

UNITED STATES V. RODNEY MARTIN

Criminal No. F1306-02

Appeal No. 03-CF-1121

EXPERT TESTIMONY

OF

**OFFICER MICHAEL MULDERIG
EXPERT IN FIREARMS AND BALLISTICS
EXAMINATION AND IDENTIFICATION**

ON

THURSDAY, MAY 22, 2003

Transcript pages 70 - 100

SUPERIOR COURT OF THE DISTRICT OF COLUMBIA
CRIMINAL DIVISION

UNITED STATES OF AMERICA)	
)	
vs.)	Criminal Action Number:
)	F-1306-02
RODNEY MARTIN,)	
)	
Defendant)	

Washington, D.C.
May 22, 2003

The above-entitled action came on for a Motions Hearing at 9:40 a.m. before the **Honorable GEOFFREY ALPRIN**, Associate Judge, in Courtroom Number 320.

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APPEARANCES:

On Behalf of the Government:

ROBERT BOWMAN, Esquire
BENJAMIN FRIEDMAN, Esquire
Assistant United States Attorney

On Behalf of the Defense:

RENEE RAYMOND, Esquire
CHRISTINE SMITH, Esquire
Washington, D.C.

Dianne Foster
Official Court Reporter

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APPELLATE DIVISION

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WITNESSES

On behalf of the Government:

	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>
WITNESS			
(By Mr. STPHAO)			
(By Mr. SKWRAO)			

E X H I B I T S

<u>Government's Exhibit Number</u>	<u>Identified</u>	<u>Admitted</u>
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1 MS. RAYMOND: Thank you, Your Honor.

2 (Open court)

3 BY MR. FRIEDMAN:

4 Q. Mr. Brown, in your experience on the police force
5 -- and without giving your opinion -- why didn't you submit
6 some of these items to be printed?

7 A. Some of the items were not submitted because I
8 was informed by the detective that the drive by people that
9 did the shooting was inside a vehicle.

10 Q. And what did you conclude from that?

11 A. That the fingerprints would not do any good
12 processing those items because of the mere fact the
13 perpetrator was in a car at the time.

14 MR. FRIEDMAN: No further questions.

15 THE COURT: Ms. Raymond, anything further?

16 MS. RAYMOND: No, Your Honor, that's it.

17 THE COURT: All right. Thank you, sir. You are
18 excused.

19 (Witness excused)

20 MR. FRIEDMAN: Yes, Your Honor, the government
21 calls Officer Mulderig.

22 MICHAEL MULDERIG,
23 having been called as a witness by the government, and,
24 being first duly sworn by the Deputy Clerk, was examined and
25 testified as follows:

1 firearm.

2 Q. What kind of training have you had in firearms
3 examination?

4 A. I received two year resident training course,
5 which is senior examiners contracted by the police
6 department assigned imitation cases very much like real
7 cases to myself and others at the time. What we will do is
8 look at those cases, evaluate them, come to our conclusions,
9 and give them back to the trainers for their evaluation.

10 In addition, I have also been trained in serial
11 number restoration, which is given by the Bureau of Alcohol,
12 Tobacco and Firearms. I've also completed several armoral
13 courses. What an armoral course is a course given by a gun
14 manufacturer, and it actually teaches you how to disassemble
15 and reassemble that gun back to manufacturer's
16 specifications.

17 Ammunition. I've been to the three major
18 ammunition plants in the U.S., that would be Winchester,
19 Remington and Federal. I actually observed how ammunition
20 is made from start to finish. The same would be for gun
21 manufacturers; I've been through several manufacturing
22 plants across New England states where I actually observed
23 guns being manufactured from start to finish.

24 And I have also worked in other area agent
25 laboratories as part of my training also, such as the

1 Northern Virginia Forensic Science Lab in Fairfax, the
2 Bureau of Alcohol, Tobacco and Firearms -- well, they were
3 in Rockville at the time, and the FBI's lab, which was in
4 D.C. at the time.

5 Q. Do you continue to train as you've gone on with
6 your career?

7 A. Yes.

8 Q. And what type of continued training do you have?

9 A. Well, we have either several armor courses or
10 seminars that I attend for dispersing information between
11 examiners from not only this country, from all over the
12 world.

13 Q. And have you trained others in firearms
14 examination and ballistics identification?

15 A. I have assisted in training, yes, but I haven't
16 been an actual trainer.

17 Q. And approximately how many times have you
18 examined firearms and ballistics evidence as they come into
19 you?

20 A. Well, I have conducted thousands and thousands of
21 examinations.

22 Q. And have you been qualified as an expert before?

23 A. Yes, I have.

24 Q. How many times in this court?

25 A. I have testified 55 times as an expert in both

1 D.C. Superior Court, and I have also testified in U.S.
2 District Court in Greenbelt, Maryland.

3 Q. Have you testified for the defense before?

4 A. Yes, I have.

5 MR. FRIEDMAN: Your Honor, at this time I would
6 seek to qualify Officer Mulderig as an expert in firearms
7 and ballistics examination and identification.

8 THE COURT: Counsel.

9 MS. RAYMOND: I just have a few questions. Thank
10 you.

11 VOIR DIRE EXAMINATION

12 BY MS. RAYMOND:

13 Q. Good afternoon. Is it officer -- yes, Officer
14 Mulderig.

15 A. Yes.

16 Q. Officer Mulderig, the firearms examination, there
17 is not -- it's not a science, correct?

18 MR. FRIEDMAN: Your Honor, I'm going to object at
19 this point as to whether this is a qualification question.

20 MS. RAYMOND: It is certainly a qualification.

21 THE COURT: I will permit it. Overruled.

22 THE WITNESS: Some examiners say it is a science,
23 some examiners say it's an art.

24 BY MS. RAYMOND:

25 Q. And when I say a science, I mean, there aren't a

1 set of standards as such that all firearms examiners are
2 required to satisfy in order to be firearms examiner, that
3 is, one set of standards, like a national set of standards,
4 correct?

5 A. There is a curriculum, and the curriculum was
6 written by the actual people who trained myself. It was
7 accepted by the police department, and it's also the same
8 curriculum that ATF is now using in their national academy.

9 Q. When you say the police department, you mean the
10 Metropolitan Police Department?

11 A. The Metropolitan Police Department, yes. And if
12 you do not complete any part of that training curriculum,
13 you are not a certified examiner.

14 Q. But again, there is no national set of standards,
15 correct?

16 A. I don't know.

17 Q. And with respect to the nature of the
18 examination, the nature of the examination, if I understand
19 it correctly, is it so that you look, you basically look
20 with your eyes and perhaps with a microscope at different
21 kinds of ballistics evidence; is that the nature of the art
22 or science?

23 MR. FRIEDMAN: Your Honor, I'm going to object
24 again; I mean, this is proper cross, but not for
25 qualification.

1 THE COURT: Well, it's a close call, and that's
2 what I've been thinking about up here, but I don't see any
3 particular harm to the government. I'll permit it.

4 MS. RAYMOND: I don't have very many more
5 questions.

6 THE WITNESS: I can explain how I conduct an
7 examination, if that's what...

8 BY MS. RAYMOND:

9 Q. No. I'm not asking that; I'm asking a specific
10 question --

11 A. Do I use my eyes?

12 Q. Right. Whether or not the examination itself is
13 done with anything but basically a visual examination, you
14 looking at an object.

15 A. You do a visual examination, but I also use a
16 microscopic examination.

17 Q. And again, you're looking at this object, if you
18 will, through an enhanced lens of the microscope.

19 A. Yes.

20 Q. Through your eyes though, correct?

21 A. Yes, do you use a microscope.

22 Q. So, for example, there are no kinds of chemicals
23 or dyes or anything like that involved in the examination of
24 firearms, correct?

25 A. Not in relation to bullets or cartridge cases.

1 There are some chemicals we use, but that would be for
2 gunshot residue testing, which would be for clothing.

3 MS. RAYMOND: Thank you. No other questions.

4 THE COURT: What is your position?

5 MS. RAYMOND: No objection.

6 THE COURT: Very well. And he's offered as an
7 expert in firearms and --

8 MR. FRIEDMAN: And ballistics examination, yes,
9 sir -- and identification.

10 THE COURT: Ladies and Gentlemen, Officer
11 Mulderig may testify in this trial as an expert in firearms
12 examination and identification. I'd like to give you this
13 brief instruction on expert testimony.

14 Ordinarily the rules of evidence do not permit
15 witnesses to testify as to opinions or conclusions; but
16 there is an exception to this rule for expert witnesses.
17 Experts are allowed to give opinions or conclusions because
18 they have become expert in some art, science, profession or
19 calling. They may give their opinions or conclusions and
20 the reasons for their opinions. In this case the Court will
21 permit Officer Mulderig to testify as an expert concerning
22 firearms examination and identification.

23 You are not bound by an expert's opinion. If you
24 find that the opinion is not based on sufficient evidence or
25 experience, that the reasons supporting the opinion are not

1 sound, or that the opinion is outweighed by other evidence
2 you may completely or partially disregard the opinion; in
3 other words, give the opinion the weight you think it
4 deserves after you consider it along with all the other
5 evidence.

6 You may proceed.

7 MR. FRIEDMAN: Thank you, Your Honor.

8 I'm going to show defense counsel what has been
9 marked as Government's Exhibit 44, 45 and 46.

10 BY MR. FRIEDMAN:

11 Q. Officer, I'm showing you what has been marked as
12 Government's Exhibits 44, 45 and 46. Could you please
13 explain what those are?

14 A. Put them on the --

15 Q. No, not yet. If you could first tell me what
16 those are.

17 A. 44 is a chart or a picture depicting the
18 different -- well, showing what a semi-automatic pistol is
19 and what a revolver is.

20 Item 46 is a chart that depicts what a cartridge,
21 a bullet and a cartridge case.

22 Item 45 depicts what an unfired and fired bullet
23 looks like, and lands and grooves of the barrel.

24 Q. All right. And would those -- are those
25 diagrams?

1 A. Those are -- they are.

2 Q. And would those diagrams help you explain and
3 demonstrate to the jury an explanation of how firearms and
4 ballistics evidence work?

5 A. Yes.

6 MR. FRIEDMAN: Your Honor, at this time the
7 government would seek to introduce these exhibits as
8 evidence

9 MS. RAYMOND: No objection.

10 THE COURT: Very well.

11 (Thereupon, Government's Exhibit Numbers 44, 45
12 and 46 were admitted into evidence.)

13 BY MR. FRIEDMAN:

14 Q. Let's start with Government's Exhibit Number 44.
15 And let me first ask you, what are the different types of
16 firearms?

17 A. There are different types of handguns; and two of
18 the most popular are the semi-automatic pistol, which is the
19 firearm on the left of the chart, and a revolver, which is
20 the firearm on the right side of the chart.

21 Q. And could you explain what the difference between
22 those two types of firearms is?

23 A. The main difference is a semi-automatic pistol,
24 when it is fired, it ejects cartridge casings, allowing you
25 to fire until you run out of ammunition or a shooter stops

1 firing. A revolver has six chambers for the most part --
2 some have more, some have less. Once you fire the revolver
3 after the sixth time you have to manually extract the
4 cartridge cases, it does not eject cartridge cases like a
5 semi-automatic pistol does.

6 Q. And how would a semi-automatic pistol actually
7 eject a cartridge casing?

8 A. The way it works is ammunition is loaded into the
9 magazine; the magazine is inserted into the grip area of the
10 firearm. Then the top portion of the firearm, or the slide,
11 is pulled to the rear. Now as it goes forward, it's taking
12 a live round of ammunition from the grip area and chambering
13 it, making it ready for fire. Once you fire the firearm,
14 from the force of the firing going off the slide comes back.
15 As it comes back, it pulls or extracts the cartridge case
16 from the chamber area and then ejects it. Then the slide
17 again goes forward, taking another round of ammunition from
18 the magazine, chambering it, making it ready to fire again.

19 Q. And what about the revolver; can you just explain
20 showing the pictures why there would be no ejection --

21 A. Well, a revolver you would have a cylinder, and a
22 cylinder only has six chambers for the most part. Once you
23 fire it, you have to open the cylinder and extract the
24 cartridge cases manually to get them to fire.

25 Q. And so as a hypothetical, if someone was shooting

1 out on the street with these two types of guns, which one
2 would you expect -- or what would you expect to find
3 somewhere on that crime scene with these two types of guns?

4 A. With a semi-automatic pistol, since it ejects
5 cartridge cases, I would expect to find cartridge cases in
6 that area. With a revolver you would not find cartridge
7 cases, unless the shooter actually takes them out of gun
8 himself.

9 Q. How far will that ejector eject cartridge cases?

10 A. On an average, a semi-automatic pistol, on
11 average roughly three or four feet. Once it hits the
12 surface, though, depending on the surface, it may bounce
13 even further.

14 Q. Now, what do you do when you get ballistics
15 evidence from a case?

16 A. Once I receive evidence for examination I take
17 the evidence, such as bullets, if I have more than one
18 bullet through the use of the microscope, as I stated
19 earlier, I put the bullets side by side. And I'm looking
20 for fine microscopic marks on those bullets that are
21 produced in the firing process. If those marks line up and
22 are exactly the same, that tells me that those bullets were
23 fired in the same firearm, that is, through the same barrel.

24 Q. Now you talked about -- why don't we start with
25 this one. I'm sorry. You talked about bullets being fired.

1 Looking at Government's Exhibit Number 46, what is 46? What
2 is that?

3 A. Number 46 shows ammunition. This is a live round
4 of ammunition on the left of this chart. It contains the
5 bullet, the cartridge case and gunpowder inside. In the
6 center of the chart it shows the bullet separated from the
7 cartridge case. This would be the bullet, and at the bottom
8 would be the cartridge case.

9 On the head area, or top area of the ammunition
10 you find the caliber, it's a head stamp put in there by the
11 manufacturer during the process of manufacturing. It will
12 have its manufacturing brand, which this case R.P., which
13 will be Remington Peters, and the caliber, and the center
14 you have a primer. When that primer is struck by the firing
15 pin firing and causes a flash of fire, it ignites the
16 gunpowder inside the cartridge case. The gunpowder burns
17 very quickly. Pressure builds up. As pressure is building
18 up it builds up so much that is actually forces the bullet
19 out of the cartridge case down the barrel.

20 Q. And when you describe cartridge casings being
21 found between a revolver and a pistol, which part of that
22 ballistics evidence were you describing?

23 A. The cartridge case is the part that is left
24 behind the bullet.

25 Q. And the other part, what you described as the

1 bullet, are those items commonly found on crime scenes also?

2 A. The cartridge case is, yes.

3 Q. And what about the bullet itself?

4 A. Sometimes you may find them, sometimes you may
5 not.

6 Q. Okay. And when do you an examination, what parts
7 of the bullet do you do an examination on?

8 A. I'm looking at the whole bullet, the outside part
9 of it.

10 Q. And what about the shell casing?

11 A. Cartridge case, I will be looking at the primer
12 area; or I will be looking in the groove area or even on the
13 outside area.

14 Q. Now I'm going to show you what's been introduced
15 as Government's Exhibit Number 45. What is that?

16 A. It's a chart depicting a bullet and a barrel of a
17 firearm.

18 Q. And does this chart demonstrate how you can
19 identify bullets as you do bullet identification?

20 A. Yes. On your left you have a copper-jacketed
21 bullet, unfired -- there are no markings on this outside
22 area at all. On the right I have a fired bullet. As you
23 can see on the right there are marks on there, and those
24 marks are put on there as the bullet travels down the barrel
25 of the firearm. Inside the barrel there is raised portions

1 called lands, they were put in there during the
2 manufacturing process; and from the tooling used to put
3 those lands in there, it leaves behind fine microscopic
4 marks or scratches as it's actually pulling metal out of the
5 barrel and then putting in those land areas.

6 Q. And are those -- well, how common are any
7 particular types of lands and grooves out of a barrel?

8 A. How common?

9 Q. The difference between guns, between two guns.

10 A. Well, we have -- there is many, many barrels out
11 there that would have, let's say, six lands and a certain
12 twist. But that is a general characterization. What I am
13 looking for are the fine microscopic marks that are actually
14 embedded into the metal as it's being shaved away from the
15 cutting part of the tool used.

16 Q. And are those distinctive for each gun?

17 A. Those are.

18 Q. And you describe a twist. What is a twist?

19 A. A twist is a direction of the lands and grooves
20 that they are spiraling towards. They travel down the
21 length of the barrel, but they also have a slight twist to
22 them. So as the bullet engages that -- what we call
23 rifling, it will give the bullet a spin; sometimes it will
24 spin to the right, sometimes it will spin to the left. And
25 basically what it looks like is a football field.

