ROBERT BALDWIN,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BALLENGEE:

Q. Mr. Baldwin, if you would, introduce yourself to the jury.

A. Good morning, ladies and gentlemen of the jury. My name is Robert Baldwin.

Q. And if you'd spell your name for the record, please.

A. Last name is B-a-l-d-w-i-n.

Q. And normal spelling of your first name?

A. Yes.

Q. Okay. Thank you.

A. Sure.

Q. What do you do for a living?

A. I'm currently employed by the Harris County Institute of Forensic Sciences in the firearms identification laboratory and I'm the manager of that section.

Q. And what do you do as a manager of the firearms section?

A. Well, aside from overseeing the administrative responsibilities of the manager's position, I also perform the duties of a firearms examiner.

Q. What are the duties of a firearms examiner?
A. Those duties would include the evaluation of firearms related evidence. That could include a firearm that has been recovered, an evaluation of that particular firearm, test-firing of that gun. It could also involve the comparison of fired exhibits such as cartridge cases, projectiles, shot shells, and shot shell components. And at the time that this case was done, we were also doing distance approximation.
Q. And what kind of educational background did you have to obtain in order to become a firearms examiner?
A. My formal education consisted of a bachelor of science degree as well as a jurist doctorate degree. I received specialized training at the FBI, the ATF, Smith & Wesson Arms, Colt Firearms, Remington Arms, Sig Arms, Glock Arms, and Baretta Arms. I have also done course work in forensic microscopy.
Q. Have you testified before as a firearms expert in Harris County?
A. Yes, sir, on many occasions.
Q. And what are the procedures that you use when you are doing firearms examinations?
A. Well, the procedures would be dictated by the type of evidence that has been submitted in the case. If we have a firearm as well as fired evidence, of

course, the initial evaluation would be to examine the firearm, do functionality testing, and then do test-firing. And then those test-fires would be used as exemplars for comparison, microscopic comparison to the fired evidence.

Q. When you say you do functionality testing, what does that mean?

A. That means that we evaluate the safety devices that are incorporated into the firearm to determine if they are working properly. We determine the trigger pull for the -- which is the amount of pressure that has to be applied in order to cause the firearm to discharge. And as I said, we would actually test-fire the gun to produce known test-fired specimens.

Q. So, is it -- how are you able to determine whether or not another bullet has been fired from that same gun if it wasn't a test-fire bullet?

A. Well, in order to make a comparison of a fired projectile, evidence projectile, back to the test-fires, that would be done microscopically. That would be done utilizing what's known as a comparison microscope, which is actually two microscopes that allow the individual to observe two specimens simultaneously in a split-screen view. You would evaluate the class characteristics that are exhibited on both the test-fires as well as the

evidence. If those class characteristics are consistent, then we go further to evaluate whether or not there is sufficient individual characteristics in order to form an opinion as to whether or not they came from the firearm that we've test-fired.

Q. Okay. Let me make sure that I understand. What exactly are class characteristics?

A. Class characteristics are what we would call general characteristics. For instance, on a fired projectile, you would have the caliber, the number of lands and grooves, the width of the lands and grooves, and the direction of twists and pitch.

Q. Do you think it would aid the jury in understanding your testimony if they were able to see what you were talking about with regard to lands and grooves?

A. I think so. Sure.

Q. I'm showing you an example of a bullet (indicating). Would you describe for me what you mean by lands and groves using that demonstrative?

A. Yes. What you've handed me is a model of a cartridge. A cartridge consists of the cartridge case, the primer, the powder charge, and the projectile. When the cartridge is detonated, of course, the projectile is forced down the barrel. And the baron surface of the

bullet, which is this area on the model, will pick up the impressions of the rifling that are on the interior surface of the barrel. And in this case, this particular model has six lands and grooves. So, the raised areas are actually the grooves and the impressed areas are the land impressions.

And so, in order for -- obviously, in order for a evidence bullet to have been fired from the same gun that we're testing, it would have to have the same rifling characteristics, the same numbers of lands and grooves, the same dimensioned lands and grooves, and it would have to be of the same caliber.

Q. You also, a minute ago, said that one of the things that you are looking for in the microscope is individual characteristics. What exactly are individual characteristics?

A. The individual characteristics are actually finer striated markings that are produced by the imperfection -- the imperfections that are produced during the -- primarily during the manufacturing process of a firearm. And those -- as I say, those individual characteristics will be exhibited on the baron surface, primarily in the lands, as a pattern of striations.

Q. Now, when you are identifying these class characteristics and these individual characteristics, is

that how you are able to determine whether or not a projectile was fired from an individual gun?

A. That is the basis for which I form my opinion as to whether or not a particular projectile has been fired from a gun.

Q. Are you also able to do that with shell casings?

A. Yes.

Q. I'm showing you what has been previously marked as State's Exhibit No. 30, 31, and 32. Do you recognize them (indicating)?

A. Yes, sir, I do.

Q. What do you recognize them to be?

A. Well, the external markings indicate the firearms laboratory number as well as the item designation and my initials. The contents of the packages or the boxes are fired .380 auto Remington Peter brand cartridge cases.

Q. And I'm showing you what's been previously marked as State's Exhibit No. 42. I believe the evidence tag fell off. Do you recognize that (indicating)?

A. Yes, sir, I do.

Q. And what do you recognize it to be?

A. This is a .380 auto Bersa brand, Thunder model,

semiautomatic pistol.

Q. Did you conduct an examination of Items 30, 31, and 32?

A. Yes, sir, I did.

Q. And what was the purpose of that examination?

A. The purpose of the examination was to determine, if possible, whether or not the fired Remington Peter cartridge cases that are contained in State's Exhibit No. 31, 32, and 30 had been fired in that Bersa .380 pistol.

Q. And after your examination of those items, 30, 31, and 32, were you able to reach a conclusion about whether or not they were fired from that Bersa pistol?

A. Based on my microscopic comparison of the fired cartridge cases in this case, State's 30, 31, and 32, against the test-fires that were made with State's Exhibit 42, it was my opinion that the fired cartridge cases were fired in State's Exhibit No. 42.

Q. I'm showing you what's been previously marked as State's Exhibit No. 43. Do you recognize that (indicating)?

A. Yes, sir, I do.

Q. And what do you recognize that to be?

A. The contents of State's Exhibit 43 is a single fired copper jacketed bullet.

Q. And I'm showing -- or I'm also showing you what's been previously marked as State's Exhibit No. 44 and 45. Do you recognize that (indicating)?

A. Yes, sir, I do.

Q. And did you perform an examination on those items?

A. Yes, sir, I did.

Q. And were you able to reach a conclusion about whether or not -- or about those items in regard to that 9-millimeter pistol?

A. Yes, sir, I did.

Q. And what was that conclusion?

A. Based on my microscopic comparison of the projectile that was contained in State's Exhibit No. 43, back to the test-firings that were made with State's Exhibit 64, it was my opinion that the fired projectile contained in 43 was fired in State's 64. Would you like me to recite the results with respect to State's 44 and 45?

Q. I'm sorry. Just to clarify. On State's Exhibit No. 44 and 45, what were your conclusions on those?

A. With respect to State's Exhibits 44 and 45, based on my microscopic comparison, it was my opinion that both 44 and 45 were fired in this 9-millimeter

Ruger pistol.

Q. And State's 44 and 45 are the shell casings?

A. That is correct, sir.

Q. Did you examine that gun for -- or the gun in State's Exhibit 64 for functionality?

A. I did, sir.

Q. What was the result of that examination?

A. It was found to be functioning as designed without any functional issues either during the examination or test-firing.

MR. BALLENGEE: Pass the witness.

MS. McLAUGHLIN: Just briefly, Your Honor.

THE COURT: Thank you.

CROSS-EXAMINATION

BY MS. McLAUGHLIN:

Q. Mr. Baldwin, you testified that you examined the casings of the 9-millimeter, State's 44 and 45, correct?

A. That's correct, ma'am.

Q. And in your examination, is it true that those casings had been run over, correct?

A. Well, I don't know if they had been run over. They clearly appear to be damaged by something, but I don't know what caused the damage.

Q. And in this case, were you provided at all with

any scene measurements or any scene diagrams?

A. No, ma'am, I was not.

MS. McLAUGHLIN: Pass the witness, Your Honor.

REDIRECT EXAMINATION

BY MR. BALLENGEE:

Q. On State's Exhibit No. 43 --

A. Yes, sir.

Q. -- the projectile in this case --

A. Yes, sir.

Q. -- how would you describe the damage that you noted in your report?

A. There is what appears to be a significant abrasion on one side of the bullet and deformity.

Q. What is the damage to the front of the bullet, to the head of the bullet?

A. Well, the bullet -- the head of the projectile is deformed, but it has not expanded. It is a jacketed hollow point, but it's still pretty much intact.

Q. If a bullet, a 9-millimeter bullet like this were to directly hit the ground, how would the bullet -- a 9-millimeter bullet react?

A. Well, that would depend on the surface that it's impacting.

Q. If it were to directly hit concrete, how would

that --

A. You would expect significant deformity on the nose of the bullet.

Q. And is there significant deformity there on 43?

A. On the nose?

Q. Yes.

A. No.

MR. BALLENGEE: Pass the witness.

MS. McLAUGHLIN: No further questions for this witness.

THE COURT: Thank you so much. We appreciate your testimony. You are excused.

THE WITNESS: Thank you, Your Honor.

THE COURT: Next witness.

MR. BALLENGEE: Your Honor, at this time, the State rests.

THE COURT: Very well.

Ladies and gentlemen, the State has now rested. Instead of starting with the defense, we're going to take a break. We'll wait for lunch to get here. And once you finish your lunch, let us know and we'll get things started. Thank you so much. Don't discuss the case, remember.

THE BAILIFF: All rise for the jury.

(Lunch recess)