q Is that normal peer review process? 11:48

17 A For a professor and a graduate student 11:48

18 to review, yes, that is how a peer review -- that 11:48

19 is. 11:49

20 Q Do you have any papers on any subject 11:49

21 that have been peer reviewed? 11:49

22 A I do. I have a couple that have been 11:49

23 peer reviewed. 11:49

24 Q They're cited in your report? 11:49

25 A They are in my CV, and my work, as I say 11:49

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1 here, all of my expert reports and papers have had 11:49  
2 a NERA peer reviewer. 11:49

3 Q Are you aware of any criticisms of the 11:50  
4 Mother Jones material by any academics affiliated 11:50  
5 with the mass shooting subject? 11:50

6 A Yeah. 11:50

7 MR. ECHEVERRIA: Objection. Vague. 11:50

8 A Yeah. Well, Dr. Kleck thinks that, you 11:50  
9 know, as I said, he has a different definition of 11:50  
10 what a mass shooting is. He doesn't think a mass 11:50  
11 shooting should be based on the number of people 11:50  
12 killed. So I'm aware that he doesn't think that 11:50  
13 looking at the number of people killed is a 11:50  
14 reasonable definition of a mass shooting. Lott, 11:51  
15 who's an academic, I don't know actually if he 11:51  
16 criticizes Mother Jones. He criticizes a broader 11:51  
17 definition of mass shooting as including too many 11:51  
18 types of incidents. I believe he criticizes those 11:51  
19 who include incidents related to other types of 11:51  
20 crimes and incidents in the home. 11:51

21 Q Do you familiarize yourself with the 11:52  
22 academic experts who do work on mass shootings? . 11:52

23 MR. ECHEVERRIA: Objection. Vague. 11:52

24 A I'm not sure how to answer that 11:52  
25 question. Do I get to know them? Is that your 11:52

Page 43

1 question? 11:52

2 Q No. Do you review other's papers on mass 11:52

3 shootings? 11:52

4 A I have reviewed. I have reviewed the 11:52

5 work of others. 11:52

6 Q Would you say that there's a cast of 11:52

7 characters who are treated as the experts in the 11:52

8 field of mass shootings? 11:52

9 A Are you asking me if they're characters? 11:52

10 I would say some of them might actually be 11:52

11 characters, but I don't want to... 11:52

12 Q Do certain names come to mind when 11:52

13 you're talking about the research on mass 11:52

14 shootings? 11:53

15 A I don't know how to answer that 11:53

16 question. I have looked for sources on mass 11:53

17 shootings and I started doing specific work on 11:53

18 mass shootings and whether large capacity 11:53

19 magazines were used in mass shootings a number of 11:53

20 years ago and have been updating this information 11:53

21 with new information. So I have looked at who has 11:53

22 maintained information on mass shootings, what 11:53

23 sources are available. That is something that I 11:53

24 have spent a fair amount of time looking at. As I 11:54

25 have updated the information, I have tried to 11:54

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1 include information but continue to use the same, 11:54  
2 have some consistency with prior work that I have 11:54  
3 done, but yes, over a number of years, I have 11:54  
4 looked at what others are doing and a number of 11:54  
5 others have looked at my analysis. 11:54

6 Q Are you familiar with a researcher James 11:54  
7 Fox? 11:54

8 A Yes, I am familiar with the name. I 11:54  
9 have possibly spoken to him, but it would have 11:54  
10 been quite a while ago, and as I sit here, I 11:54  
11 just... 11:55

12 Q You're not familiar with his work? 11:55

13 A I don't recall looking at it recently. 11:55  
14 His name is familiar. I'm quite sure I have at 11:55  
15 some point looked at his work, but I'm just not 11:55  
16 recalling now. And I believe I may have spoken to 11:55  
17 him or contacted him. 11:55

18 Q Do you recall whether you recognize his 11:55  
19 name from mass shooting related work? 11:55

20 A I just don't recall. I do recall his 11:55  
21 name in relation to, you know, guns- or 11:55  
22 weapons-related matters. I don't have a specific 11:55  
23 recollection as I sit here. I didn't specifically 11:55  
24 look at his work with regard to my report here. 11:55

25 MR. BRADY: Mark this as Exhibit 82. 11:55

1 the second page of this document. 01:26

2 A Okay. 01:26

3 Q And so not the cover page, and there are 01:26

4 two pages from the document or from the website on 01:26

5 each page of the document. Does that make sense? 01:26

6 A Yeah. 01:27

7 Q So page 1, in the second paragraph, the 01:27

8 non-bolded paragraph, it indicates that this 01:27

9 report defines mass shootings as those in which 01:27

10 four or more victims were killed in a public place 01:27

11 unrelated to another crime. Is that your 01:27

12 understanding of what the Citizens Crime 01:27

13 Commissions definition of mass shootings was? 01:27

14 A They do define it as four or more 01:27

15 victims killed, I believe, yes. It is in a public 01:27

16 place unrelated to another crime. 01:27

17 Q So it's essentially Mother Jones' 01:27

18 definition pre-2013; is that fair to say? 01:27

19 A Yes. I would say they're essentially 01:27

20 the same, except that Mother Jones changed it to 01:27

21 three or more after 2013, that's correct. 01:28

22 Q And did you notice any discrepancy 01:28

23 between the two after 2013 as a result of the 01:28

24 different definition? 01:28

25 A So, sure. Mother Jones included mass 01:28

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1 shootings in which fewer than four people were 01:28  
2 killed, and you can see that -- you can probably 01:28  
3 see that more easily in where I'm not including 01:28  
4 the shooter in this updated Appendix B. 01:28  
5 Q Okay. And that's Exhibit 80. 01:28  
6 A Yeah. So for example, you look on page 01:28  
7 2, you can see No. 33, Trestle Trail Bridge, had 01:29  
8 three fatalities, and it's in Mother Jones, but 01:29  
9 not in Citizens Crime. You can see Fort Hood, No. 01:29  
10 36, has three fatalities, and it's in Mother Jones 01:29  
11 but not in Citizens Crime. So those are some 01:29  
12 examples. 01:29  
13 Q Okay. So would it be fair to say that 01:29  
14 the universe of mass shootings would be larger 01:29  
15 under Mother Jones definition? 01:29  
16 MR. ECHEVERRIA: Objection. Vague. 01:29  
17 A After 2013, Mother Jones included mass 01:29  
18 shootings in which fewer than four people were 01:29  
19 killed. And Citizens Crime does not do that. So 01:30  
20 to that extent, yes, after 2013, Mother Jones 01:30  
21 includes some mass shootings that Citizens Crime 01:30  
22 does not. Although there is -- the definitions, . 01:30  
23 as I have said, are very similar, there are some 01:30  
24 mass shootings that are in one that are not in the 01:30  
25 other and there are some differences. 01:30

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1 Q Would there be an instance where a mass 01:30  
2 shooting was in -- do you mind if I call it the 01:30  
3 CRC for short, just so I don't have to keep 01:30  
4 looking at its name. 01:30  
5 MR. ECHEVERRIA: Would it be CCC? 01:30  
6 MR. BRADY: Sorry, CCC, yes. 01:30  
7 A Yeah, that seems easier. 01:30  
8 Q So if I say CCC, will you understand 01:30  
9 what I mean? 01:31  
10 A Yes. 01:31  
11 Q So can you think of an instance where 01:31  
12 there would be a mass shooting in the CCC that is 01:31  
13 not in Mother Jones? 01:31  
14 A There are some that are in one that are 01:31  
15 not in the other, and there are some that are in 01:31  
16 the other that are not in one. So there are some 01:31  
17 differences. I think they have independently done 01:31  
18 it and there are some differences. They may be 01:31  
19 instances that are ambiguous and they may have 01:31  
20 come to a different determination, and one may 01:31  
21 have missed one that the other one caught and vice 01:31  
22 versa. So they're not perfect, but they are very . 01:31  
23 similar in terms of what they have found to be 01:31  
24 mass shootings. They're not identical. So I 01:31  
25 think I say in the Mother Jones data contains 93 01:31

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1 percent of the mass shootings and Citizens Crime 01:32  
2 Commission for the years covered by both. 01:32  
3 Q And do you make a determination on what 01:32  
4 percentage of the CCC has of Mother Jones 01:32  
5 incidents? 01:32  
6 A I don't particularly say that here, no, 01:32  
7 but you can do that right off of my table. 01:32  
8 Q Okay. So to your point about the 01:32  
9 information not being perfect, on the last page 01:32  
10 under methodology, it indicates that 01:32  
11 contradictions may exist between this analysis and 01:32  
12 other sources. Do you agree with that statement? 01:32  
13 A They say every effort has been made to 01:33  
14 obtain the most accurate information; however, 01:33  
15 contradictions may exist between this analysis and 01:33  
16 other sources. And, yes, I would not disagree 01:33  
17 with that. I would agree with that. I mean, I 01:33  
18 guess I don't know whether they made every effort. 01:33  
19 I have no reason to disagree with that. 01:33  
20 Q Sure. You have no reason to disagree 01:33  
21 that they were working to get the best 01:33  
22 information, right? . 01:33  
23 A That's correct. 01:33  
24 Q And you have no reason to dispute that 01:33  
25 they say contradictions may exist with other 01:33

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1 sources, right? 01:33

2 A I can see that contradictions exist with 01:33

3 other sources. I mean, that's one of the things 01:33

4 my table shows. 01:33

5 Q Got it. And in the very last sentence 01:34

6 it says: "This analysis does not cover an 01:34

7 exhaustive list of mass shootings." Did you take 01:34

8 that into account in preparing your report? 01:34

9 A So it says: "As the ATF does not 01:34

10 require police departments to collect data related 01:34

11 to the capacity of a firearm's ammunition magazine 01:34

12 and the media does not always report the details 01:34

13 of the weapons used, this analysis does not cover 01:34

14 an exhaustive list of mass shootings." I have 01:34

15 looked for, as I say in my report, for additional 01:34

16 sources of mass shootings. And as I say, Dr. 01:34

17 Kleck has criticized my use of Mother Jones and 01:34

18 Citizens Crime Commission, but has not noted any 01:34

19 mass shooting that meets their definition that has 01:35

20 not been included. So I have looked. I have 01:35

21 reviewed Dr. Kleck's report in this matter as well 01:35

22 as in other matters. I have reviewed his 01:35

23 suggestion that Shooting Tracker indicates some 01:35

24 omission, but I have noted, as I said, that 01:35

25 Shooting Tracker has a different definition. It 01:35

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1 is including incidents that are not classically 01:35  
2 considered mass shootings and do not fall in the 01:35  
3 criteria of Mother Jones, Citizens Crime 01:35  
4 Commission or the Congressional Research Service 01:35  
5 report that Dr. Kleck relied upon. 01:35

6 Q And what other sources -- in your report 01:36  
7 you say you relied on Mother Jones and the CCC, 01:36  
8 and that you then did Google and Factiva searches 01:36  
9 to confirm the results in those two sources, but I 01:36  
10 don't see where you cite any other source for 01:36  
11 determining mass shooting incidents. Am I wrong? 01:36

12 A The mass shooting incidents that I have 01:36  
13 analyzed and that are in my report are those 01:36  
14 within Citizens Crime Commission and Mother Jones. 01:36  
15 As I say in my report, I have found those to be 01:36  
16 the most comprehensive list of mass shootings of 01:36  
17 the type that the State of California is focused 01:36  
18 on and that other -- that were the focus of other 01:36  
19 cases -- 01:37

20 Q But you didn't go beyond -- 01:37

21 A -- that I have worked on. I have not 01:37  
22 found any other site, although now, Dr. Kleck has 01:37  
23 mentioned and relied upon this Congressional 01:37  
24 Research Service, which does not list the mass 01:37  
25 shootings, but in order to have done the research 01:37

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1 that they have done, they appear to have compiled 01:37  
2 their own list of mass shootings, and so I do 01:37  
3 think that that is an additional source that I 01:37  
4 will explore. I have not found that data to be 01:37  
5 publicly available, but perhaps there are other 01:37  
6 ways that I can obtain the data that they have 01:37  
7 done. So they appear to have done their own -- 01:37  
8 according to their analysis, they have done their 01:37  
9 own independent research of mass shootings. 01:37

10 Q So you didn't look at any sources other 01:38  
11 than Mother Jones and the Citizens Crime 01:38  
12 Commission for mass shooting incidents, meaning 01:38  
13 the definition that you were looking at; is that 01:38  
14 correct? 01:38

15 A I have looked at a whole host of other 01:38  
16 sources to see if there are other sources for mass 01:38  
17 shootings. Having reviewed a whole host of other 01:38  
18 sources, I have continued to find that the 01:38  
19 Citizens Crime Commission and Mother Jones have 01:38  
20 the most comprehensive list of mass shootings or 01:38  
21 public mass shootings or mass shootings of the 01:38  
22 type that are at issue, the mass shootings that I 01:38  
23 have analyzed are, in my report, are those from 01:38  
24 Mother Jones and Citizens Crime Commission. 01:38

25 Q And in reviewing all those other sources 01:39

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1 to see if there was one potentially better or 01:39  
2 equivalent to Mother Jones and Citizens Crime 01:39  
3 Commission in your opinion, did any of those 01:39  
4 materials -- did you see any mass shooting 01:39  
5 incidents in those materials that you did not 01:39  
6 recognize from appearing in Mother Jones or 01:39  
7 Citizens Crime Commission? 01:39

8 A Sure. There are lots of mass shootings 01:39  
9 in, for example, Dr. Kleck's book and list of mass 01:39  
10 shootings that are not in Citizens Crime and 01:39  
11 Mother Jones, because, as I said before, he uses a 01:39  
12 definition of mass shootings -- 01:39

13 Q You misunderstood my question I think. 01:39  
14 I'm asking ones that met the definition used in 01:39  
15 Mother Jones and Citizens Crime Commission, in 01:39  
16 reviewing these other sources because sometimes, 01:39  
17 like you said, CCC might find a shooting that 01:39  
18 Mother Jones didn't find or vice versa, in 01:40  
19 reviewing those other source, did you see any that 01:40  
20 had mass shootings that met their definition but 01:40  
21 was not included in Mother Jones or CCC? 01:40

22 A There might have been one or two mass . 01:40  
23 shootings. So there is not a source that I found 01:40  
24 that was more comprehensive, but in reviewing 01:40  
25 particular instances, there may have been one or 01:40

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1 two mass shootings that based on the materials I 01:40  
2 reviewed appeared that they would fit the 01:40  
3 definition of Mother Jones and Citizens Crime 01:40  
4 Commission. 01:40  
5 Q And you didn't include those in your 01:40  
6 report? 01:40  
7 A No, I had a -- I did not want to -- I 01:40  
8 had sort of one reputable method, which is I'm 01:40  
9 using these sources and this is what I'm doing and 01:40  
10 these are the most comprehensive sources I'm able 01:40  
11 to find. I didn't want to include another, and in 01:41  
12 the course of looking at something that some 01:41  
13 expert opposing, rebutting my analysis pointed to, 01:41  
14 I have found one or two incidences that, you know, 01:41  
15 from based on that information may meet that 01:41  
16 criteria, that wouldn't then be a systematic 01:41  
17 reputable objective way. It would depend on -- so 01:41  
18 I haven't systematically, for example, gone 01:41  
19 through -- no, I haven't included anything in 01:41  
20 addition. I haven't included any incidents in 01:41  
21 addition to Mother Jones and Citizens Crime 01:41  
22 Commission in my analysis of mass shootings. I . 01:41  
23 have obviously relied on other information and I 01:41  
24 have looked to see whether there are other or more 01:41  
25 comprehensive sources of mass shootings, but I 01:41

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1 they are all on here and they are under assault 01:52  
2 weapons and large capacity magazines and then 01:52  
3 other, under other guns, but I'm just -- we should 01:52  
4 have, at any rate, turned over to you each of the 01:52  
5 documents that we did rely on. 01:52  
6 Q We'll confirm and see if that's the 01:52  
7 right document or not. Did you run any of your 01:52  
8 own regressions on the data from Mother Jones or 01:53  
9 the Citizens Crime Commission? 01:53  
10 MR. ECHEVERRIA: Objection. Compound. 01:53  
11 Q Okay. Did you run any regressions on 01:53  
12 the data compiled by Mother Jones? 01:53  
13 A Any regressions? 01:53  
14 Q Yes. 01:53  
15 A I don't believe so, no. 01:53  
16 Q Your question back to me suggests that 01:53  
17 you wouldn't think that that would be necessary; 01:53  
18 is that fair to say? 01:53  
19 A I don't have a particular thought of 01:53  
20 what we would run a regression on. 01:53  
21 Q And that's why you think it wouldn't be 01:53  
22 necessary? . 01:53  
23 A I think that's right. 01:53  
24 Q So when you look at Exhibit B to your 01:54  
25 report. 01:54

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1 A B? 01:54  
2 Q B, yes. 01:54  
3 A Appendix B? 01:54  
4 Q Yes, I'm sorry, Appendix B. 01:54  
5 MR. ECHEVERRIA: The original Appendix B 01:54  
6 in her report, not Exhibit 80? 01:54  
7 MR. BRADY: Yes. I don't think it will 01:54  
8 make a difference for this purpose. Either 01:54  
9 one will suffice. I'm just looking at the 01:54  
10 categories, which I don't believe have 01:54  
11 changed at the top. 01:54  
12 Q Correct? 01:54  
13 A Correct, other than that the casualties 01:54  
14 don't include the shooter anymore. 01:54  
15 Q So you have several variables: Shots 01:54  
16 fired, number of guns, guns obtained legally. Is 01:54  
17 it not ever helpful to -- or would it not be 01:54  
18 helpful to run regressions on those variables 01:55  
19 to... 01:55  
20 A To do what? 01:55  
21 Q Formulate your opinion here? 01:55  
22 MR. ECHEVERRIA: Objection. Vague. 01:55  
23 A I'm not sure what you would be referring 01:55  
24 to. Usually people say people run regressions 01:55  
25 without any idea of what they're doing. I haven't 01:55

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1 heard anyone suggest you should just run 01:55  
2 regressions without some question that the 01:55  
3 regression is trying to answer. 01:55  
4 Q That's what I'm asking you. I don't 01:55  
5 pretend to be an expert on regressions or 01:55  
6 anything, so I'm asking you because you are the 01:55  
7 expert on regressions, right, would you see a need 01:56  
8 to run any regressions on this data -- would 01:56  
9 running regressions be helpful to you here? 01:56  
10 MR. ECHEVERRIA: Objection. Vague. 01:56  
11 A I did not see a need in doing my 01:56  
12 assignment in this case to run regressions, no. 01:56  
13 Q So it is your opinion that assault 01:57  
14 weapons when used in mass shootings cause 01:57  
15 casualties to be higher than those that do not 01:57  
16 involve assault; is it fair to say? 01:57  
17 A It's my finding that in mass shootings 01:57  
18 that involve assault weapons that casualties are 01:57  
19 higher. 01:57  
20 Q Could that -- could your observation be 01:58  
21 the result of a spurious correlation? 01:58  
22 MR. ECHEVERRIA: Objection. Calls for . 01:58  
23 speculation. 01:58  
24 A Dr. Kleck claims that it could be or he 01:58  
25 claims that it could be or that it is a spurious 01:58

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1 correlation. A spurious correlation, as I 01:58  
2 understand him to be using the term, is either it 01:59  
3 is a coincidence -- and I don't believe he thinks 01:59  
4 it's a coincidence -- that it's not just from my 01:59  
5 data, he believes it is true from any data source 01:59  
6 you look at. So my understanding is that Dr. 01:59  
7 Kleck thinks that it's not just with my data, it's 01:59  
8 with his analysis of mass shootings and anyone 01:59  
9 else's analysis of mass shootings. He seems to 01:59  
10 believe that it is because the shooters believe 01:59  
11 that assault weapons will kill more people or help 01:59  
12 them kill or injure more people. That seems to be 01:59  
13 his explanation. 01:59  
14 Q And is that a plausible explanation? 01:59  
15 A I think if the mass shooters think 02:00  
16 assault weapons kill more people, that would seem 02:00  
17 to be consistent with what the State of California 02:00  
18 is trying to do and ban assault weapons, then 02:00  
19 banning the very things that the shooters think 02:00  
20 are helpful in killing more people. I mean, it 02:00  
21 would seem that Dr. Kleck is saying that the 02:00  
22 shooters seem to believe what the State of . 02:00  
23 California also believes and what, according to 02:00  
24 Dr. Kleck, he says the media believes. 02:00  
25 Q And what does the State of California 02:00

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1 believe, as you understand it? 02:00

2 MR. ECHEVERRIA: Objection. Vague. 02:00

3 A I don't want to speak that I do 02:00

4 understand what the State of California believes. 02:00

5 My understanding is that the State of California 02:00

6 believes that a ban on assault weapons is a good 02:01

7 idea, and in part, because the State of California 02:01

8 believes that mass shootings involve assault 02:01

9 weapons and that those that involve assault 02:01

10 weapons are more deadly or have more casualties. 02:01

11 Q But assuming that there are more 02:01

12 casualties in mass shootings where an assault 02:01

13 weapon is used, have you seen any literature, 02:01

14 academic literature, research-based, that supports 02:01

15 the notion that those casualties are because of 02:02

16 the rifle used? 02:02

17 MR. ECHEVERRIA: Objection. Vague. 02:02

18 A Well, Dr. Kleck's discussion -- 02:02

19 Q I'm asking if you've seen anything in 02:02

20 the literature. 02:02

21 MR. ECHEVERRIA: Objection. Vague. 02:02

22 A Dr. Kleck has the same discussions, I . 02:02

23 believe, in his writings. I think the fact that 02:02

24 there are more casualties in mass shootings when 02:02

25 assault weapons are involved is consistent with 02:02

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1 the theory that assault weapons cause more 02:02  
2 casualties. 02:02

3 Q In your analysis of mass shootings, you 02:03  
4 grouped things into assault weapons and 02:03  
5 non-assault weapons, is that correct, in your 02:03  
6 table on page 7 of your report? 02:03

7 A So I looked at whether the mass shooting 02:03  
8 involved an assault weapon according to the laws 02:03  
9 of the State of California. 02:03

10 Q So it either did or -- in which case you 02:03  
11 put it under the assault weapon column -- or it 02:03  
12 did not, in which case you put it in the no 02:03  
13 assault weapon column or unknown, correct? 02:04

14 A Right. So either there is enough 02:04  
15 information to say it was an assault weapon, it 02:04  
16 was not an assault weapon or there wasn't enough 02:04  
17 information and it was unknown. 02:04

18 Q Okay. And you compared, in making your 02:04  
19 determination that use of an assault weapon 02:04  
20 results in more casualties in a mass shooting when 02:04  
21 an assault weapon is involved than others, you 02:04  
22 were looking at these two numbers or these two 02:04  
23 categories in your table, assault weapons and no 02:04  
24 assault weapons? 02:04

25 A That's one of the things, yes. 02:04

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C E R T I F I C A T E

STATE OF NEW YORK )

) ss.

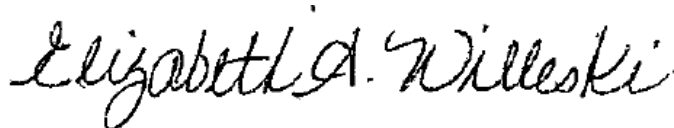
COUNTY OF NEW YORK)

I, ELIZABETH WILLESKI, a Registered Professional Reporter and Notary Public within and for the State of New York, do hereby certify:

That LUCY P. ALLEN the witness whose deposition is hereinbefore set forth, was duly sworn by me and that such deposition is a true record of the testimony given by such witness.

I further certify that I am not related to any of the parties to this action by blood or marriage and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 14th day of December 2018.



ELIZABETH A. WILLESKI, COURT REPORTER  
My Commission Expires: May 31, 2020

## Exhibit 14

Atkinson-Baker, Inc.  
www.depo.com

IN THE UNITED STATES DISTRICT COURT  
FOR THE CENTRAL DISTRICT OF CALIFORNIA  
SOUTHERN DIVISION

STEVEN RUPP, et al.,  
Plaintiff

v. CASE NUMBER:  
8:17-cv-00746-JLS-JDE

XAVIER BECERRA, in his  
official capacity as Attorney  
General of the State of  
California, et al.,  
Defendants

DEPOSITION OF:

J. BUFORD BOONE, III

S T I P U L A T I O N S

IT IS STIPULATED AND AGREED, by and  
between the parties through their respective  
counsel, that the deposition of:

J. BUFORD BOONE, III

may be taken before Lisa Bailey, Notary Public,  
State at Large, at Bradley, Arant, Boult &  
Cummings, 1819 5th Avenue North, One Federal Place,  
Birmingham, Alabama 35203 on December 10, 2018  
commencing at approximately 10:00 a.m.

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1           IT IS FURTHER STIPULATED AND AGREED that  
2     the signature to and reading of the deposition by  
3     the witness is not waived, the deposition to have  
4     same force and effect as if full compliance had  
5     been had with all laws and rules of Court relating  
6     to the taking of depositions.

7           IT IS FURTHER STIPULATED AND AGREED that it  
8     shall not be necessary for any objections to be  
9     made by counsel to any questions, except as to  
10    form or leading questions, and that counsel for  
11    the parties may make objections and assign grounds  
12    at the time of the trial, or at the time said  
13    deposition is offered in evidence, or prior  
14    thereto.

15  
16  
17                   \* \* \* \* \*  
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22  
23  
24  
25

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1 I, Lisa Bailey, a court reporter of  
2 Birmingham, Alabama, acting as commissioner,  
3 certify that on December 10, 2018 pursuant to  
4 Rules of Civil Procedure and the foregoing  
5 stipulation of counsel, there came before me in  
6 Birmingham, Alabama, J. BUFORD BOONE, III, witness  
7 in the above cause, for oral examination, whereupon  
8 the following proceedings were had:

9 J. BUFORD BOONE, III  
10 Being first duly sworn, was examined and testified  
11 as follows:

12 EXAMINATION

13 BY MR. CHANG:

14 Q. Good morning, Mr. Boone. My name is  
15 Peter Chang from the California Attorney General's  
16 Office. And do you understand you're here  
17 testifying as an expert witness in the case Rupp  
18 versus Becerra?

19 A. Yes, sir.

20 Q. Have you been deposed before?

21 A. Yes, sir.

22 Q. Let's say in the last four years how  
23 many times have you been deposed?

24 A. I believe four. This may be four. This  
25 may make number four.

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1 caliber you're talking about or what individual  
2 cartridge would be loaded in that caliber.

3 Q. Let's ask a more general question. The  
4 -- so the same -- so a rifle, say the AR-15, can  
5 you load different cartridges into it?

6 A. Yes, sir.

7 Q. Cartridges of different caliber?

8 A. Yes, sir.

9 Q. How is it you can load cartridges of  
10 different caliber into the same rifle -- you know,  
11 with a barrel of some diameter --

12 A. I may have misunderstood you. But I  
13 thought you meant the family of AR-15s. Were you  
14 speaking individually, of an individual rifle?

15 Q. I'm speaking, right, of one individual  
16 rifle, one individual AR-15.

17 A. It would typically only load cartridges  
18 of one caliber of an individual rifle but the rifle  
19 is available in multiple loadings.

20 Q. I get you. So for a rifle -- for a  
21 rifle that is designed to load a .223 cartridge,  
22 you can't load a different size cartridge into that  
23 rifle; is that correct?

24 A. Almost.

25 Q. Okay. What am I missing?

1           A.       You can load 5.56 cartridges in a .223  
2 rifle, although it's not recommended.

3           Q.       So to load a different -- say, a 9  
4 millimeter into that rifle you would need to switch  
5 out the barrel; is that correct?

6           A.       You would need to switch out a number of  
7 components.

8           Q.       What would you need to switch out?

9           A.       Typically you would need to replace most  
10 of the upper receiver which does include the barrel  
11 but also includes the bolt group and the 9  
12 millimeter version of that type rifle typically are  
13 blowback operated as opposed to gas operated. So  
14 the upper receiver would be quite different, and  
15 the magazine is configured differently than a 5.56  
16 or .223 magazine. So you would either need a  
17 magazine that was modified to fit the magazine well  
18 or you would need a block in the magazine well to  
19 modify the magazine well to fit the 9 millimeter  
20 magazine.

21          Q.       I see.

22          A.       May I add to that a moment?

23          Q.       Please.

24          A.       You could do all that without changing  
25 the serial number of the firearm.

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1 Q. Right. What is a centerfire rifle?

2 A. It uses a cartridge whose priming  
3 compound is contained in what we call a primer,  
4 which consists of three parts. It has a metal cup.  
5 It has the priming compound. It typically has a  
6 piece of foil over the top of that and most of what  
7 we use in this country will have an anvil contained  
8 in the primer. That is loaded into the brass  
9 cartridge case. And there is a flash hole in the  
10 cartridge case such that when the firing pin  
11 contacts the cup of the primer, it crushes the  
12 compound between the cup and the anvil creating a  
13 flash. And that flash travels through the hole and  
14 into the powder and ignites the powder. It's  
15 called centerfire because that's located in the  
16 center of the cartridge case as opposed to rimfire.

17 Q. What is the difference between a  
18 centerfire and a rimfire?

19 A. Rimfire cartridges have the priming  
20 compound internal to the brass cartridge case  
21 around the outside rim of the head of the cartridge  
22 case.

23 Q. What is the functional difference?

24 A. I'm not sure I understand.

25 Q. What is the difference in -- beyond the

1 physical characteristics, what's the difference  
2 between the effect of firing a centerfire cartridge  
3 versus a rimfire cartridge?

4 MR. SWEENEY: Objection. You may  
5 answer.

6 Q. Do you understand the question?

7 A. I'm trying.

8 Q. I'll rephrase that. Why would someone  
9 -- would you choose a centerfire cartridge in  
10 certain circumstances and a rimfire cartridge in a  
11 different circumstance?

12 A. Yes.

13 Q. Could you explain that?

14 A. Typically rimfire cartridges are not  
15 loaded to as high pressure as centerfire  
16 cartridges. Rimfire was the earliest self-  
17 contained priming method that I'm aware of. And  
18 because the priming compound is contained in the  
19 rim of the cartridge in an area where the brass  
20 necessarily is not as strong as it is in the center  
21 of the cartridge, as technology improved and  
22 smokeless powder became more used the pressures  
23 were able to go up. And rimfire cartridge cases  
24 cannot handle the pressures that centerfire  
25 cartridge cases can. Typically what we find in

1 rimfire is 22 rimfire or 17 HMR.

2 Q. Are there .223 rimfires?

3 A. None that are called .223, no, sir.

4 Q. What are they called?

5 A. .22 rimfire or .22 Magnum. The  
6 projectile diameter is the same or almost the same  
7 as that of a .223.

8 Q. Can you fit the .22 rimfire cartridge  
9 into a rifle that's designed to use .223?

10 A. It will travel down into the bore and  
11 probably lodge. It can be fit in, but it's not  
12 something you should try.

13 Q. So when you say the rimfire is not  
14 capable or packed as high pressure as the  
15 centerfire, what's the -- what's the difference  
16 when you fire it? I'm trying -- if you could help  
17 me, I'm trying to see what is the effect of firing  
18 a centerfire cartridge versus a rimfire? Is it --  
19 does it travel at a slower velocity? Does it  
20 penetrate less? What is the real world difference  
21 when you fire the two different cartridges?

22 MR. SWEENEY: Objection. Do you want  
23 him to answer the last question you just  
24 posed?

25 MR. CHANG: I'm trying to see if he can

1           decipher what I'm trying to ask.

2           A.       I'm not having any luck deciphering what  
3           you're trying to ask. I'm sorry, sir.

4           Q.       So you would say the -- you know,  
5           there's a pressure difference in how much pressure  
6           the cartridges can handle between rimfire and  
7           centerfire, correct?

8           A.       Correct.

9           Q.       So with the rimfire being a lower  
10          pressure cartridge, you know -- let me rephrase  
11          that.

12                   Why would someone choose a centerfire  
13          cartridge over a rimfire cartridge when they want  
14          to go shooting?

15          A.       Why would they choose centerfire over  
16          rimfire?

17          Q.       Correct.

18          A.       Aside from it fitting the firearm they  
19          want to shoot that day, I'm not certain. Although,  
20          typically you can find rifles that are capable of  
21          shooting much further in centerfire. For example,  
22          I was shooting at 400 yards recently with a rimfire  
23          rifle because of the challenge, which it would have  
24          been less challenging with a centerfire.

25          Q.       That's because centerfire cartridges can

1 be shot further than a rimfire cartridge?

2 MR. SWEENEY: Objection. You can

3 answer.

4 A. I wouldn't phrase it like that because  
5 there are so many different centerfire cartridges  
6 and so many different rimfire cartridges that there  
7 is some overlap. It would not be accurate to make  
8 a blanket statement like that about rimfire versus  
9 centerfire.

10 Q. So what other differences are there? If  
11 there are -- you know, there are some rimfires that  
12 can be shot just as far as a centerfire cartridge,  
13 then what other differences are there? Are there  
14 any other differences?

15 A. Typically rimfire cartridges are lower  
16 pressure than centerfire cartridges, and that  
17 translates into time of flight. One of the reasons  
18 I was shooting at long distance with the rimfire  
19 was I had a slow cartridge and I was playing around  
20 with the ability of a projectile to make the  
21 transition from supersonic to subsonic flight.

22 Q. So when you say slow cartridge, what do  
23 you mean by that?

24 A. Slower cartridges, I believe I said.

25 Q. Rimfire cartridge is a slower cartridge

1 than centerfire cartridge; is that correct?

2 A. Typically. Some of them are but not  
3 necessarily. For example, I've shot a number of  
4 centerfire cartridges that are loaded to be what we  
5 call subsonic or lower than the speed of sound.

6 Q. So we'll come back to this in a little  
7 bit.

8 A. If you could give me specific cartridge  
9 loadings, I could answer much better.

10 Q. Well, we're talking about, you know,  
11 because the -- like you said, there are a lot of  
12 variations between the different cartridges. If  
13 you need more specificity, please feel free to ask.

14 A. Yes, sir.

15 Q. So going back to what we were talking  
16 about, the third sentence in the second paragraph,  
17 that in your opinion -- it's not your opinion that  
18 only actual AR-15 rifles are the only semi-  
19 automatic centerfire rifle with the detachable  
20 magazines that are useful for self-defense,  
21 correct?

22 A. Yes, sir.

23 Q. Are semi-automatic centerfire rifles  
24 with fixed magazines useful for self-defense?

25 A. They can be.

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1 Q. How can they can useful for self-  
2 defense?

3 A. The same way any firearm is useful for  
4 self-defense. You can shoot a violent attacker and  
5 physiologically cause him to stop.

6 Q. Are automatic centerfire rifles with  
7 detachable magazines useful for self-defense?

8 A. They can be. I would not choose one  
9 personally.

10 Q. Why not?

11 A. Because I have shot some -- or shot full  
12 -- we are talking full automatic, correct?

13 Q. Correct.

14 A. I have shot full automatic enough that I  
15 understand I can more precisely place shots on  
16 semi-automatic than I can on full automatic.

17 Q. Even with a single?

18 A. Well, if a full automatic rifle is set  
19 to single shot there's virtually no difference.  
20 But on full automatic it's difficult for many  
21 people to fire a single shot with a trigger pull.  
22 Well-trained people have. I've done it. We only  
23 use fully automatic for demonstration type  
24 purposes. I don't recall operating on full  
25 automatic once I learned its limitations.

1 Q. Are semi-automatic handguns useful for  
2 self-defense?

3 A. They can be, yes, sir.

4 Q. And when you say "they can be," what do  
5 you mean by that?

6 A. Any weapon you have can be useful for  
7 self-defense, arguably more useful than no weapon.  
8 Handguns are useful primarily because they're  
9 convenient and concealable.

10 Q. Is there any reason a homeowner would  
11 need to conceal his or her handgun in his or her  
12 home?

13 A. I prefer to conceal mine.

14 Q. Let me be more clear. In a home  
15 intruder situation, is there any reason the  
16 homeowner would want to conceal his or her handgun  
17 when confronting a home intruder?

18 A. I wouldn't think a rational person  
19 would.

20 Q. Me either. Are shotguns useful for  
21 self-defense?

22 A. They can be if the proper ammunition is  
23 selected.

24 Q. What kind of ammunition would be  
25 selected for a shotgun that would be useful for

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1 self-defense?

2 A. I would recommend looking at test data  
3 and determining what level of penetration you're  
4 willing -- or you desire. It would depend on the  
5 situation as well. Shotgun shells come in a  
6 variety of loadings. Some of which may penetrate  
7 further than you desire. Some of which may not  
8 penetrate as far as you desire.

9 Q. Do you know what the most common type of  
10 shotgun shell is or commonly sold?

11 A. I would not say there's one that is most  
12 commonly sold, but I don't look at sales  
13 statistics. Shotguns are used for skeet shooting.  
14 And for that you would use small shot sizes.  
15 They're used by turkey hunters which would use  
16 larger shot sizes or goose hunters that use larger  
17 shot sizes. And deer hunters use buckshot and  
18 slugs. So it's not the shotgun itself that makes  
19 it useful. It's the projectiles and how they  
20 perform.

21 Q. And the same could be said for AR-15s,  
22 correct?

23 A. Yes, sir.

24 Q. Could you turn to page eight of your  
25 report. If you could look at -- you see the

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1 heading Handguns Versus Long Arms?

2 A. Yes.

3 Q. If you could look at the second  
4 paragraph below that, the third line, the end of  
5 the third line starting with "If the" -- I'll read  
6 that to you. Tell me if I'm reading it correctly.  
7 "If the optimum choices are used in ammunition  
8 selection, handguns are typically far less  
9 terminally effective than rifles or shotguns." Did  
10 I read that correctly?

11 A. Yes, sir.

12 Q. What do you mean by that?

13 A. If not for the bullet no one would be  
14 afraid of the gun. And, therefore, you need to  
15 look at the choice of ammunition as opposed to the  
16 type of firearm being used. And if you choose the  
17 best ammunition, then handguns are typically far  
18 less terminally effective. They cannot be counted  
19 on to create the physical trauma of the tissue to  
20 rapidly physiologically incapacitate an individual  
21 as well as rifles and shotguns.

22 Q. Is that true in all circumstances?

23 A. If you choose the best ammunition for  
24 all of them, I have never seen a situation where it  
25 was not true.

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1 disingenuous to say fired from all semi-automatic  
2 handguns. Because we would -- I would say within  
3 reason, within standard service type weapons. We  
4 tested our ammunition in test barrels that were  
5 designed to mimic a standard service pistol. We  
6 also would then shoot the ammunition in a standard  
7 service pistol to ensure that the velocity of the  
8 projectile was similar.

9 Q. Sure. And let's say a very standard  
10 semi-automatic handgun, a Glock, for example, Glock  
11 17. Are you familiar with that?

12 A. Yes, sir.

13 Q. It's a 9 millimeter?

14 A. Yes, sir.

15 Q. Well, strike that.

16 What's a common -- what's a common hand  
17 -- semi-automatic handgun that can accept a  
18 Winchester 180 grain .40 Smith and Wesson  
19 cartridge?

20 A. A Glock 22.

21 Q. Glock 22. Okay. And you said that  
22 there are other -- there are -- let's talk in the  
23 Glock line of semi-automatic handguns. Are there  
24 other types of handgun cartridges that could be  
25 loaded into other standard Glock handguns that

1 would allow the projectile to reach the optimum 12  
2 to 18-inch depth?

3 A. I would assume there are. And by  
4 allowed, you mean could be expected to?

5 Q. Could be expected, yes.

6 A. Because "allow" would encompass  
7 "anything could."

8 Q. Right.

9 A. But we tested for consistency.

10 Q. Correct, that you would expect to reach  
11 the optimum depth.

12 A. Yes, sir, I believe there are other  
13 cartridges.

14 Q. But you can't recall offhand what those  
15 are?

16 A. I'm trying to remember what we went to,  
17 the Speer 165 grain Gold Dot I believe 53967. I'm  
18 hesitant to call out specific numbers like that  
19 just from memory because I want to testify  
20 truthfully. There are other cartridges.

21 Q. There are other .40 Smith and Wesson  
22 cartridges?

23 A. Yes, sir.

24 Q. There are other .45 cartridges?

25 A. Yes, sir.

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1 Q. Are there any 9 millimeter cartridges?

2 A. Yes, sir.

3 Q. And are those cartridges -- to be clear,  
4 there are variance -- strike that.

5 There are 9 millimeter, .40 Smith and  
6 Wesson, and .45 cartridges when shot out of a semi-  
7 automatic handgun would allow the projectile to  
8 reach the optimum 12 to 18 inch depth. Is that  
9 correct?

10 A. Reasonable belief, yes, sir.

11 Q. You mean that's your reasonable belief?

12 A. Yes, sir.

13 Q. If you could go to page six, and I think  
14 you referenced several points already. The bottom  
15 of page six, the paragraph starting with  
16 "Overpenetration." Fifth line down starting with,  
17 "For example." You discuss a test that you  
18 participated in in the -- at the BRF, correct?

19 A. Yes, sir.

20 Q. When was that test conducted?

21 A. I believe we conducted it about '99. I  
22 don't recall. I believe we were in the older  
23 facility when that one happened.

24 Q. What was the purpose of the test?

25 A. We had been asked by another government

36

J. Buford Boone, III  
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Def. Exhibit 14  
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1 or law enforcement entity to conduct terminal  
2 ballistics testing on some ammunition that they  
3 desired to use in their facility, and they had  
4 chosen a lightweight jacketed hollow point that was  
5 traveling at fast for its caliber speed. And when  
6 they contacted me, they said we're using this -- we  
7 want to use this because we're afraid that our guys  
8 may miss a lot and we want a projectile that when  
9 they hit a wall, it will disintegrate and not be  
10 dangerous to anyone beyond the wall.

11 Q. Other than the specific bullet that you  
12 mentioned at the bottom of page six, the 115 grain  
13 Plus P, Plus 9 millimeter?

14 A. Yes, sir.

15 Q. Is that how you say it?

16 A. Yes, sir.

17 Q. Other than that bullet what other  
18 projectiles did you test?

19 A. During my career?

20 Q. In that test.

21 A. Just that one?

22 Q. Just that one. Okay. When you conduct  
23 tests, these kind of projectile tests, are the --  
24 do you test the shots -- do you fire the shots at  
25 different distances between the barrel -- the end

1 of the barrel and the target?

2 A. In this test we did.

3 Q. What were the distances you tested?

4 A. 10 feet and 20 yards.

5 Q. Why did you test at two different  
6 distances?

7 A. Our protocol at the time was to conduct  
8 six events at ten feet and two events at 20 yards.  
9 That was the protocol that was set up before I took  
10 over the research facility.

11 Q. Do you have any understanding as to why  
12 those two distances were chosen?

13 A. Yes, sir, because -- and this is -- I  
14 don't have facts on this, but I believe it to be  
15 because when the facility was set up there was the  
16 realization that most gunfights occur at close  
17 distance. And, therefore, the majority of the  
18 testing was done at 10 feet. But recognizing the  
19 projectiles lose velocity as they travel down  
20 range, there was a desire to determine whether  
21 there was a difference in projectile performance at  
22 20 yards versus 10 feet.

23 Q. So this particular test --

24 A. I'm sorry. I said 20 feet. 20 yards,  
25 ma'am. 10 feet versus 20 yards.

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1 Q. You were correct the first time.

2 A. Okay.

3 Q. Even when you didn't think you were  
4 correct, you were correct.

5 A. I strive for accuracy, sir.

6 Q. In this particular test that you discuss  
7 at the bottom of page six, where you mention this 9  
8 millimeter bullet averaging 11 inches of bare  
9 tissue simulate, was that -- in reaching that  
10 depth, was that fired at 10 feet or 20 yards?

11 A. That was at 10 feet, sir.

12 Q. Did you test other 9 millimeter bullets  
13 -- I think you have mentioned that at this  
14 particular test you tested only this bullet,  
15 correct?

16 A. Yes, sir. It was our plan when we did a  
17 test, a test was of a particular loading. And if  
18 we tested another loading it would be a separate  
19 test.

20 Q. Did the -- after this test did the FBI  
21 decide to make any changes in their firearms, their  
22 standard issue firearms?

23 A. After this test?

24 Q. Correct.

25 A. No, sir.

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1 Q. Let me step back a little bit. What is  
2 your understanding as to what -- what are the  
3 standard issue FBI firearms?

4 A. Right now I believe it is a Glock 19 or  
5 a Glock 17 for handguns. A rifle which I will call  
6 a Colt pattern rifle for lack of a better term  
7 which could be AR-15 similar. Last I heard they  
8 were actually Rock River government models. But  
9 they also have, I believe, other types. 870  
10 Remington shotgun is probably still issued. There  
11 are still firearms in the field that were  
12 previously issued. But when the FBI transitions to  
13 something, they don't typically recall everything  
14 that's in the field. So it's quite common to have  
15 previous weapons still in the hands of older  
16 agents.

17 Q. When you say standard issue, does that  
18 mean the FBI issues these weapons, these firearms,  
19 to all agents?

20 A. They issue the handguns to all agents.  
21 All agents don't necessarily get issued a rifle or  
22 shotgun.

23 Q. Who gets issued a rifle or -- who gets  
24 issued a rifle?

25 A. It would be operational agents. The

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1 objections downloaded the ammunition reducing the  
2 pressure, therefore, reducing the recoil but also  
3 reducing the velocity.

4 What they in effect did was created a  
5 situation where the .40 Smith and Wesson was no  
6 more effective than the 9 millimeter we issued at  
7 the time. That meant that you gave the agents the  
8 same size pistol with less cartridges. No one who  
9 goes into a bad situation would choose to go with  
10 less cartridges unless the more cartridges would  
11 make it impossible to function. In other words, if  
12 you have a choice between 15 or 16 you're a fool if  
13 you choose 15. So I pressed hard that we either  
14 issue a .40 caliber that is loaded to full  
15 potential or we go back to issuing 9 millimeters  
16 which had the same effectiveness as the .40 we  
17 issued at the time.

18 The man that took over for me, in my  
19 training of him -- we had 18 months roughly  
20 together to train. When I explained it all to him  
21 and how I had been trying to get us into the most  
22 effective system, he said -- well, he was first to  
23 find out the way things were, but he said he was  
24 going to change it. I helped him in looking at  
25 this also because the FBI test protocol projectile

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1 performance has improved drastically over the last  
2 20 years. And 9 millimeter, if you choose the best  
3 cartridge, 9 millimeter and .40 are very close  
4 together. The 9 offered a better package as long  
5 as the best ammunition was chosen. All of this is  
6 dependent on the ammunition you choose and not  
7 necessarily the caliber of the gun.

8 But Supervisory Special Agent Patterson  
9 wrote this and put it out to law enforcement. I do  
10 not believe he intended for it to get out. My  
11 counsel to him was write it as if you know it's  
12 going to get out. And of course it got out. I'm  
13 okay with that too.

14 So that's what this is. It's describing  
15 why the FBI went back to the 9 millimeter.

16 Q. So this executive summary or this  
17 document talks about the 9 millimeter Luger. So  
18 under -- do you know whether a 9 millimeter Luger  
19 shot out of a semi-automatic handgun shot at ten  
20 feet, whether that would allow the projectile to  
21 reach the 12 to 18-inch penetration depth?

22 A. It would be more dependent on the  
23 projectile, the actual projectile than the fact  
24 that it's a 9 millimeter Luger. There are some  
25 that will and some won't.

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1 Q. What kind of -- do you know what kind of  
2 projectile the FBI uses?

3 A. I have read that they're using a Hornady  
4 Critical Defense, and I believe they're also using  
5 a Speer Gold Dot G2. But I'm not positive of that.

6 Q. And for both of those projectiles in a 9  
7 millimeter cartridge shot out of a semi-automatic  
8 handgun, would the projectile reach the 12 to 18  
9 inch depth?

10 A. If they're the specific loadings that  
11 the FBI uses, I have great confidence that they  
12 would.

13 Q. And those loadings, are they available  
14 for purchase by anyone?

15 A. I hope so but I don't know.

16 Q. Do you know if they have cartridges  
17 specifically made or specially made for the FBI?

18 A. The FBI solicits ammunition through  
19 contracts. And so it's my understanding when a  
20 contract is entered into the manufacturer makes  
21 that ammunition specifically for that contract. In  
22 my time they were not prohibited from selling the  
23 same or similar ammunition to others. They were  
24 only prohibited from selling what we called  
25 contract ammunition at contract price to entities

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1 that were not listed on the contract.

2 Q. But the manufacturers are free to sell  
3 the same ammunition to anyone?

4 A. I don't know of any reason they  
5 couldn't.

6 Q. So in your report you also talk about  
7 the issue of -- is it true that you talked about  
8 how a projectile's penetration performance could  
9 actually increase by going through an intermediate  
10 barrier; is that correct?

11 A. Yes, sir.

12 Q. Now, why would a projectile's  
13 penetration of a target increase due to striking an  
14 intermediate barrier?

15 A. To go back to the case that I reference  
16 there, the 9 millimeter, that particular projectile  
17 relied on the construction of its nose to cause it  
18 to upset or expand in tissue. When it upsets or  
19 expands, the frontal area increases, thereby  
20 increasing the resistance to the tissue and slowing  
21 the projectile down. However, when it impacted the  
22 plywood, the plywood acted as a plug to plug up the  
23 hollow cavity of that projectile preventing it from  
24 expanding. And because it was loaded to higher  
25 pressure than normal and had a higher velocity than

1 normal, it there became a faster than normal  
2 projectile which failed to expand and increased its  
3 penetration depth. Exactly the opposite of what  
4 requester wanted it to do.

5 Q. And that's the result of a particular  
6 construction of the nose of the bullet; is that  
7 correct?

8 A. I would say it's a result of the bullet  
9 construction. I was in the mode of telling  
10 manufacturers what performance we wanted as opposed  
11 to how to make the bullet.

12 Q. Okay. Are there handgun cartridges?  
13 Strike that.

14 Are there bullets loaded on handgun  
15 cartridges that -- which penetration level would  
16 not increase because it hit an intermediate  
17 barrier?

18 A. There are some that probably won't and  
19 that are less susceptible than others.

20 Q. And for those bullets and cartridges can  
21 you say that, you know, if they strike an  
22 intermediate barrier whether they would still over  
23 penetrate a -- the target?

24 A. I would test them to determine that.

25 Q. So without testing specific

1 bullet/cartridge combinations you can't really say  
2 whether -- how that bullet/cartridge combination  
3 would perform in any situation; is that true?

4 A. Correct. That's the reason we tested.

5 MR. SWEENEY: We've been going an hour.

6 Would this be a good time to take a break?

7 MR. CHANG: Absolutely.

8 (Off the record.)

9 BY MR. CHANG:

10 Q. So, Mr. Boone, do you understand the  
11 term "tumbling" as it relates to projectiles?

12 A. I understand the term that many people  
13 use, tumbling, and believe it is an incorrect term  
14 as used.

15 Q. What do you believe many people -- how  
16 do you believe people use that term incorrectly?

17 A. I believe people are under the  
18 impression that bullets tumble when they hit  
19 tissue. And tumbling would be full rotations  
20 through the tissue, which I have rarely, if ever,  
21 seen personally.

22 Q. So what happens when a bullet hits  
23 tissue?

24 A. Depends upon which bullet.

25 Q. What are the different major types of

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1 bullets?

2       A.       Projectile interaction with tissue  
3 really revolves around the designer's intent. And  
4 there are bullets that hit tissue and travel quite  
5 a distance before yawing. The term that I use  
6 "yaw" is probably what most people think of when  
7 tumbling. It's common for a projectile,  
8 particularly one that is pointed and long and  
9 skinny and does not deform or does not deform much,  
10 to go into the tissue and travel for a distance  
11 depending upon the projectile itself and the  
12 characteristics of the rifle before it yaws and  
13 turns around and travels backwards.

14       Q.       The projectile will enter the target and  
15 do a full rotation -- or do a half rotation and  
16 travel backwards?

17       A.       Correct. And that would be a  
18 projectile, typically a long skinny projectile,  
19 which does not deform or does not deform much.  
20 There are, however, projectiles which are designed  
21 not to do that. And there are projectiles which  
22 are designed to expand when they hit tissue. So  
23 there are projectiles designed for all the purposes  
24 actually. The market hunters, fur hunters, want  
25 projectiles that don't expand so they make a small

1 hole in and out so that the pelt is in better  
2 shape.

3 Q. What is an example of the long and  
4 skinny projectile that yaws?

5 A. M855. The projectile loaded in that  
6 cartridge. I'm sorry. I think the projectile  
7 itself is called SS109.

8 Q. No one is here to contradict you one way  
9 or another.

10 A. And it will -- it may or may not do  
11 that. It depends on its angle of impact.

12 Q. What about a .223 Remington? Does that  
13 have a long and skinny projectile?

14 A. Sir, you described a cartridge which  
15 could have any number of projectiles including the  
16 one I just mentioned.

17 Q. Okay. So a .223 Remington cartridge  
18 could have an M855 projectile?

19 A. It could have the same projectile as an  
20 M855, yes, sir.

21 Q. Do you know if that's a common  
22 configuration?

23 A. I don't know of anyone that loads that  
24 in the factory, but I suspect there are people that  
25 hand load them.

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1 Q. Are there any .223 Remington cartridges  
2 that are loaded with the type of long and skinny  
3 projectile that yaws that you mentioned?

4 A. The projectile I mentioned, the SS109.

5 Q. No, just any kind of projectile that is  
6 long and skinny and does the yawing.

7 A. I'm sure there are.

8 Q. And that's loaded into a .223 Remington  
9 in the factory?

10 A. I would believe so. Yes, sir.

11 Q. What is the effect on the target when a  
12 projectile yaws inside the target?

13 A. The maximum tissue damage of a  
14 projectile which fails to expand, a long skinny  
15 projectile which fails to expand or doesn't expand  
16 much, as it yaws it will create the greatest  
17 permanent wound cavity at the point of yaw, at the  
18 point of maximum rotation. So if you were to look  
19 at a wound profile, you would see the entrance.  
20 You would see what is called the neck, which is the  
21 distance it travels prior to initiating the yaw,  
22 and then you would have the maximum cavity at the  
23 maximum point of the projectile being vertical.  
24 And at that point it would create not only the  
25 largest permanent cavity, but likely the largest

1 temporary cavity if the temporary cavity had any  
2 effect on tissue with that particular projectile.  
3 And then it would turn over and go out and base  
4 forward. And it's quite common for those to fully  
5 penetrate mammals the size of humans.

6 Q. The projectile that does the yawing?

7 A. The projectile which goes in and fails  
8 to expand yaws and travels base forward typically  
9 will penetrate more tissue than a common 150 to 200  
10 pound mammal. It would exit.

11 Q. It would exit?

12 A. Typically.

13 Q. Typically. So it would go beyond the 12  
14 to 18 inch?

15 A. Yes, sir.

16 Q. Does that mean it's less effective at  
17 stopping someone than a projectile that reaches the  
18 12 to 18 inch depth?

19 A. I believe so, yes, sir.

20 Q. Why would a projectile that yaws and --  
21 inside a body and creates this permanent cavity  
22 that you described and then exits cause -- but less  
23 terminal -- be less terminally effective than a  
24 projectile that enters a target and stops at  
25 somewhere between 12 and 18 inches?

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1           A.       It would depend on the size of the  
2 target of course. We chose the 12 to 18 inches  
3 based on the average population. And 12 to 18  
4 inches we believe is a good range for the average  
5 population. But if you were to go to a place with  
6 very small or skinny people, that would likely be  
7 too much. If you were to go to a place with  
8 extremely large people, it might not be enough  
9 because we don't know what we're going to  
10 encounter.

11                   And when you ask me about a projectile  
12 that could be expected to go in and yaw, if you had  
13 a subject who was ten inches thick facing you and  
14 you fired one of those projectile at him and you  
15 just found one that had, say, an 8 inch neck length  
16 it would pass completely through that subject's  
17 body fully before it yawed completely. And you  
18 want the terminal performance to occur where the  
19 vital organs are. For example, 12 inches may sound  
20 deep to you for a human heart but if you're having  
21 to shoot sideways as Agent Doug did on Michael  
22 Platt in Miami, 12 inches may not be quite enough.

23           Q.       So it depends on shot placement,  
24 correct?

25           A.       Shot placement is paramount with any

1 firearm.

2 Q. You mentioned a subject with an eight  
3 inch neck. Depth, width?

4 A. No, sir. Eight inch neck on the  
5 projectile. The neck is where the projectile  
6 begins to yaw.

7 Q. I'm sorry. Could you explain that?

8 A. Sure. As the projectile enters the  
9 tissue, if the projectile is going -- sorry if I'm  
10 pointing -- as the projectile enters in, where it  
11 travels before it begins to yaw is called the neck.  
12 And so you measure where it begins to yaw and  
13 that's the neck length. And I have seen  
14 projectiles with a neck length of zero, but I've  
15 also seen projectiles with an expected neck length  
16 of eight to ten inches. So if you're counting on  
17 the yawing of the projectile to create your wound  
18 mechanism but you have chosen a projectile with a  
19 neck length longer than your subject's body, then  
20 your wounding mechanism is occurring outside the  
21 subject's body.

22 Q. I mean, the optimal penetration as you  
23 described earlier was 12 to 18 inches, right?

24 A. Right.

25 Q. So you're assuming the projectile -- for

1 a projectile to reach that depth of 12 to 18  
2 inches, the projectile has to get to 12 to 18  
3 inches, correct?

4 A. Correct.

5 Q. So a projectile that yaws at eight to  
6 ten inches begins the yawing before you reach that  
7 optimum depth, correct?

8 A. Correct.

9 Q. And so at this point it's already inside  
10 the target's body because you're eight to ten  
11 inches inside the body?

12 A. Correct.

13 Q. And then it continues through?

14 A. Correct.

15 Q. You mentioned the permanent cavity.  
16 What is a permanent cavity?

17 A. That is the tissue that is actually  
18 crushed or destroyed by the projectile's  
19 interaction with it.

20 Q. And you mentioned the different body  
21 size. So 12 to 18 inches, that's really just a --  
22 how is that chosen? Because you mentioned it  
23 really depends on -- the optimal penetration level  
24 depends on how large the target is or how thick the  
25 target is?

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1 A. Yes, sir.

2 Q. How did you choose -- how did the FBI  
3 choose 18 to 12 inches as the optimum depth?

4 A. Research I have done and training I have  
5 conducted. I was not at Ballistics Research when  
6 that was settled. They held consultations with  
7 medical experts and they held a wound ballistics  
8 seminar. I believe they may have actually had two.  
9 And they researched and investigated exactly  
10 physiologically how you can stop an aggressive  
11 human attacker. And it was a consensus of those  
12 present that in the average population you needed  
13 12 to 18 inches.

14 There are others who have different  
15 metrics. For example, I believe Customs and Border  
16 Patrol says nine to 15. The most important thing  
17 is that because the FBI had a standard or a desired  
18 level the ammunition manufacturers could then take  
19 that information and engineer their projectiles to  
20 perform the way that we wanted. And because we  
21 created the scientifically repeatable test method,  
22 those engineers could get the same results that we  
23 did. Meaning we got better bullets.

24 Q. So the Customs and Border patrol has a  
25 different -- has chosen a different optimum depth?

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1           A.       They had at one time. I'm not sure what  
2 they have now.

3           Q.       And do you recall when the 12 to 18  
4 inches optimal depth -- or when -- strike that.

5                   Do you recall when the FBI decided that  
6 the 18 to 12 inches penetration depth was optimal?

7           A.       I believe it was the same time they  
8 selected the other metrics which would have been  
9 1988.

10          Q.       And if the general American population  
11 has gotten larger since 1988, would that change the  
12 optimal depth penetration level?

13          A.       I would think it would have to. But I  
14 don't know if they've gotten larger.

15          Q.       So now let's go back to permanent  
16 cavity. If a projectile enters the body is there  
17 -- why would you prefer a projectile to stop -- to  
18 penetrate -- excuse me.

19                   Why would you prefer a projectile to  
20 stop in the 12 to 18-inch penetration depth as  
21 opposed to continuing through the body?

22          A.       It is --

23          Q.       Beyond 18 inches?

24          A.       It is my opinion and it is the opinion  
25 of the FBI that once you have achieved 18 inches of

1 penetration you were unlikely to encounter more  
2 vital organs deeper than that in the general  
3 population. And although we would prefer  
4 overpenetration to underpenetration, we recognize  
5 that we're responsible for every projectile that we  
6 launch. And I'm very comfortable with the 12 to  
7 18-inch standard.

8 Q. So as far as the terminal effectiveness  
9 to the target, it doesn't matter if it continues  
10 beyond the 18 inches. It's the same terminal  
11 effectiveness in your opinion?

12 A. Not necessarily. It would depend on  
13 other metrics such as expansion. And the temporary  
14 cavity can have an effect, though it's difficult to  
15 quantify.

16 Q. What is the temporary cavity?

17 A. That is the tissue that is strengthened  
18 by the passage of the projectile. And if the  
19 tissue is stretched beyond its capacity it can be  
20 damaged. Typically with handguns you don't have  
21 temporary cavity damage. But with larger or faster  
22 projectiles you can have temporary cavity damage  
23 that's effective in physiologically incapacitating  
24 a subject.

25 Q. So would rifle rounds typically cause

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1 temporary cavities?

2 A. If they are of sufficient velocity and  
3 construction, yes.

4 Q. What would you consider to be of  
5 sufficient velocity?

6 A. For example, in, say, 300 blackout.

7 Q. Is that a firearm?

8 A. That's a chambering that's common in  
9 AR-15 type rifles. It would be considered a  
10 centerfire rifle cartridge. If you purchase a box  
11 of subsonic .300 Blackout and you purchase another  
12 box of supersonic .300 Blackout, it's reasonable to  
13 believe that the supersonic ammunition will have a  
14 higher temporary cavity than the subsonic  
15 ammunition, but they're both .300 Blackout.

16 Q. Do you know what velocity a -- at what  
17 velocity does a projectile reach supersonic?

18 A. The speed of sound constantly changes  
19 with the atmosphere. But a good layman's term is  
20 to look at temperature in Fahrenheit. Add that to  
21 1060 feet per second -- and that's a rough  
22 estimation of the speed of sound, what we call  
23 Mach.

24 Q. You'll have to make it even more layman  
25 for me. At the average temperature --

1 A. On a hundred degree day call it 1160.

2 Q. Feet per second?

3 A. Right. 1060 plus 100 is 1160. That is  
4 roughly Mach.

5 Q. Okay.

6 A. It's not precise, but it's what we use  
7 in the external ballistics community typically.

8 Q. So 1160 feet per second when you have a  
9 cartridge, let's say a 9 millimeter, shot out of a  
10 semi-automatic handgun, what is the velocity of  
11 that cartridge being fired after it's fired?

12 A. It would be a wide range depending on  
13 which cartridge you selected.

14 Q. Average. Do you have an average  
15 velocity?

16 A. I don't. I could give you a range.

17 Q. Could you give a range?

18 A. It might be from 980 feet per second to,  
19 say, 1250.

20 Q. So right around the supersonic -- some  
21 could reach supersonic velocity and some might not?

22 A. Some do and some don't, yes, sir.

23 Q. And if a handgun round reaches that  
24 supersonic velocity or speed, would it create a  
25 temporary cavity in the target?

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1           A.       They all create a temporary cavity.  
2       It's whether or not the temporary cavity is  
3       injurious to the tissue.

4           Q.       I see. So generally speaking would a  
5       projectile fired out of a rifle be more likely to  
6       create a temporary cavity than a projectile fired  
7       out of a handgun round?

8           A.       It would depend on the actual cartridge.

9           Q.       Let's say a .223 Remington fired out of  
10      a rifle versus a 9 millimeter fired out of a semi-  
11      automatic handgun?

12          A.       In general terms -- and you can make  
13      this untrue by the selection of certain  
14      cartridges -- but in general terms rifles are more  
15      effective than handguns. And a large portion of  
16      that is because they have a more effective  
17      temporary cavity than the handgun. It's one of the  
18      reasons that handguns are not as effective -- the  
19      temporary cavity typically from a handgun wound is  
20      not as injurious to the tissue. In other words,  
21      according to the doctors if the projectile has not  
22      hit anything vital, then they'll plug it with two  
23      Band-Aids and some acetaminophen, or pain reliever.

24                  If we translate that into the reason  
25      that the FBI advocates the use of shoulder weapons,

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1     that means a more reliable quick incapacitation of  
2     the aggressor.

3           Q.     You just said that the FBI advocates the  
4     use of shoulder fire weapons. What do you mean by  
5     that?

6           A.     I would think that any agent headed into  
7     a situation where he had knowledge that he would or  
8     might need a firearm and chose anything other than  
9     a shoulder weapon would have been either doing it  
10    because of operational need or because he was  
11    foolish. The idea is to stop the aggression as  
12    quickly as possible, and the rifle or shotgun has  
13    the best chance of doing that over the handgun.

14          Q.     Right. Assume the agent would prefer a  
15    shoulder mounted rifle over a handgun in a  
16    dangerous --

17          A.     Any reasonable person should.

18          Q.     Okay. The FBI doesn't advocate a  
19    certain firearm over another, right?

20          A.     In our training we recommend to the  
21    agents and we give them terminal ballistics  
22    training to show them that the rifle is the better  
23    choice terminally. If all things are equal, they  
24    rarely are, but if all things are equal the rifle  
25    is the better choice than the handgun.

1 Q. You mentioned that projectiles will  
2 expand when it impacts a target; is that correct?

3 A. Some will. Most will, yes, sir.

4 Q. What is the effect of that expansion  
5 when it impacts the target?

6 A. Larger projectiles crush more tissue so  
7 it results in a larger permanent wound cavity.

8 Q. And the larger projectiles, do they tend  
9 to be on larger caliber cartridges?

10 A. Do you mean pre-expansion or  
11 post-expansion?

12 Q. Pre-expansion.

13 A. Pre-expansion, larger projectiles  
14 typically are handgun projectiles, I believe. But  
15 there is quite a bit of overlap.

16 Q. So these larger projectiles that are  
17 typically in handguns, in handgun cartridges, they  
18 tend to -- they tend to expand when they hit a  
19 target; is that correct?

20 A. Depends on which projectile. Some do  
21 and some don't.

22 Q. Would you say most do?

23 A. I would not, no.

24 Q. Is it -- is it a correct statement to  
25 say that most projectiles will expand when it

1 yards instead of three?

2 A. It begins at 50 actually. You start at  
3 50 and shoot in on the rifle.

4 Q. Why does it end at seven and not three?

5 A. I'm just guessing because it would be  
6 ridiculous to go any closer. It would be no easier  
7 at three than it is at seven with a rifle.

8 Q. With a handgun, the test, do they start  
9 at three and go to 25?

10 A. That's my understanding now. My time we  
11 started and went the other way.

12 Q. But currently they start at three and go  
13 the other way?

14 A. I believe so.

15 Q. Do you know why in the rifle test they  
16 go from the greater distance to the lesser  
17 distance?

18 A. I don't know why. In my time we always  
19 started the greater distance and worked our way in.  
20 Only towards my retirement was it discussed to  
21 start at the closer distance and work your way out.

22 Q. For rifle tests?

23 A. For handguns.

24 Q. What about for a shotgun? To qualify  
25 for a shotgun, what distances are the shots taken?

1           A.       Maximum of 50 yards and minimum of  
2       seven.

3           Q.       Same as the rifle?

4           A.       Same as the rifle, yes, sir.

5           Q.       You mentioned the Rock River rifle  
6       earlier as an FBI issued rifle?

7           A.       Yes, sir.

8           Q.       Is that an AR-15?

9           A.       AR-15 type.

10          Q.       Type. And this Rock River rifle, what  
11       is the barrel length of this Rock River rifle?

12          A.       I believe it's 14 and a half.

13          Q.       Is that shorter than the -- than your  
14       typical AR-15 rifle, AR-15 type rifle?

15                 MR. SWEENEY: Objection.

16          A.       It would depend on who owned the rifle.  
17       There are laws that prohibit citizens from owning  
18       rifles with barrel lengths less than 16 inches I  
19       think. So it's not common for a civilian to have a  
20       14 and a half inch barrel rifle unless he has a  
21       muzzle device that is permanently affixed to it to  
22       make it comply with the law or he has registered it  
23       as a short barrel rifle.

24          Q.       So the rifles that the FBI issues to its  
25       agents are shorter than the rifles that civilians

1 will purchase on the open market?

2 A. Typically an inch and a half shorter,  
3 yes, sir.

4 Q. And why do -- do you know why the FBI  
5 issued rifles are shorter than the civilian AR-15?

6 A. The FBI chose the barrel length based on  
7 operational needs and not having a barrel length  
8 restriction.

9 Q. What is the operational need of the FBI  
10 that they might prefer a shorter barrel length?

11 A. Operation inside homes or in close  
12 quarter battle type situations and in vehicles,  
13 maneuvering around with a firearm.

14 Q. So the civilian versions of AR-15 type  
15 weapons have longer barrels. And would you say  
16 they're less maneuverable inside a home?

17 A. Yes, sir.

18 Q. Correct me if I'm wrong. I think  
19 somewhere in your report you mentioned that the  
20 AR-15 rifles are the most commonly used rifles in  
21 American law enforcement; is that correct?

22 MR. SWEENEY: Objection.

23 A. I believe they are.

24 THE WITNESS: Sorry.

25 MR. SWEENEY: I said objection. You may

1 answer.

2 A. I believe they are.

3 Q. Do you know whether that's the version  
4 with the shorter barrel or the version with the  
5 longer barrel that's available to the public?

6 A. I would not classify them as two  
7 versions. There are multiple different barrel  
8 lengths.

9 Q. So do you know the barrel length used by  
10 law enforcement -- American law enforcement  
11 agencies, are they of the shorter length that the  
12 FBI has chosen, or are they of the length that's  
13 longer that's available to the general public?

14 A. Both.

15 Q. Are the rifles used by the FBI or issued  
16 by the FBI, are they select fire rifles?

17 A. Some are. Some are not.

18 Q. And the ones that are not select fire,  
19 does that mean they are just semi-automatic?

20 A. Yes, sir.

21 Q. Okay. And that means one shot per  
22 trigger pull, correct?

23 A. Correct. And in the AR-15 pattern we're  
24 still speaking?

25 Q. Yes.

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1 A. Yes, sir.

2 Q. What other patterns are there?

3 A. We had MP5 10 millimeters which are  
4 centerfire shoulder weapons that had a two round  
5 burst position on the selector.

6 Q. But that's not a rifle, right?

7 A. In the context of our discussion it is.  
8 Shoulder fire -- shoulder mounted centerfire.

9 Q. Shoulder mounted centerfire MP5?

10 A. Yes, sir.

11 Q. The qualifications that the FBI agents  
12 have to undertake, the firearm qualification test  
13 that we were discussing earlier, how frequently  
14 must the agents take this qualification test to  
15 maintain their certification?

16 A. It depends upon the weapon.

17 Q. Okay. Let's say for a handgun.

18 A. Quarterly.

19 Q. Four times a year?

20 A. Yes, sir.

21 Q. What about for a rifle?

22 A. I believe it's twice a year.

23 Q. And the shotgun?

24 A. I believe that's also twice a year.

25 Q. Why are there different recertification

1 MR. SWEENEY: Objection.

2 A. Yes, sir.

3 Q. And what is the basis of that position?

4 A. That what it takes to stop an aggressive  
5 human being is a physiological metric and that the  
6 same humans that attack law enforcement would be  
7 expected to attack civilians. In other words,  
8 there would be -- aside from individual differences  
9 there's no way to say a certain type of person  
10 attacks law enforcement but doesn't attack  
11 civilians. In other words, humans are humans.

12 Q. But would you agree that law enforcement  
13 officers use their firearms not only for self-  
14 defense purposes but for offensive purposes?

15 A. Could you clarify what you mean by  
16 "use." In other words, are we speaking of firing  
17 the weapon?

18 Q. Correct, or potentially firing the  
19 weapon.

20 A. No, sir. The firing the weapon is the  
21 same.

22 Q. Would you agree that law enforcement  
23 personnel may use their firearms in a broader range  
24 of circumstances than a civilian would be permitted  
25 to use their firearm lawfully?

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1 MR. SWEENEY: Objection.

2 A. No, sir.

3 Q. For example, law enforcement personnel  
4 are authorized to apprehend criminals, correct?

5 A. Yes, sir.

6 Q. And civilians are not authorized to  
7 apprehend criminals, correct?

8 A. I'm not aware of that. I believe they  
9 are.

10 Q. Civilians are authorized to apprehend  
11 criminals?

12 A. I believe so, yes, sir.

13 Q. In what circumstances?

14 A. If an individual breaks into your house  
15 and you hold him at gunpoint until the police  
16 arrive, you have apprehended a criminal.

17 Q. Outside of the home invasion context,  
18 are civilians authorized to apprehend criminals?

19 A. I believe so.

20 Q. In what context?

21 A. If someone attacks you and you are  
22 forced to defend yourself and you incapacitate  
23 them, you have necessarily seized them. And I  
24 believe that's lawful.

25 Q. Let's talk about some specific

1 scenarios. Law enforcement personnel, they serve  
2 warrants, correct?

3 A. Yes.

4 Q. And in serving warrants they often serve  
5 warrants at the residence of the suspect, correct?

6 A. Yes, sir.

7 Q. And to do that they have to often enter  
8 the residence of the suspect to serve the warrant,  
9 correct?

10 A. Yes, sir.

11 Q. Can you think of a scenario in which a  
12 civilian would enter the home of a -- of someone  
13 that they think might pose a threat to their  
14 personal safety?

15 A. Not a lawful scenario.

16 Q. But that's a scenario that law  
17 enforcement officers face, correct?

18 A. If they have the appropriate  
19 authorities.

20 Q. A warrant, for example?

21 A. Right, yes, sir.

22 Q. Would a law enforcement officer be  
23 permitted to use their firearms in active pursuit  
24 of a criminal suspect?

25 A. Depends on the situation.

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1 Q. In which situations would a law  
2 enforcement officer be authorized to engage in the  
3 active pursuit of a criminal suspect?

4 A. Authorized to engage in the active  
5 pursuit of the suspect if the suspect is fleeing.

6 Q. Would a civilian be lawfully authorized  
7 to engage in the pursuit of a criminal suspect if  
8 the suspect is fleeing?

9 A. I don't know anything that would  
10 prohibit him from chasing the suspect.

11 Q. Let's say a law enforcement officer  
12 that's authorized to engage in pursuit of a suspect  
13 if a suspect is fleeing. Is that officer  
14 authorized to use deadly force on that escaping  
15 suspect?

16 A. It would depend on the situation of the  
17 suspect attempting to flee.

18 Q. In what situations would the law  
19 enforcement officer be authorized to use deadly  
20 force against a fleeing suspect?

21 A. If that subject had inflicted or  
22 attempted to inflict death or grievous bodily harm  
23 in a violent confrontation, the officer, I believe,  
24 is authorized to use deadly force to prevent his  
25 escape. I believe that's Tennessee versus Garner.

1 Q. Would the same be true for a civilian --  
2 for example, would a civilian be authorized to use  
3 deadly force against a fleeing criminal suspect?

4 A. It would depend on the situation.

5 Q. In what situation would a civilian be  
6 lawfully authorized to use deadly force against  
7 someone who's fleeing the situation?

8 A. If the fleeing individual continued to  
9 be a threat to the civilian or potentially others.

10 Q. What if the fleeing civilian {(sic) is  
11 no longer a threat to the civilian, him or herself?

12 A. The fleeing subject?

13 Q. Right. What if the fleeing subject is  
14 no longer a threat to the civilian and those  
15 immediately around the civilian?

16 A. I don't think --

17 Q. Would the civilian still be authorized  
18 to use deadly force against the fleeing suspect?

19 A. I don't believe so.

20 Q. For a law enforcement officer in the  
21 same situation where there's a fleeing suspect and  
22 the suspect is no longer an immediate threat to the  
23 officer or those immediately around the officer,  
24 would the officer still be authorized to use deadly  
25 force against a fleeing suspect?

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1 A. My understanding is no.

2 Q. Let me show you Exhibit --

3 MR. SWEENEY: The next number is 24.

4 Q. -- 24, 25, and 26. Let me try to  
5 organize them.

6 (Deposition Exhibit Numbers 24-26  
7 were marked for identification.)

8 Q. Mr. Boone, you have before you Exhibit  
9 24?

10 A. Yes, sir.

11 Q. Can you read the top line of that  
12 document?

13 A. Beginning --

14 Q. After the box.

15 A. Attorney General, October 17, 1995  
16 Memorandum On Resolution 14. Parens, attachment,  
17 closed parens.

18 Q. What's below that? What's the bold  
19 letters below that?

20 A. U.S. Department of Justice Office Of  
21 Investigative Agency Policies.

22 Q. Do you recognize this document?

23 A. I do not.

24 Q. Okay. Have you seen this document  
25 before?

1           A.       I don't know if I've seen this actual  
2 document, but it appears to be a deadly force  
3 policy so I probably had training on it before.

4           Q.       Take a quick look at the document. And  
5 when you're ready, just tell me what the document  
6 is about.

7                   MR. SWEENEY: Objection. The document  
8 speaks for itself. You can ask him specific  
9 questions about the document.

10           MR. CHANG: Sure.

11           Q.       Let me know when you have had a chance  
12 to review.

13           A.       I've had a chance.

14           Q.       And under the background section, the  
15 second paragraph it says, "Attachment to this  
16 resolution is a uniform deadly force policy and  
17 accompanying commentaries. Attachment A sets forth  
18 the uniform deadly force policy. Attachment B sets  
19 forth the commentaries governing the use of deadly  
20 force in noncustodial and custodial situations,"  
21 correct?

22           A.       Yes, sir.

23           Q.       And this is a memorandum issued by the  
24 United States Attorney General?

25           A.       I believe it says Louis J. Freeh,

1 Director of Investigative Agency Policy, so yes,  
2 sir. I'm sorry, that threw me. He became our  
3 director.

4 Q. I meant in a general sense, not a  
5 specific attorney general but the U.S. Attorney  
6 General's Office?

7 A. Yes, sir.

8 Q. Let's turn to Exhibit 25.

9 A. Yes, sir.

10 Q. What is the first kind of the bold  
11 heading there?

12 A. Policy Statement, Use of Deadly Force.

13 Q. Is it your understanding that this is  
14 the exhibit referenced in the Attorney General  
15 October 17, 1995 memorandum on Resolution 14?

16 A. I have no reason to believe otherwise.

17 Q. Well, I -- if you could refer to page  
18 seven of your opening report.

19 A. Yes, sir.

20 Q. You see there the top of the page under  
21 the heading Law Enforcement, you quoted a paragraph  
22 from an October 17, 1995 memorandum issued by the  
23 U.S. Department of Justice, correct?

24 A. Yes, sir.

25 Q. Is Exhibit 25 the memorandum that you

1       quoted in your opening report?

2           A.       It -- give me a moment to look at it.

3           Q.       Sure. I just direct your attention to  
4       Roman numeral I, directly below the bolded --

5           A.       Yes, sir, that appears to be.

6           Q.       Okay. So under that Roman numeral I  
7       which you quote in your report, it provides that  
8       "Law enforcement officers and correctional officers  
9       of the Department of Justice may use deadly force  
10      only when necessary; that is, when an officer has a  
11      reasonable belief that the subject of such force  
12      poses an imminent danger of death or serious  
13      physical injury to the officer or to another  
14      person." Is that correct?

15          A.       Yes, sir.

16          Q.       Now, the next section, section A, is  
17      titled Fleeing Felons, correct?

18          A.       Yes.

19          Q.       "Deadly force may be used to prevent the  
20      escape of a fleeing subject if there is probable  
21      cause to believe, one, the subject has committed a  
22      felony involving the infliction or threat of  
23      infliction of serious physical injury or death,  
24      and, two, the escape of the subject would pose an  
25      imminent danger of death or serious physical injury

1 to the officer or to another person." Correct?

2 A. Yes, sir.

3 Q. So under this policy described in this  
4 subheading a law enforcement officer could use  
5 deadly force when against the escape of a fleeing  
6 suspect if the officer believes that the subject  
7 had committed a felony involving serious bodily  
8 injury or death and escape would pose an imminent  
9 danger or death to the officer or to another  
10 person, correct?

11 A. Yes.

12 Q. So in this scenario if the fleeing  
13 subject has committed a felony involving serious  
14 bodily injury or death but is fleeing and no longer  
15 a direct threat to the officer or to another person  
16 near the officer but the officer believes the  
17 fleeing suspect may escape and pose a danger to  
18 someone else in a different location, would the  
19 officer be authorized to use deadly force against  
20 that escaping subject?

21 A. Only if the danger was imminent.

22 Q. Correct. But if the officer believes  
23 that the escaping suspect would pose an imminent  
24 danger of death to someone at a different location?

25 A. Yes.

1 Q. Under the same situation would a  
2 civilian be lawfully authorized to use deadly force  
3 against that fleeing suspect?

4 MR. SWEENEY: Objection.

5 A. I'm not an attorney and have not studied  
6 civilian. I would hope that the civilian would do  
7 what he could to stop the individual from an  
8 imminent threat to others. But unfortunately not  
9 all people are concerned about others' safety.

10 Q. Here we're talking about a -- this is no  
11 longer a home invasion, home defense scenario here,  
12 correct?

13 A. Yes, sir. And this is I believe  
14 administrative policy as opposed to law.

15 Q. Correct. Correct.

16 A. It is my belief that administrative  
17 policies typically are more restrictive than what  
18 the law allows.

19 Q. And looking at subsection B titled,  
20 Escaping Prisoners, number one below that it says,  
21 Unless force other than deadly force appears to be  
22 sufficient, deadly force may be used to prevent  
23 escaping of a prisoner committed to the custody of  
24 the Attorney General or the Bureau of Prisons,  
25 correct?

1 A. Yes.

2 Q. So a law enforcement officer may use  
3 deadly force to prevent the escape of a prisoner  
4 committed to federal custody?

5 A. Yes, sir.

6 Q. Would a civilian be lawfully authorized  
7 to use deadly force to prevent the escape of a  
8 prisoner?

9 MR. SWEENEY: Objection.

10 A. I doubt it. But I don't know.

11 Q. That's outside -- outside of a home  
12 defense situation?

13 A. And outside of my area of expertise.

14 Q. Based on what -- let's go to Exhibit 26.  
15 What is Exhibit 26?

16 A. Attorney General, October 17 memorandum,  
17 appears to be a commentary regarding the use of  
18 deadly force in noncustodial situations.

19 Q. Did you review Exhibit 26 in preparing  
20 your report?

21 A. I do not believe that I did. It's  
22 possible that this was contained in the cite and I  
23 just -- I don't remember how much of the cite I  
24 read. It appears to me you printed out much of  
25 what I had cited there so I probably had seen that

1 before but not in this format before.

2 Q. Sure.

3 A. So it didn't click with me.

4 Q. And look at the -- under the  
5 introduction section, the second paragraph, the  
6 last sentence there. It says, "In addition, as a  
7 matter of principle, the department deliberately  
8 did not formulate this policy to authorize force up  
9 to constitutional or other legal limits." And  
10 that's consistent with what you said earlier, the  
11 policy is below what's lawfully legally permitted?

12 A. More restrictive, yes, sir.

13 Q. More restrictive. And this policy only  
14 applies to federal law enforcement personnel,  
15 correct?

16 A. I believe so, yes, sir.

17 Q. It doesn't apply to civilians, for  
18 example?

19 A. I believe that's correct.

20 Q. I want you to look at -- direct your  
21 attention to section III, Roman numeral III,  
22 Principles on use of deadly force. Third line down  
23 last word there, "Yet." Could you read that  
24 sentence beginning with the word "Yet"?

25 A. "Yet even the best prevention policies

1 are on occasion insufficient, as when an officer is  
2 serving a warrant or conducting surveillance is  
3 confronted with a threat to his or her life."

4 Q. Is there something about serving a  
5 warrant or conducting surveillance which a law  
6 enforcement officer may be faced with more threat  
7 or danger to his or her life than in other  
8 situations?

9 A. I don't understand the correlation  
10 there. To me serving a warrant is significantly  
11 different than conducting surveillance.

12 Q. Here the policy or commentary listed  
13 those two situations as examples when the best  
14 prevention policies may be insufficient, correct?

15 A. Do you mind if I read the whole  
16 paragraph?

17 Q. Absolutely. Take your time.

18 A. My reading of that still makes me  
19 question why they only mention warrants or  
20 conducting surveillance. In reading the whole  
21 context what this portion speaks to is the  
22 necessity to use deadly force. That necessity  
23 revolves around whether or not your life is in  
24 danger, not revolves around what you are doing at  
25 the time your life is placed in danger. Therefore,

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1 I think that serving a warrant or surveillance  
2 can't necessarily be considered putting your life  
3 at greater danger than another instance.

4 For example, if I serve a warrant on an  
5 unoccupied building, I'm probably not in much  
6 danger but I'm still serving a warrant. This  
7 speaks to the necessity to use deadly force in my  
8 opinion.

9 Q. That's an interesting point. Would you  
10 say an officer serving a warrant is more likely to  
11 face a threat to his or her life than a civilian  
12 watching TV at home?

13 MR. SWEENEY: Objection.

14 A. Of course.

15 Q. Would you say an officer conducting  
16 surveillance is more likely to face a threat to his  
17 or her life than a civilian who is at his or her  
18 home?

19 MR. SWEENEY: Objection.

20 A. Depending on where the surveillance is  
21 occurring but it's not unreasonable to believe  
22 that.

23 Q. And, you know, as a general matter, you  
24 know police officers and law enforcement personnel  
25 are more likely to insert themselves in situations

1 in which there's greater threat to his or her life  
2 than a civilian might face; is that correct?

3 MR. SWEENEY: Objection.

4 A. I would not disagree with that, yes,  
5 sir.

6 Q. For example, if there's a bank robbery  
7 down the street, law enforcement officers would  
8 have to go and resolve the situation and perhaps  
9 confront the robbers, correct?

10 A. They're expected to.

11 Q. They're expected to. A civilian would  
12 not be expected to go and apprehend the robbers,  
13 correct?

14 A. Correct.

15 Q. In fact, do you know whether it would be  
16 lawful for a civilian to go and confront the  
17 robbers with a firearm or possibly use deadly force  
18 against the robbers?

19 A. Depends on the actual circumstances.  
20 There would be an amalgamation of things, but I  
21 certainly can imagine situations where it would be  
22 appropriate.

23 Q. Or a civilian who's not in the bank when  
24 the robbery takes place, for the civilian to go  
25 into the bank and use deadly force against the

1 robber?

2 A. It would depend on the situation.

3 Q. In what situation would a civilian be  
4 authorized to do that?

5 A. If the civilian saw the bank robber  
6 murdering people and chose to stop that situation,  
7 I think it would be perfectly lawful.

8 Q. So in an active shooter situation, in a  
9 situation where there's a shooter who is shooting  
10 at people in the area, let's say, a bank, for  
11 example, or a -- let's say a school, for example,  
12 -- just strike that.

13 Let's build on your prior scenario you  
14 gave before. If there's a hostage situation in a  
15 bank and the law enforcement officers are expected  
16 to go and resolve the situation, correct, one way  
17 or another?

18 A. Yes, sir.

19 Q. And it's your opinion that, you know, in  
20 that situation where a bank robber is actually  
21 shooting the hostages in the bank that it's lawful  
22 for a civilian to go and use deadly force against  
23 that bank robber?

24 A. It is my opinion, that is correct, that  
25 it's lawful. You've got two crimes there. You've

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1 the detectives chided him for not fighting which I  
2 thought was unprofessional. But they chided him  
3 about why didn't you fight, I thought you were  
4 going to fire us up. He said, bro, don't nobody  
5 mess with the gauge.

6 Q. That's a good line. They should put  
7 that on a cop show. That's a good line.

8 In your experience are criminals less  
9 fearful -- or are criminal suspects less fearful of  
10 being shot by a semi-automatic handgun than an  
11 AR-15, for example?

12 MR. SWEENEY: Objection.

13 A. In my experience criminals are fearful  
14 of being shot, A, and they attribute power not the  
15 way I would attribute performance. They attribute  
16 power to the size of the weapon that's pointed at  
17 them. In other words, they seem to always be more  
18 afraid of the bigger guns.

19 Q. In your opinion is it reasonable to  
20 believe that a criminal would be more intimidated  
21 by a homeowner with an AR-15 than a homeowner with  
22 a semi-automatic handgun?

23 A. Yes.

24 Q. In your opinion is it reasonable to  
25 believe that a criminal would be more intimidated

1 by a homeowner with an AR-15 than a shotgun?

2 A. I believe most criminals would not make  
3 a handgun differentiation other than it's a big  
4 gun.

5 Q. Right. In your opinion is it reasonable  
6 -- in your opinion which might be more intimidating  
7 to a criminal, a -- strike that.

8 Are you familiar with what a featureless  
9 AR-15 is?

10 A. I think so. But I would appreciate an  
11 explanation.

12 Q. When I say featureless AR-15 -- if  
13 you'll refer to Exhibit 21, California Penal Code  
14 30515. You'll see that it lists a set of features.

15 A. Yes, sir.

16 Q. For example, a pistol grip that  
17 protrudes conspicuously beneath the action of the  
18 weapon, a thumbhole stock, a folding or telescoping  
19 stock, a flash suppressor and a forward pistol  
20 grip. So when I say a featureless AR-15, it means  
21 it's an AR-15 that does not have any of these  
22 features. Do you understand?

23 A. Yes, sir.

24 Q. Including a detachable magazine?

25 A. Yes, sir.

1           Q.       So in your opinion would a criminal be  
2       intimidated by a homeowner with a featureless  
3       AR-15?

4           A.       Would it be intimidated by it? It would  
5       be intimidated by any firearm, I believe.

6           Q.       Would he be more or less intimidated by  
7       a homeowner with a AR-15 with a forward pistol  
8       grip, for example, than one without?

9           A.       I doubt it.

10          Q.       About the same level of intimidation?

11          A.       Just solely speaking of a forward pistol  
12       grip.

13          Q.       Sure.

14          A.       That could be roughly the same.

15          Q.       What about a flash suppressor, what  
16       about faced with an AR-15 with all the features  
17       described and one -- let's take that back.

18                 Faced with an AR-15 with a -- faced with  
19       a featureless AR-15 and an AR-15 -- the same AR-15  
20       but with a flash suppressor, would you say it's  
21       reasonable to believe that a criminal would be  
22       equally intimidated by the two firearms?

23          A.       For clarification, the only difference  
24       between the two firearms is a flash suppressor?

25          Q.       Correct.

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1 A. I don't think he would notice.

2 Q. Is the same true for a folding or  
3 telescoping stock?

4 A. If that's the only feature, yes, sir.

5 Q. And a detachable magazine?

6 A. I don't know that he would notice  
7 whether the magazine was permanent or attached.

8 Q. We're up to Exhibit 27 now.

9 (Deposition Exhibit Number 27  
10 was marked for identification.)

11 Q. So before you is Exhibit 27. There are  
12 two rifles, correct?

13 A. Yes, sir.

14 Q. A and B. Could you describe for rifle A  
15 the features that we were talking about previously,  
16 identified in California Penal Code 30515. What  
17 features does the rifle next to the letter A  
18 possess?

19 A. I see a stock that appears to be capable  
20 of telescoping. I say appears to be because I've  
21 seen similar stocks that are not that bear the same  
22 outer characteristics. It has a pistol grip. It  
23 has a magazine which I can't determine for sure  
24 whether that's removable or permanent. It has a --  
25 what appears to be a A2 flash hider on the front of

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J. Buford Boone, III  
December 10, 2018

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1 it. I can't tell whether it's centerfire or  
2 rimfire, but I would lean towards centerfire.

3 Q. And the rifle that's in -- next to the  
4 letter B in Exhibit 27?

5 A. Yes, sir.

6 Q. Do you see any of the features  
7 identified in California Penal Code 30515?

8 A. I see a pistol grip. I see a magazine  
9 that I can't determine whether it's detachable or  
10 nondetachable. And I can't tell on the barrel if  
11 that forward portion beyond the reduced diameter is  
12 a muzzle device or not. I can't tell whether  
13 that's a solid barrel or not. I also can't tell  
14 for sure whether this is centerfire or rimfire.

15 Q. You talk about centerfire and rimfire.  
16 And that is -- the rimfire is a term -- centerfire  
17 and rimfire are distinctions we talked about  
18 before?

19 A. Yes, sir.

20 Q. So visually are you able to tell a rifle  
21 equipped -- are you able to tell a rimfire rifle  
22 from a centerfire rifle?

23 A. In some cases if you're knowledgeable of  
24 firearms, yes. You might recognize a rifle that's  
25 only been manufactured as rimfire. There are many

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1 centerfire rifles that have been converted or have  
2 a conversion kit placed in them for rimfire. The  
3 bottom rifle, B, here the ejection port appears  
4 very small.

5 Q. Does that suggest to you that it's a  
6 rimfire?

7 A. No, sir. That suggests it's for a  
8 shorter cartridge which could be centerfire.

9 Q. So in most cases -- you said in some  
10 cases if you're knowledgeable of firearms maybe  
11 visually you can tell a centerfire rifle from a  
12 rimfire rifle, correct?

13 Would you say in terms of intimidation  
14 to a criminal, you know, would a rimfire rifle be  
15 more or less intimidating than a centerfire rifle?

16 A. I would be surprised if they could take  
17 the time to notice the difference or even be able  
18 to determine the difference.

19 Q. Okay. And you understand the term AR-15  
20 encompasses a large, large family of rifles,  
21 correct?

22 A. Yes, sir.

23 Q. And do you understand that assault  
24 rifles that we're talking about here in this case  
25 is a subset of the larger AR-15 family?

1 MR. SWEENEY: Objection.

2 A. The term "assault rifle" to me is a  
3 fully automatic weapon capable of fully automatic  
4 fire. The metrics that you have in the law apply  
5 to a large group of AR-15 type rifles. I hope that  
6 was clear.

7 Q. To be clear, the assault rifles we're  
8 talking about are the assault weapons, rifles that  
9 are assault weapons under California Penal Code  
10 Section 30510 and 30515?

11 A. Yes.

12 MR. SWEENEY: Objection.

13 Q. Those assault rifles -- not all AR-15s  
14 are assault rifles under California law; is that  
15 correct?

16 MR. SWEENEY: Objection.

17 A. May I review the --

18 Q. Absolutely.

19 A. I would say that the vast majority of  
20 AR-15 type rifles that I have witnessed would be  
21 under these metrics. It would be possible to make  
22 one that wasn't. For example, if you took the  
23 AR-15 and removed the pistol grip and put a plug in  
24 it so that there was nothing protruding below the  
25 frame, that's possible to do. But I don't think

1 I've ever seen it done.

2 Q. The AR-15 could be a rimfire like we  
3 talked about earlier, correct?

4 A. Yes. I forgot about rimfire, you're  
5 correct.

6 Q. So a rimfire AR-15 would not be an  
7 assault rifle under California law?

8 MR. SWEENEY: Objection.

9 A. I don't believe so. But my main goal  
10 was to look at centerfire. I didn't look at  
11 rimfire much.

12 Q. Sure. But there are AR-15s that are  
13 rimfire rifles, correct?

14 A. AR-15 type, yes, sir.

15 Q. And there are AR-15 types that are --  
16 that have fixed magazines instead of detachable  
17 magazines; is that correct?

18 A. I don't know of any.

19 Q. But they could be made to have a fixed  
20 magazine; is that your understanding?

21 A. No, I don't know how it would load. Can  
22 I think about that for a moment?

23 Q. Sure.

24 A. I've never seen one that I'm aware of  
25 that has a fixed magazine but -- and I'm not trying

1 to be flippant. But to load that if it was fixed  
2 you would have to take the upper receiver off and  
3 then load cartridges in the magazine well and then  
4 put the -- so you would have to disassemble the  
5 rifle if it had a fixed magazine.

6 Q. Look at page seven of your report. See  
7 the third paragraph up from the bottom starting  
8 with the word "Therefore." The last sentence in  
9 that photograph says, "Based on my experience the  
10 AR-15 platform rifle is the most common rifle in  
11 use by American law enforcement today and has been  
12 for many years." Is that correct?

13 A. Yes, sir.

14 Q. What is the basis of that statement?

15 A. Having worked with and trained thousands  
16 of police officers and FBI agents.

17 Q. Is that -- over how many years was that  
18 training?

19 A. I began training police and FBI in 1989.  
20 And if I'm allowed to add a little bit, I remember  
21 these types of rifles in use back in my time with  
22 the Las Animas County Sheriff Department as a  
23 reserve officer. So that would be 1986 maybe.

24 Q. Los Angeles?

25 A. Las Animas, Colorado Sheriff Department.

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1 So from my work and training experience that's been  
2 the most common type of rifle I've seen.

3 Q. And that's based on your personal  
4 experience, right? It's not based on any type of  
5 surveys or official reports?

6 A. Correct.

7 Q. And that statement is limited to rifles,  
8 correct? It's not -- the AR-15 type rifle is not  
9 the most common firearm used by American law  
10 enforcement; is that correct?

11 A. Correct.

12 Q. Do you know what the most common firearm  
13 used by American law enforcement is?

14 A. A handgun.

15 Q. Let's look at -- this was previously  
16 marked as Exhibit 3.

17 A. Yes, sir.

18 Q. And this is a -- it looks like a slide  
19 presentation entitled Data Analysis of .223 Caliber  
20 Ammunition, correct?

21 A. Yes, sir.

22 Q. And this was an attachment to your  
23 rebuttal report?

24 A. Yes, sir.

25 Q. So where did you get this report -- this

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1 set of slides?

2 A. I don't recall. It was sent to me over  
3 unsecure communication, the Internet. I had an  
4 Internet account, e-mail account as well -- you  
5 know, an open account anybody can access as well as  
6 the secret computers. And this came to me over  
7 nonsecure means in my e-mail, but I don't recall  
8 who sent it to me.

9 Q. You received it while you were working  
10 for the Ballistics Research Facility?

11 A. Yes, sir.

12 Q. Do you remember which year?

13 A. I do not. But I specifically remember  
14 receiving it.

15 Q. Was it towards the end of your time at  
16 the FBI or the BRF, or was it in the beginning?

17 A. It would have been after 2000. I'm  
18 sorry. After 2001. Because I remember we were in  
19 the facility I retired from and we moved to that  
20 one in 2001.

21 Q. So sometime around 2001 and 2012?

22 A. Sometime between that, yes, sir.

23 Q. Do you know when this -- when the slide  
24 presentation was prepared?

25 A. I do not. No, sir.

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1           Q.       The first heading there says, "A number  
2 of ATF arrests involve arrests that take place in  
3 and around vehicles or making entry into  
4 residences," correct?

5           A.       Yes, sir.

6           Q.       Do you have sufficient understanding  
7 based on that to comment on these considerations?

8           A.       I believe I do.

9                   MR. SWEENEY: Objection.

10          A.       I believe I do.

11          Q.       What is your understanding of that first  
12 arrow there? What is it -- can you explain what  
13 consideration that first arrow references?

14          A.       I believe they're setting the reader up  
15 to let them know that the myth of rifles and  
16 overpenetration in urban situations is just a myth.

17          Q.       Where did you get that from?

18          A.       Because I was instrumental in convincing  
19 the FBI that rifles were appropriate for close  
20 quarter battle type situations inside -- in  
21 vehicles and in homes. And I took on the work of a  
22 former agent in trying to convince people that  
23 because in the early days rifles were thought to be  
24 horribly over penetrative, in other words, shoot  
25 through the most number of walls when that's not

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1 necessarily the fact. So convincing people of the  
2 facts as opposed to the myths was something that  
3 was paramount on our minds. That's the reason I  
4 wrote the weapon selection presentation and ATF  
5 asked to copy it, I believe.

6 Q. And from this first point in the slide  
7 here, it doesn't say anything about penetration  
8 level, right?

9 A. No, it doesn't.

10 Q. It just -- to me it seems to read just  
11 that they -- a number of ATF arrests involve  
12 arrests around vehicles or entry into residences.  
13 And that's a consideration for them?

14 A. Yes, sir.

15 Q. And for whatever this -- in this data  
16 analysis of the .223 caliber ammunition, correct?

17 MR. SWEENEY: Objection.

18 A. Yes, sir.

19 Q. Looking at that last arrow there's an  
20 increasing number of suspects using body armor.  
21 Why might that be a consideration for the ATF?

22 A. Because body armor, the most prevalent  
23 type found is soft body armor, which is designed to  
24 stop blunt slow projectiles like commonly found in  
25 handguns but rifles will penetrate body armor in

1 general terms.

2 Q. In general. So the ATF here is -- in  
3 looking at .223 caliber ammunition a consideration  
4 is to penetrate the soft body armor used by  
5 suspects?

6 A. I think that would be one of them in  
7 addition to be aware if you're using a rifle and  
8 you have a friendly fire incident it may also  
9 penetrate your partner's body armor. I don't think  
10 it's fair to take one slide and explain it without  
11 explaining the context of the entire situation at  
12 the time. ATF was in the process of moving to  
13 using rifles where they hadn't used them before.  
14 And as was explained to me, they want to tell the  
15 administrators of the facts so they can make an  
16 informed decision as to whether or not rifles are a  
17 good choice for what they do. Because previous to  
18 this time people who didn't understand the facts  
19 thought rifles were a bad choice.

20 Q. And before this time the ATF used only  
21 the handguns and shotguns; is that right?

22 A. I don't know for sure.

23 Q. Okay.

24 A. But my belief would be that they did not  
25 use rifles much but I don't know for sure.

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1 Q. But they used handguns, correct?

2 A. Yes, sir. I know they came to me to  
3 seek help in putting the facts out and dispelling  
4 the myths.

5 Q. Myths about rifles?

6 A. Yes, sir.

7 Q. Flip a few more pages to the page with  
8 the slide title, FBI Bare Gelatin Test.

9 A. Yes.

10 Q. Have you seen this graph before?

11 A. I believe it's a direct copy of a graph  
12 that I made. I don't remember if I did it just  
13 with bare Jell-O with averages. But I've seen it  
14 certainly in his presentation.

15 Q. For each one of those the ammunition  
16 there are two round points along the line of the  
17 graph. What do the two points mean?

18 A. I believe they show the minimum and  
19 maximum depth of penetration for the test of the  
20 specific munition that they have failed to identify  
21 what that is. In other words, they've shown a  
22 caliber like 9 or .40. But I think it was for a  
23 specific loading of 9 and .40, and I think those  
24 numbers came from a test that I conducted.

25 Q. Okay. I see. So -- but this slide --

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1 it doesn't show the specific configuration of the 9  
2 millimeter or .40 Smith and Wesson, for example?

3 A. No, sir. And it only shows bare  
4 gelatin.

5 Q. So according to this chart the 9  
6 millimeter, the minimum penetration was 12 and a  
7 half inches and the maximum was 13.25, correct?

8 A. Yes, sir.

9 Q. And that's within the optimal 12 to 18  
10 inches?

11 A. Yes, sir.

12 Q. Can you tell from this slide what  
13 firearm this was fired out of?

14 A. No, sir.

15 Q. Can you tell what distance the -- if it  
16 was between the end of the barrel and the gelatin?

17 A. As it was my test and I believe the data  
18 all reflected the CQB test that I conducted, the  
19 bare gelatin would have either been at ten feet or  
20 it would have been an amalgamation of two tests,  
21 one at ten feet and one at 100 yards. And I don't  
22 know what they did, if they included just the ten  
23 feet data. For 9 and .40 it would have been only  
24 been ten feet. The .223 may have been an  
25 amalgamation of the two tests. I don't recall.

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1 Q. How can you get the result from the  
2 amalgamation of two tests -- let's take a look at  
3 that last -- the .223, 55 grain SP. This shows a  
4 minimum penetration level of 11 inches and a  
5 maximum of 13.5?

6 A. Yes, sir.

7 Q. Wouldn't that change depending on the  
8 distance?

9 A. It depends on the projectile design.  
10 Again, we don't know whether that is 11 to 13 and a  
11 half of five shots at ten or 11 to 13 and a half of  
12 five shots at ten and five shots at 100.

13 Q. We can't tell?

14 A. Insufficient information.

15 Q. Let's go three pages over to the slide  
16 with the caption, Combined Penetration Averages  
17 Through Medium Into Gelatin.

18 A. Yes, sir.

19 Q. These -- along these graphs for each of  
20 the ammunition are three round points now. Do you  
21 know why there are three points?

22 A. I believe that's showing you the range  
23 of penetration and the average of all shots.

24 Q. The one in the middle would be the  
25 average?

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1 belief that my successor has continued on the path  
2 that I was on when I left.

3 Q. What is the basis of that belief?

4 A. Because I trained him and I've heard  
5 from him that they have not changed their opinion  
6 of terminal performance.

7 Q. When did you hear from him?

8 A. The last time?

9 Q. Correct.

10 A. Maybe November.

11 Q. When did you last hear from him that the  
12 FBI has not changed its opinion of terminal  
13 performance?

14 A. September.

15 Q. Of this year?

16 A. Yes, sir.

17 Q. So between 2012 to 2018 of this year the  
18 FBI has not changed their opinion as to terminal  
19 performance of ammunition?

20 A. Not changed their opinion of what's  
21 desired. They may have changed the scoring value  
22 in the procurements, but it's still the same 12 to  
23 18 maximum expansion. No shots less than 12.

24 Q. Right. But the test results --

25 A. Yes, sir.

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1 Q. Do you know if that -- for example, is  
2 it your belief or is it your understanding that  
3 ballistics technology has improved over the past  
4 ten years?

5 A. Yes, sir.

6 Q. So do you know one way or the other  
7 whether the terminal effectiveness of ammunition  
8 has changed since 2012?

9 A. I haven't tested it, but my expectation  
10 is that the terminal effectiveness of all calibers  
11 has improved since 2012.

12 Q. Do you know whether the terminal  
13 effectiveness of the 9 millimeter cartridge has  
14 improved since 2012?

15 A. Certain 9 millimeter cartridges I would  
16 say yes.

17 Q. Would those be the ones that were made  
18 after 2012? What do you mean by certain 9  
19 millimeter cartridges?

20 A. My successor told me that the most  
21 recent procurement resulted in the best 9  
22 millimeter cartridge they'd ever tested.

23 Q. Do you have those test results?

24 A. I may have them. I don't know.

25 Q. Would you be able to provide it as part

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1 of this --

2 A. No, sir, but you can get them from the  
3 FBI.

4 Q. Me personally?

5 A. The State of California can. It's a  
6 simple letterhead request to the FBI Ballistic  
7 Research Facility signed by a supervisor with an  
8 official use and nondisclosure agreement.

9 Q. Have you seen it?

10 A. The request letter?

11 Q. No, the most recent test results.

12 A. On the 9 millimeter?

13 Q. On the 9 millimeter.

14 A. No, sir. I don't believe I have.

15 Q. Have you seen any test results since you  
16 retired in 2012?

17 A. I believe I have, yes, sir.

18 Q. Do you recall which test results?

19 A. I do not. I have been hired to review  
20 the ammunition CD, the data that I mentioned you  
21 can get. I have had other police departments who  
22 have acquired it through official purposes or  
23 through official requests and ask me to come  
24 explain it to them.

25 Q. Right. Okay. Once it's released it's

1 out, right?

2 A. Well, no, sir. They sign the same  
3 agreement you would, that they will not release it  
4 outside their agency.

5 Q. But they showed it to you?

6 A. Right, but I was there to train them on  
7 it.

8 Q. There's some kind of agreement between  
9 you and them on confidentiality?

10 A. I always agree with my clients on  
11 confidentiality and err on the side of caution.

12 Q. Let's go to the last page. The heading  
13 is Results of Data for ATF's Mission.

14 A. Yes, sir.

15 Q. And under that is Weapon of Choice. And  
16 there's a check mark by Colt M4, right?

17 A. Yes, sir.

18 Q. Do you know what considerations the ATF  
19 examined in deciding their weapon of choice besides  
20 penetration level?

21 MR. CHANG: Can we take a brief break.

22 (Off the record.)

23 MR. CHANG: Can you read the question  
24 for us.

25 (Requested portion read.)

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1 A. I do not know.

2 Q. Would you expect there to be -- to have  
3 been other considerations?

4 A. I would expect they would be the same  
5 types of considerations of all law enforcement.

6 Q. And what might those considerations be?

7 A. What they were using currently, what  
8 they had been trained on, size, overall size,  
9 availability, whether or not they had a contract  
10 that would allow them to purchase the firearms.  
11 The whole host of things.

12 Q. Cost, would cost be a consideration?

13 A. Cost could be, yes, sir.

14 Q. And here the slide showed Colt M4. Is a  
15 Colt M4 a semi-automatic centerfire rifle?

16 A. All the M4s I've seen are fully  
17 automatic. There may be three round bursts, I'm  
18 sorry. I think they're either three round bursts  
19 or fully auto.

20 Q. So here the ATF chose a fully automatic  
21 rifle?

22 A. Yes, sir.

23 Q. Do you know the barrel length of a Colt  
24 M4?

25 A. Should be 14 and a half inches.

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1 Q. Do you know whether the ATF was planning  
2 to arm all of its agents with a Colt M4?

3 A. I do not know.

4 Q. Do you know if the ATF ultimately ended  
5 up procuring the Colt M4?

6 A. I've seen them with M4s, but I don't  
7 know if that's what they ended up with as a sole  
8 procurement. Most federal agencies are not going  
9 to have just one type of weapon. As you procure  
10 new ones you don't throw the old ones away unless  
11 they're broken. So I would expect them to have an  
12 amalgamation of -- a variety of AR-15 type weapons.

13 Q. All things being equal a -- we were  
14 talking about AR-15 type rifles. All things being  
15 equal a featureless AR-15 rifle would have the same  
16 penetration characteristics as an AR-15 rifle with  
17 the features described in California Penal Code  
18 section 30515; is that correct?

19 A. Yes, sir.

20 Q. Let's talk about shotguns for a bit.  
21 Now, is it your understanding that when someone  
22 fires a shotgun the shotgun pellets exit the barrel  
23 as a mass and spread as they travel forward?

24 A. If they're pellets being fired, yes,  
25 sir.

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1 Q. What else could a shotgun fire?

2 A. Shotgun slugs or round balls, single  
3 projectile as well, loading for single projectiles.

4 Q. Now, for a shotgun shell with pellets,  
5 is there an optimal distance from which to fire a  
6 shotgun?

7 A. Depends on the pellets and the choke of  
8 the shotgun.

9 Q. Okay. You mentioned earlier the  
10 qualification test for -- FBI qualification test  
11 for shotguns is between seven and 50 yards,  
12 correct?

13 A. Yes, sir.

14 Q. Within that distance would the shotgun  
15 be an effective firearm?

16 A. Depending upon the cartridge used and  
17 where the projectile, or projectiles, hit because  
18 there are two different loads used for that  
19 qualification.

20 Q. What are the two different loads?

21 A. Double-aught buckshot and 12 gauge slug.  
22 So single projectile load and a -- currently I  
23 believe a nine pellet double-aught buckshot load.

24 Q. What would the difference in  
25 effectiveness be between the two loads shot between

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1 seven and 50 yards?

2 A. At seven yards you have an okay chance  
3 of keeping all pellets within a scoring area, but  
4 it's no certainty. Because of the spread of the  
5 pellets it's not uncommon for the shooter through  
6 no mistake of his own to have one of the pellets  
7 miss the scoring area. Beyond seven yards I would  
8 think it would be almost impossible to put all the  
9 pellets on the target. And that's the reason the  
10 shotgun is not recommended for use with buckshot  
11 beyond close quarter distances. I believe that's  
12 the reason for the qualification course as well.  
13 It's only fired at seven yards with buckshot.

14 Q. What about for the slug?

15 A. The slug they fire at 50 yards and in.

16 Q. And what's the -- with the buckshot at  
17 50 yards how accurate can you be?

18 A. Both accurate and inaccurate. You have  
19 nine projectiles.

20 Q. Even with the slug, I thought the slug  
21 was a single projectile.

22 A. I'm sorry. I thought you said with  
23 buckshot.

24 Q. With a slug.

25 A. With a slug I've made head shots at 50

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1 yards.

2 Q. So the pellet is only -- the  
3 qualification test for the pellet shotgun load  
4 that's only tested at seven yards?

5 A. Yes, sir.

6 Q. At seven yards what's the penetration  
7 depth for that nine pellet shotgun load that you  
8 were describing?

9 A. I don't believe I tested it at seven  
10 yards. At ten feet that load would typically fully  
11 penetrate an 18-inch block of gelatin. At seven  
12 yards I think I would have difficulty keeping all  
13 the pellets in the block of gelatin.

14 Q. Do you know in the -- in a home  
15 intrusion situation in that kind of self -- there's  
16 a home intruder and the homeowner is in the self-  
17 defense situation and has to use his or her  
18 firearm, do you know what the average number of  
19 shots fired is?

20 A. I do not.

21 Q. In the law enforcement situation, do you  
22 know what the average number of shots fired by a  
23 law enforcement officer in an incident is?

24 A. I do not.

25 Q. Let's go to your report, page 11,

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1 please. This is Exhibit 22.

2 A. Yes, sir.

3 Q. You've listed six characteristics that  
4 make it -- make the AR-15 rifle particularly  
5 suitable for defensive purposes, correct?

6 A. Yes, sir.

7 Q. Now, would all these -- and we  
8 previously discussed that the AR-15 could have --  
9 could be a rimfire or could be a centerfire,  
10 correct?

11 A. Yes, sir.

12 Q. Are all these characteristics present in  
13 an AR-15 that's a rimfire?

14 A. I would say no, sir.

15 Q. And which one, which one of these  
16 characteristics would not be present in a rimfire  
17 AR-15?

18 A. Characteristic number five.

19 Q. How so? I'm sorry, could you describe  
20 characteristic number five?

21 A. Yes, sir. It can be chambered in a  
22 variety of cartridges so the user could choose one  
23 that is an ideal combination of effective while  
24 having relatively mild recoil.

25 Q. Could you describe why characteristic

1 five would not apply?

2 A. I don't know of any rimfire cartridges  
3 that I believe would be a good choice for home  
4 defense if you had a choice of something more  
5 appropriate or more effective.

6 Q. Why is that?

7 A. Because rimfire cartridges are  
8 inherently lower pressure and they're loaded with  
9 lighter weight or fragile projectiles. They're not  
10 intended -- although they have been used, they're  
11 not intended to stop violent actions of a mammal  
12 that weighs what a human being does. They're small  
13 game cartridges.

14 Q. Have you tested rimfire cartridges when  
15 you were at the BRF?

16 A. Only informally.

17 Q. In what situation -- in what type of  
18 informal situation did you test rimfire cartridges?

19 A. The first time I was asked by the FBI  
20 laboratory if I could catch some bullets for them.

21 Q. What do you mean by catch bullets?

22 A. Catch a bullet so that they can examine  
23 it later and look at the markings on it. And this  
24 happened before the man who taught me how to do it  
25 had left. And I ignorantly didn't raise the door

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1 at the end of the bay thinking I was going to catch  
2 all the bullets. And when I fired the .22 into the  
3 block of gelatin and heard it hit the back wall or  
4 the back door he chuckled and said, "Went right  
5 through, didn't it?" So the .22 was a slow  
6 velocity projectile that did not deform much so it  
7 penetrated -- I believe the block was either 16 or  
8 18 inches. It penetrated all the way through the  
9 block of gelatin. There was a time when we were  
10 asked to shoot some .22 Magnum rounds into a block  
11 of gelatin for use in a special purpose situation.  
12 And I was underwhelmed with their performance.

13 Q. So when you tested the rimfire .22 you  
14 said it went through -- it went beyond the 18  
15 inches?

16 A. It went all the way through the block of  
17 gelatin, yes, sir.

18 Q. Isn't that -- didn't that accomplish the  
19 terminal effectiveness in that it reached beyond --  
20 it reached at least 18 inches?

21 A. No, sir. Penetration is only one  
22 metric. It didn't expand at all and we didn't test  
23 it for barriers.

24 Q. Are there rimfire rounds that expand  
25 upon impact?

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1 projectiles.

2 Q. But you were not aware of any  
3 configuration -- theoretically they could put a --  
4 are there bullets that are more easily deformed  
5 than others?

6 A. There are bullets that are more easily  
7 deformed than others. But I've never seen a  
8 rimfire cartridge that averaged between 12 and 18  
9 when expanded.

10 Q. But you haven't tested it?

11 A. I have not tested it.

12 Q. What is it about a telescoping or  
13 adjustable stock that makes a rifle particularly  
14 suitable for defensive purposes?

15 A. The tallest agent I can recall training  
16 probably was six foot seven. The smallest agent I  
17 can recall training was less than five feet tall.  
18 I can give each of them the same rifle, and they  
19 can both use it effectively without modifying the  
20 gun for them. That's one of the selling  
21 characteristics other than obviously making it  
22 compact so you can transport it.

23 Q. How much more compact might an  
24 adjustable stock make a rifle?

25 A. I don't know. A few inches. I need to

1 measure that to --

2 Q. What about a folding stock, are you  
3 familiar with a folding stock?

4 A. I'm familiar with some folding stocks,  
5 yes, sir.

6 Q. With a folding stock how much shorter  
7 might you make a rifle?

8 A. It would depend on the length of it  
9 unfolded. It would end where the hinge point was,  
10 from the hinge point to the butt.

11 Q. Sitting here today are you able to  
12 provide a general estimate?

13 A. I would be guessing and I prefer not to  
14 guess.

15 Q. All these characteristics, these six  
16 characteristics, you have listed on the bottom of  
17 page 11 that make the AR-15 particularly suitable  
18 for defensive purposes, would they also apply if a  
19 rifle has a fixed magazine?

20 A. Yes, I think they would.

21 Q. Other than that second characteristic,  
22 do these six -- do these characteristics that make  
23 a rifle particularly suitable for defensive  
24 purposes also apply to a handgun?

25 A. Not as much. No, sir.

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1 Q. In what way?

2 A. The relatively mild recoil portion.

3 Q. What do you mean?

4 A. Full power handgun rounds, I would say  
5 are not relatively mild recoil.

6 Q. What do you mean by a full power handgun  
7 round?

8 A. Service cartridges you would load in,  
9 say, a 9 millimeter, a .40 or .45 auto which is not  
10 a cartridge that would be used by law enforcement.  
11 It does have relative mild recoil. But a 9  
12 millimeter Luger loaded 35,000 PSI maximum average  
13 pressure, it's milder than a .40 loaded at 35,000  
14 PSI, but I wouldn't call the recoil mild.

15 Q. And you mentioned the .25.

16 A. Yes, sir.

17 Q. I've had a law enforcement officer tell  
18 me that he'd rather be shot by a 9 millimeter than  
19 a .22. Do you know why he might say that?

20 A. I don't know why he told you that. I  
21 have had others tell me that they were under the  
22 impression that the .22 would go in the body and  
23 bounce around the body in a zigzag pattern damaging  
24 more tissue and organs.

25 Q. Is that true?

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1 A. Not to my knowledge, no, sir.

2 Q. What happens to a .22 when it impacts  
3 the body?

4 A. Depending on where it hit and what it  
5 hit. But if it doesn't hit any hard structures,  
6 it's likely to go in one side and out the other  
7 like I experienced in my gelatin ballistic  
8 research. And I've heard more than one person  
9 espouse that myth.

10 Q. I've heard it too. So it's a nationwide  
11 theory.

12 A. Yes, sir.

13 Q. The last characteristic here that you  
14 listed on page 11 utilizes magazines of varying  
15 capacities depending on the need. When might one  
16 need a magazine of -- with larger capacity versus a  
17 magazine with fewer capacity?

18 MR. SWEENEY: Objection.

19 Q. With a lesser capacity?

20 A. Depending on the situation. I don't  
21 know anyone that would go into a planned event with  
22 less ammunition than they can reasonably carry.  
23 For example, when I walk around my farm I typically  
24 use a 20 round magazine because the 30 pokes me in  
25 the ribs. I've got the rifle slung on my shoulder.

1 So I have a 20 round magazine in the rifle. And  
2 it's nice to be able to do that. When I'm sitting  
3 in a stand and hunting hogs, for example, I switch  
4 the 20 to a 30. I have more need if I run into a  
5 sounder of hogs.

6 Q. What would you do in that situation?

7 A. Prosecute them with extreme prejudice.

8 Q. And previously we talked about how it's  
9 hard to make generalized statements about  
10 ammunition because they could -- projectile  
11 ballistics could depend on a lot of different  
12 factors, correct?

13 A. Yes, sir.

14 Q. It could depend on the -- they depend on  
15 the barrel configuration; is that correct?

16 A. The barrel can have an effect on it.

17 Q. And the barrel length would affect the  
18 projectile ballistics, correct?

19 A. It likely would affect the velocity.

20 Q. How so?

21 A. If the propellant is all burned before  
22 the projectile exits the barrel, then it would  
23 result in reduced velocity. But most cartridges  
24 and most firearms the size that are commonly used  
25 do not burn all the propellant prior to the

1 projectile exiting. Therefore, a longer barrel  
2 gives more time under pressure results in the  
3 projectile exiting at a little higher velocity.

4 Q. And what's the effect of a projectile  
5 exiting the barrel at a higher velocity?

6 A. It impacts the target at a higher  
7 velocity if all things are equal. It's very common  
8 in the long range hunting, for example, that you  
9 choose a longer barrel so the projectile will  
10 impact the animal in the desired performance  
11 window. So if your performance window occurs from,  
12 say, zero to 50 yards but you expect to need it 50  
13 to 100, use a longer barrel and start the bullet  
14 faster. And then you impact during your  
15 performance window more reliably. That causes  
16 problems if you impact earlier as well.

17 Q. So at -- let's use the FBI qualification  
18 test distance of ten feet and 20 yards. A rifle  
19 with a -- let's compare the -- a rifle with a 16  
20 inch barrel versus a rifle with a 14 and a half  
21 inch barrel. The rifle with the 16 inch barrel,  
22 the projectile will come out of that barrel at a  
23 higher velocity than the 14 and a half inch barrel,  
24 correct?

25 A. It's reasonable to assume that but you

1 can't determine without testing because there's  
2 variability in rifle barrels. And so if you had a  
3 fast 14 and a half inch barrel versus a slow 16,  
4 they may overlap.

5 Q. As a general matter?

6 A. It's expected, yes.

7 Q. It's expected?

8 A. A little bit higher velocity.

9 Q. And at, let's say, ten feet, would that  
10 higher velocity bullet coming out of the 16 inch  
11 barrel cause more damage to a target at the ten  
12 feet range?

13 A. Recognizing there are no absolutes, I  
14 would expect very little measurable difference  
15 between a 16 inch barrel AR-15 type rifle versus a  
16 14 and a half.

17 Q. There would --

18 A. Because the velocity variation you would  
19 see is probably overlapped by the shot-to-shot  
20 velocity variation of the ammunition.

21 Q. Right. There would be variation from  
22 shot to shot?

23 A. Correct.

24 Q. But on average the 16 inch barrel is  
25 expected to have a higher velocity than the 14 and

1 a half inch, right?

2 A. Right. But I would not guess it to be  
3 much more than 40 feet per second depending on the  
4 load. It's not a significant difference in my  
5 opinion between a 14 and a half and a 16 inch in  
6 .223 with most loads.

7 Q. At what point does a shorter barrel  
8 start reaching -- would you see a significant  
9 decline in velocity?

10 A. Linear or rotational?

11 Q. Linear.

12 A. Linear velocity I would expect a  
13 significant decrease once you drop below about 11  
14 inches on .223.

15 Q. What about rotational?

16 A. Depends on the twist rate of the barrel.  
17 For example, if you're using a one and nine twist,  
18 I don't think you should go below about 14 and a  
19 half. We'd prefer a one and seven for that. If  
20 you're going below 11 you absolutely need a one and  
21 seven twist because rotational velocity is  
22 dependent upon not only twist rate but also linear  
23 velocity.

24 Q. What is the effect of -- is there any  
25 effect on the -- on a target with differing

1 rotational velocity?

2 A. There certainly can be.

3 Q. How so?

4 A. The rotational velocity has been shown  
5 to contribute to the expansion of the projectile.

6 Q. So the greater the rotational velocity,  
7 the greater the expansion of the projectile?

8 A. In most cases. And sometimes it can go  
9 beyond what you want.

10 Q. So a 16 inch barrel compared to a 14 and  
11 a half inch barrel, would the 16 inch barrel have,  
12 as a general matter, have both greater linear  
13 velocity and rotational velocity?

14 A. If they were the same twist rate, yes.

15 Q. Another factor in barrel configuration  
16 is chamber, correct?

17 A. Yes, sir.

18 Q. What is chamber?

19 A. The internal dimensions of the firearms  
20 barrel where the cartridge is contained, and that's  
21 where the cartridge sits during ignition of the  
22 firing sequence. And it also includes what we call  
23 the lead area or the throat which is that area of  
24 the barrel from the mouth of the cartridge case to  
25 where the rifling action begins.

1 Q. How does the chamber affect projectile  
2 ballistics?

3 A. The chamber only would affect the  
4 projectile ballistics based on the lead if the same  
5 cartridge was fired in both chambers.

6 Q. How might that lead affect the  
7 projectile ballistics?

8 A. The more lead there is, the more room  
9 there is for the projectile to jump during the  
10 ignition sequence. As the projectile jumps the  
11 volume that's containing the powder is greater and,  
12 therefore, if all other things are equal you should  
13 have slightly lower pressure if you have more lead.

14 Q. And another factor in barrel  
15 configuration is the bore; is that correct?

16 A. Yes.

17 Q. And what does that refer to?

18 A. The diameter, the inside diameter of the  
19 barrel.

20 Q. And another factor in the barrel  
21 configuration is the rifling profile; is that  
22 correct?

23 A. Yes.

24 Q. What is the rifling profile?

25 A. Rifling is the method used to spin the

1 ammunition for the FBI. And recognizing that  
2 you're never perfect, we evaluated every instance  
3 where we procured ammunition. And if we thought we  
4 could make it better, we did. And I'm assuming  
5 they're still doing that. I know they've changed a  
6 few things in the formula.

7 Q. If two projectiles both reach at least  
8 the 12-inch depth in a gelatin, would you consider  
9 those two to have the same lethality?

10 A. I don't use the term lethality.

11 Q. Terminal --

12 A. And deride those who do. I'm sorry.

13 Q. Feel free to deride. I'm sure I've used  
14 many terms inappropriately here in this deposition.

15 Would terminal effectiveness be a better  
16 term?

17 A. That's a much better term, yes, sir.

18 Q. If two projectiles both reach at least  
19 the 12-inch penetration depth in a target, would  
20 you consider those two to have the same terminal  
21 effectiveness?

22 A. I can't answer that without knowing the  
23 other metrics.

24 Q. What are some other metrics?

25 A. Expansion, retained weight, shots less

1 than 12 inches, and range of penetration.

2 Q. What is shots less than 12 inches?

3 A. How many shots in your entire test  
4 failed to make it to the 12-inch mark.

5 Q. What is weight retention?

6 A. How much the projectile weighs once  
7 recovered as compared to how much it weighed prior  
8 to being fired.

9 Q. Does that relate to fragmentation?

10 A. It does, and it also relates to whether  
11 or not it picks up any of the intervening barriers.

12 Q. And do you want a greater weight -- sit  
13 preferable -- is it the greater the weight  
14 retention the more terminally effective the  
15 projectile is?

16 A. Weight retention is something we used in  
17 the beginning to discourage fragmentation, and my  
18 belief now -- although we still use weight  
19 retention -- is that overall expansion is far more  
20 important. But we used it as a metric to show that  
21 the projectile was more robust and less prone to  
22 fragment. I think they still use weight retention.  
23 But I'm not sure. My successor and I discussed  
24 whether or not to keep that in the protocol.

25 Q. If a rifle and a handgun had the same

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1 barrel characteristics would firing the same  
2 cartridge have the same muzzle velocity?

3 A. I would expect it to.

4 Q. Do you know any handguns that have the  
5 same barrel characteristics as a rifle?

6 A. Yes, sir.

7 Q. Could you give an example?

8 A. Sure. Say, a nine inch .300 Blackout  
9 could be configured either as a rifle or a handgun.  
10 A nine inch .223 -- and I'm speaking again AR-15  
11 type weapons -- could be figured either as a rifle  
12 or a handgun. If the barrels are the same, the  
13 projectile can't determine whether or not there's a  
14 shoulder stock.

15 Q. Right. So the -- what was that rifle  
16 that you mentioned could be configured into a  
17 handgun?

18 A. Both the .223 AR-15 or the .300  
19 Blackout.

20 Q. Could be configured either as a rifle or  
21 handgun?

22 A. Yes, sir.

23 Q. Why might someone configure a .223 AR-15  
24 into a handgun?

25 A. Because they wanted a shorter overall

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December 10, 2018

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1 length and to comply with the national laws for  
2 civilians that prohibit short barrel rifles unless  
3 you, I believe, pay the tax and register them.

4 Q. So a .223 AR-15 configured as a handgun,  
5 does that still have a 16-inch barrel?

6 A. It could. I don't know why you would,  
7 but it could.

8 Q. So the AR-15 designation, it doesn't say  
9 anything about the barrel length? It's unrelated  
10 to the barrel length?

11 A. Correct.

12 Q. Let's take a look at your rebuttal  
13 report. I think that's Exhibit 20. Take a look at  
14 page eight, bottom of page eight under the heading  
15 Reasonable Effective Range.

16 A. Yes, sir.

17 Q. And you quote a paragraph in a statement  
18 in the report made by Detective Mersereau?

19 A. Yes, sir.

20 Q. I'll just read it for the record. "It  
21 is highly unlikely that citizens would face a  
22 situation where the threat is beyond the effective  
23 range of a handgun and certainly not with any great  
24 frequency. It is even less likely that the law  
25 would be at such a distant perceived threat as

1 justifying a use of force at all, much less the use  
2 of lethal force delivered via a rifle." Is that  
3 correct?

4 A. Yes.

5 Q. And your response was, "This is  
6 especially curious inasmuch as he earlier cited an  
7 incident known to have occurred at extended range."  
8 And you quoted a section of Detective Mersereau's  
9 report in which he cited the Las Vegas shooting of  
10 a shooter firing from a 32nd floor hotel?

11 A. Yes, sir.

12 Q. Into a crowded outdoor concert venue,  
13 correct?

14 A. Yes, sir.

15 Q. And your opinion is that Detective  
16 Mersereau directly contradicted his assertion. Can  
17 you describe where you see this contradiction in  
18 Detective Mersereau's report?

19 A. Sure. He on one hand says that it's  
20 unlikely that you're going to face the situation  
21 and less likely that the law would view such a  
22 distant perceived threat as justifying the use of  
23 force at all, and at the same time talks about the  
24 shooting in Las Vegas which was quite a long  
25 distance away. I don't know the exact distance,

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C E R T I F I C A T E

STATE OF ALABAMA )

JEFFERSON COUNTY )

I hereby certify that the above and foregoing deposition was taken down by me in stenotype, and the questions and answers thereto were reduced to computer print under my Supervision, and that the foregoing represents a true and correct transcript of the deposition given by said witness upon said hearing.

I further certify that I am neither of counsel nor of kin to the parties to the action, nor am I in anywise interested in the result of said cause.

/s/Lisa Bailey

Lisa Bailey, CCR #289

CCR #289, Expires 9/30/19

Commissioner for the

State of Alabama at Large