1	IN THE SUPERIOR COURT OF THE STATE OF ARIZONA			
2	IN AND FOR THE COUNTY OF PIMA			
3				
4	THE STATE OF ARIZONA,			
5	Plaintiff,			
6	vs. No. CR 20124578-001			
7	BRYAN PETER FOSHAY,			
8	Defendant.			
9				
10	Tucson, Arizona			
11	1/13/2014			
12				
13	BEFORE: The Honorable Jane L. Eikleberry, Judge			
14				
15	Appearances:			
16	Lindsay P. St. John, Esq. Appearing for the State			
17				
18	Walter Palser, Esq. and Elena Kay, Esq. Appearing for the Defendant.			
19				
20	Defendant's Motion to Preclude			
21	and Motion to Continue Trial			
22	CATE D. MINCON, CD. DDD			
23	GAIL D. VINSON, CR, RPR Arizona # 50610			
24	Official Court Reporter Pima County Superior Court			
25	Tucson, Arizona 85701			

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THE COURT: This is CR20124578, State of
 1
 2
    Arizona versus Brian Peter Foshay. Would you state
 3
    your appearances, please.
 4
                   MS. ST. JOHN: Lindsay St. John on
 5
    behalf of the State, your Honor. For the record, the
 6
    victim representatives are here in the courtroom. Al
 7
    Blackwell and his daughter-in-law Toby.
 8
                   THE COURT: Thank you.
 9
                   MR. PALSER: Good morning, Judge -- Or
10
    good afternoon. Sorry. Walt Palser and Elena Kay on
    behalf of Mr. Foshay, who is present, out of custody.
11
12
    And we invoke the rules for the motions.
13
                   THE COURT: You invoke the rules, so you
14
    don't want any witnesses present.
15
                   MR. PALSER: Yes, your Honor.
16
                   THE COURT: Anyone who is going to be a
17
    witness other than victim representatives, if they are
18
    going to testify --
19
                   MS. ST. JOHN: They are not, your Honor.
20
                   THE COURT: -- please leave the
21
    courtroom until you are called.
22
              Where do you want to start? Do you want to
23
    start with this motion to preclude the firearms
24
    evidence?
25
                   MS. ST. JOHN: Yes, your Honor.
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1
                   THE COURT: All right. Go ahead.
                   MR. PALSER: Judge, I believe the State
 2
    has witnesses on that issue, and the Court has read the
 3
 4
    motions. I don't want to -- Given our limited time, I
 5
    don't want to repeat everything I said in my written
 6
             At this point I think it might be best to just
 7
    hear the witness and then argue.
 8
                   THE COURT: Call your first witness.
                   MS. ST. JOHN: Your Honor, I would
 9
10
    pronounce that on this point, the defense is the one
    filing the motion. They bear the burden of proof that
11
    the State does, in fact, have witnesses, and we have
12
13
    flown in Mr. Edwards from California prepared to
14
    testify.
15
              But I do think that the Court does have the
16
    ability upon reading the pleadings and finding that the
17
    defense has brought no evidence under which to bear
18
    their burden. And given that the Court has heard
19
    innumerable testimony in other cases about ballistics
20
    and firearm examinations, the Court could determine
21
    that no Daubert hearing is necessary and that these
22
    issues are merely sufficient for cross-examination but
23
    don't rise to the threshold level excluding under
24
    Daubert.
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THE COURT: Mr. Palser?

25

```
1
                   MR. PALSER: Judge, the hallmark of the
 2
    Daubert case is reliability. We are not under the Frye
 3
    standard anymore. This is, in essence, an issue of
 4
    first impression with this Court. We searched for and
 5
    we failed to find a precedent to back up the State's
 6
    position that any Arizona court has decided this issue
 7
    under the Daubert standard.
 8
              Rule 702, which is the new basically
    codification of that Daubert standard requires this
 9
10
    Court to act as a gatekeeper of any type of expert
11
    evidence. And because we are no longer under the aegis
    of the Frye case, certainly our position is that the
12
13
    Court has, I guess, a right and a duty and a discretion
14
    to do that in this case, to make that decision as to
15
    what so-called expert testimony comes in.
16
                   THE COURT: All right. Ms. St. John, do
17
    you have Mr. Edwards present?
18
                   MS. ST. JOHN: Yes.
19
                   THE COURT: I would like him to testify
20
    briefly about his qualifications and about his opinions
21
    about the reliability of the testing that he did.
22
                   MS. ST. JOHN: Thank you, your Honor.
23
    am happy to do that. I want to make sure the record is
24
    clear I also have Frank Powell, a criminalist with the
25
    Tucson Police Department laboratory, who is able to
```

```
talk about the history of firearms analysis. And I
 1
    would propose that we call him second, because
 2
 3
    Mr. Edwards is from out of town, and I am concerned
 4
    about getting his testimony done.
 5
                   THE COURT: Okay.
                   MS. ST. JOHN: Thank you.
 6
 7
                          ROCKY EDWARDS
 8
      was called as a witness and, having been first duly
         sworn, was examined and testified as follows:
10
                   MS. ST. JOHN: Your Honor, before he
    takes the stand can I ask him to get the keyboard? He
11
12
    has a wireless keyboard.
13
                   THE WITNESS: I don't have the
14
    attachment to it.
15
                   MS. ST. JOHN: We will deal with it on
16
    the computer then.
17
                       DIRECT EXAMINATION
18
    BY MS. ST. JOHN:
19
         Mr. Edwards, would you please introduce yourself
20
    to the judge?
21
         Yes, ma'am. My name is Rocky Edwards.
22
         And where are you currently employed?
23
         I am employed by the Santa Ana police department
24
    and am also a contract employee with the Stockton
25
    Police Department in California.
```

```
1 Q Can you tell us about when you first became
```

- 2 | involved in firearms and ballistics analysis?
- 3 A Yes, when I was in the Army in about early -- the
- 4 | late 1980s. I was accepted to the United States Army
- 5 | criminal investigation division where I was trained as
- 6 a forensic firearm and toolmark examiner.
- 7 Q Could you tell the judge a little bit about the
- 8 | school that you underwent at that training?
- 9 A Yes. I was special agent prior to going to the
- 10 | U.S. Army crime lab. And then, when I went to training
- 11 | there, I was sent to most manufacturers of firearms in
- 12 | the United States, trained in firearm toolmark
- 13 | identification and also for -- It was a two-year
- 14 | course, so for two years I trained in firearms and
- 15 | toolmark examination.
- 16 I was sent to the Southwestern Institute of
- 17 | Forensic Scientists in Dallas, Texas, where I trained
- 18 | in the advanced techniques and was then sent to
- 19 Letterman Army Medical Center at the Presidio of San
- 20 Francisco.
- 21 | THE COURT: Let me interrupt. I have
- 22 Mr. Edwards' CV. It's part of the file. I don't think
- 23 | we need to go through all of this training and
- 24 experience. But if there's anything you have to add to
- 25 the CV?

```
1
                   MS. ST. JOHN: No, your Honor. I think
    his CV is fairly detailed. But I want to make sure the
 2
 3
    court understands that he has been doing this type of
 4
    analysis since the 1980s, and that after serving in the
 5
    military he then went on to work in private for law
 6
    enforcement departments doing the same type of work.
 7
                   THE COURT:
                               That's fine. Let's talk
 8
    about the new tests that he used in this case. That's
    my primary concern.
10
                   MS. ST. JOHN:
                                  Thank you.
11
         Now, Mr. Edwards, I want to take you a step back
12
    before the judge's question, which is, are you as part
13
    of your training taught how to go about the examination
14
    or the comparison of a bullet to a test-fire for a
15
    bullet to a gun or a bullet to a barrel cast?
16
    Α
         Yes, ma'am.
17
         And is that the same sort of methodology that you
18
    used using this newer technology?
19
    Α
         Yes.
20
         Okay. Now I want to talk to you about the
21
    technology. How long has confocal microscope been
22
    around?
         It was created in 1955 by Marvin Minski --
23
24
    M-I-N-S-K-I, I believe, is how you spell it. And it's
25
    at Harvard University; that's where they developed it
```

- 1 at. And then this has been around in different
- 2 | sciences and different areas and for the past -- for 50
- 3 years almost.
- 4 Q And, now, also as part of your system is there
- 5 | sort of computer imaging that's being used?
- 6 A Well, the confocal microscope reads into the
- 7 | computer as far as what images it's recording.
- 8 Q And how long has computer imaging been used in
- 9 ballistics analysis?
- 10 A I first saw it in 2001, but it's been around since
- 11 | the 1990s.
- 12 Q Now, this use of confocal combined with 3-D
- 13 | imaging, how long has that been around?
- 14 A Since the 1990s.
- 15 Q Okay. And in this case, specifically this image,
- 16 | you have been able to produce not only a
- 17 | computer-generated image but actually a 3-D image that
- 18 | you can rotate and turn so that you can see it in
- 19 different angles; is that correct?
- 20 A Yes, very similar to the comparison microscope.
- 21 | Q And how long has that 3-D imagery been in use?
- 22 | A Since 2007.
- 23 | Q Now, does this system change the essential
- 24 | analysis that you are doing that you did under a
- 25 traditional comparison microscope?

```
1 A No.
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- 2 Q And can you explain to the judge the benefits or
- 3 | the additional things you are able to see using
- 4 | confocal microscopy and the digital imaging over what
- 5 | you could see in a traditional conventional microscope?
- 6 | A It allows you to look at -- Well, it gives you
- 7 | more clarity, a clearer image. It's always in focus.
- 8 | And the lighting, it's always where you can see what
- 9 | you are looking at. So it's just an easier -- It's
- 10 | just another way of looking at things.
- 11 | The thing is, it's like having an additional
- 12 | scope. So you have, where we have two additional
- 13 | scopes, FSC which has LED lighting, and I like a DM
- 14 | scope, which has incandescence. It has fluorescent, it
- 15 has LED, and different optics.
- And then the 3D is another, basically,
- 17 comparison microscope for looking at different areas.
- 18 Q So for those two microscopes that you discussed in
- 19 | your lab at California are those both comparison
- 20 microscopes with different types of lighting setups on
- 21 them?
- 22 A And objectives, yes.
- 23 | Q Okay. Has this 3-D technology been tested?
- 24 A Yes.
- 25 | Q Can you describe that for the judge? A scientific

- 1 study involving about 600 different unknown bullets
- 2 that were examined?
- 3 A Yes, it was a study just recently finished. 2010
- 4 | it was finished. It's a takeoff from a 1998 validation
- 5 | study by David Brundage where they did an examination
- 6 of ten consecutively manufactured firearms.
- 7 Q And what type of firearms were those?
- 8 A Ruger.
- 9 Q Is that the same type that we are dealing with in
- 10 | this case?
- 11 | A Same brand.
- 12 | Q Please continue.
- 13 A So what they did is they took that study a step
- 14 | further, and they sent it to 623 participants from 35
- 15 | countries around the world, firearms examiners and
- 16 | seven 3-D systems. This is not the only 3-D system
- 17 | that exists. They sent those to the seven 3-D systems
- 18 which participated in this study.
- And what they were doing is they had blind
- 20 | tests in there, as well, and they were looking for the
- 21 | error rates to see -- and they were all consecutive to
- 22 | see if examiners can make proper identifications from
- 23 | these test-firings.
- And so as a result the study came out, there
- 25 was only two areas where two examiners could not make

```
1 identifications, and that was because they had about a
```

- 2 month's worth of training.
- 3 | Q So those were two new examiners?
- 4 A Right. And they were not in the United States.
- 5 Q And were all of the other examiners able to make
- 6 determinations either identifying or excluding the
- 7 objects before them?
- 8 A Yes.
- 9 Q Now, I want to talk to you about this case
- 10 | specifically. How did you first become involved in
- 11 | this case?
- 12 A I was contacted by Detective Musik, and she asked
- 13 | if I would be willing to take a look at the evidence in
- 14 | this case. And --
- 15 | Q And ultimately at did conclusion of looking over
- 16 | everything, all of the microscopy, did you prepare a
- 17 | presentation that ultimately you have given to me as
- 18 | well as the defense?
- 19 A Yes.
- MS. ST. JOHN: I am going to move to
- 21 | admit State's Exhibit 1, which is that presentation at
- 22 this time.
- MR. PALSER: No objection for purposes
- 24 of today's hearing.
- THE COURT: State's Exhibit 1 is

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1 admitted.
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- THE WITNESS: Click on the index.
- MS. ST. JOHN: Sorry.
- 4 Q And, Mr. Edwards, is this the home screen of the
- 5 | presentation that you prepared for myself as well as
- 6 | for the Court?
- 7 A Yes.
- 8 Q Now, looking at this top left corner, is this the
- 9 | gun magazine cartridge as well as the test-fire you
- 10 | originally received?
- 11 | A Those are the ammunition for the magazine and the
- 12 | firearm and the holster and the magazine. So it's
- 13 | pistol, magazine, the holster and the cartridges that
- 14 | were recovered from the magazine.
- 15 Q And did you receive the test fires that were
- 16 | performed by the Tucson Police Department laboratory?
- 17 A Yes, I did.
- 18 Q How many test fires were done by them?
- 19 A Six.
- 20 Q Did you go on to do any additional test fires?
- 21 A Twenty.
- 22 | Q I'm sorry, I am having trouble hearing you.
- 23 A Twenty.
- 24 Q And why did you think it was important to do
- 25 | additional test fires for a total of 20?

- 1 A To study how the microscopic variances between the
- 2 test fires were. They were all identifiable to each
- 3 other. And also studying what type of variations there
- 4 were.
- 5 Q And now over here barrel cast prep, can you
- 6 explain to the judge what we are looking at here?
- 7 A Yes, ma'am. This is how I prepared the barrel
- 8 cast. And it's a silicone type of substance that we
- 9 can put down the barrel. It hardens within five
- 10 | minutes. And you can pull it out almost like a
- 11 | champagne cork, pulling itself right out of barrel.
- 12 Q So does that allow you to create actually the
- 13 | texture to duplicate the texture that's actually on the
- 14 inside of that barrel?
- 15 A It will show the characteristics that are inside
- 16 of that barrel.
- 17 | Q And is that what we are looking at here, this gray
- 18 object next to the ruler?
- 19 A Yes.
- 20 Q Now, once you have a barrel cast, do you do
- 21 | anything to it to prepare it for analysis and
- 22 | comparison to the autopsy bullet?
- 23 A Yes. What I do is I take a paperclip and shove it
- 24 down the center to give it rigidity, and then put some
- 25 | tape around it and cut it back about a edge from the

- 1 muzzle there. So that way I can write on that tape
- 2 | that's on a 2-barrel cast. The silicon, you know it's
- 3 | really hard to mark that.
- 4 Q And what's the purpose of being able to write on
- 5 | the tape around the barrel cast?
- 6 A If I want to, I can put marks or something, a note
- 7 | to me for areas that I need to come back to or
- 8 reference.
- 9 Q So when you are saying you are making notes, does
- 10 | that include numbers, sort of where you start on the
- 11 | barrel cast around the circumference?
- 12 | A I do that on the autopsy bullet and on the
- 13 | test-fire, but I didn't do so much on the barreling
- 14 cast.
- 15 | Q And why do you do that on the autopsy bullet? Why
- 16 | is that important?
- 17 | A To get all the test fires orientated to each other
- 18 | and go back. Once you start working with a bullet, you
- 19 | can find areas that's in agreement present. As you go
- 20 | back and fade back and go back to that area if for some
- 21 | reason you are interrupted or you need to go back to
- 22 one of the different test fires. It saves you from
- 23 | having to do it all over again.
- 24 Q So then down here we have the autopsy bullet. Is
- 25 that --

```
1 A Yes.
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- 2 Q -- the bullet that you were given to compare to?
- 3 A Yes.
- 4 Q You were talking to the judge about how, even
- 5 | though you are doing the same analysis that you would
- 6 on a comparison microscope, you've got some things that
- 7 | are better on confocal. And we were talking about
- 8 | lighting, so I am going to click on that. Can you
- 9 explain to us what we are looking at here?
- 10 | A This is basically showing the lighting is similar
- 11 | to the comparison microscope, the lighting up and down,
- 12 back and forth. So it has the same type of features,
- 13 very user friendly for the examiner.
- 14 Q For some reason I can't see the entire screen.
- And movement. Can you explain what we are
- 16 looking at here?
- 17 | A Yes, there again, very much like a comparison
- 18 | microscope. You can take the bullet back and forth and
- 19 work with it at different angles.
- 20 Q So the image that we are seeing rotating on the
- 21 | screen in front of us, is this an image that was
- 22 | limited on the confocal microscope and pulled together
- 23 on the 3-D imagery?
- 24 A Yes, that's two scan autopsy bullets. And around
- 25 | the base area.

- 1 Q And, then, the ability to zoom, why is that
- 2 | significant and why is that a benefit of the confocal?
- 3 A Because it's always in focus, no matter how far
- 4 you zoom in. Your scope, you are always adjusting,
- 5 | always making adjustments. This is much easier, you
- 6 | come in and out. You zoom in as close as you want and
- 7 | it's going to be in focus.
- 8 Q Now, I want to take you in to the bullet itself
- 9 and some of the comparisons that you made.
- 10 Mr. Edwards, on a standard comparison microscope, are
- 11 | you able to line up, like, the unknown item and a
- 12 | test-fire or a known item and rotate them individually
- 13 | to make sure that they line up with what you are
- 14 looking for?
- 15 A Yes.
- 16 | Q And is that something you are able to do with this
- 17 | type of software, as well?
- 18 A Yes.
- 19 | Q Is there one of these that we should start with?
- 20 | Is there a particularly good area to start?
- 21 | A Any of them. Start with one from the comparison
- 22 | microscope and check one of the ones with diamond and
- 23 3-D.
- 24 Q That brings up another area that was questioned in
- 25 | the defense motion. Did you, in fact, use a comparison

```
1 microscope to begin your analysis?
```

- 2 A Yes.
- 3 Q And were you able to come to a conclusion using a
- 4 comparison microscope?
- 5 A Yes.
- 6 Q And what was your conclusion?
- 7 A That the autopsy bullet was fired by that pistol,
- 8 by the P94.
- 9 Q The P94 or the gun that you were given for
- 10 | testing; is that correct?
- 11 A In my opinion, yes.
- 12 Q Now, why was it then relevant for you to go on and
- 13 | further examine these on the confocal microscope?
- 14 A Well, because the areas of agreement, the way the
- 15 | autopsy bullet was, the reproducibility on that bullet
- 16 | was faint. When the test-fire was fired in the water
- 17 | tanking, this bullet passed I think through.
- 18 Q The brace and accent are a deadly combo.
- 19 You are saying a bullet fired in a water tank
- 20 | is pristine; is that correct?
- 21 A Right. And the bullet that was recovered from, I
- 22 | quess, the autopsy is there's going to be differences,
- 23 going to be changes. So this appeared to have a
- 24 | lighter individual characteristics than the test fires
- 25 did.

```
1 Q And when you are talking about individual
```

- 2 | characteristics, can you explain for the judge the
- 3 classes of characteristics that you are looking for
- 4 during the course of an examination?
- 5 A Yes, class characteristics are characteristics
- 6 that are determined by the manufacturer. In a firearm
- 7 | we are looking at six lands graphs with right twist.
- 8 The manufacture determines that when he makes the
- 9 barrel, when he makes that firearm.
- 10 Then we go in from there to subclass
- 11 | characteristics. Those characteristics are created by
- 12 | like damaged tooling. When they are cutting the
- 13 | rifling there might be a chip or burl on that tool that
- 14 | may cover from that firearm to another or a series of
- 15 | firearms. There may be more than one firearm that has
- 16 | a subclass characteristic.
- 17 | Q So agreement within the subclass narrows the type
- 18 of firearm, but doesn't give you a specific firearm
- 19 | match or exclusion; is that fair?
- 20 A That's correct.
- 21 | Q And then, beyond that, what are you looking at?
- 22 A From there we move to the individual
- 23 | characteristics that are to that firearm. And they are
- 24 | caused during the manufacturing process, from the time
- 25 | they are manufactured, and then from -- it could be

- 1 from abuse of the firearm, you know, different ways,
- 2 | it's not cleaned properly or that type of thing. Rust,
- 3 | corrosion, those things can have an impact on that
- 4 | firearm which will daily make the bullet even more
- 5 individual.
- 6 Q Now, when you are doing something like this and
- 7 | you have got 20 test fires, do you expect each
- 8 | test-fire to have the exact same individual
- 9 characteristics, have the exact same striations?
- 10 A No.
- 11 Q And why not?
- 12 | A Because you have a bullet that's been fired in a
- 13 | nanosecond. It's going through that barrel. And
- 14 | there's different velocities between bullets. I mean,
- 15 | you take a box of cartridges, fire them, and there will
- 16 | be various velocities to each one of them. Plus you
- 17 have a mechanical device firing this cartridge. The
- 18 | bullet is engaging, and it's just there's variances.
- 19 As that bullet engages that barrel and goes down the
- 20 | barrel, it's just not going to reproduce exactly the
- 21 | same every time.
- 22 | Q Is that the advantage of having 20 test fires
- 23 | versus only 6?
- 24 A Yes.
- 25 Q So when we are looking here at the autopsy bullet,

- 1 items that are denoted with a circle, are those going
- 2 to have images from the comparison microscope versus
- 3 | those denoted with a triangle from the confocal
- 4 microscope?
- 5 A Yes.
- 6 Q So let's start with this blue comparison
- 7 | microscope. We can see the little harder on the
- 8 | screen. But we can see sort of a bright graphy color
- 9 on the left and a brighter color on the left with a
- 10 | line of demarcation in the middle. Are those two
- 11 | different items --
- 12 A Yes.
- 13 | Q -- that we are looking at on the same screen?
- 14 A On the right side you would have the autopsy
- 15 | bullet. On the left, this one -- Yes, right is the
- 16 | autopsy bullet.
- 17 | Q Do you need to see to the left?
- 18 A The left is the test-fire from Tucson PD.
- 19 Q The right is the autopsy bullet and the left is a
- 20 | test-fire; is that what you are indicating?
- 21 A Right.
- 22 | Q And can you explain to the judge what we are
- 23 looking for here?
- 24 | A Looking for characteristics that are of common
- 25 | contour and individual characteristics with land

```
impressions and groove impressions. Particularly
 1
    concentrate on the land impressions, because they are
 2
 3
    less likely to have issues with -- Research has shown,
 4
    the research with subclass characteristics, subclass
 5
    characteristics are on the groove and impression areas,
 6
    which would be the area above where the blue lines are.
 7
         And do you know how I get out of this screen,
 8
    Mr. Edwards?
         No, I don't.
    Α
10
         My computer is being strange.
11
                   THE COURT: Ms. St. John, in the
    interests of time, I am not sure that all of the
12
13
    particulars of the comparison that were done are
14
    critical. I think the focusing ought to be whether the
15
    testing done is the product of reliable principles and
16
    methods and whether the testimony that this witness
17
    could give at trial is based on sufficient facts or
18
    data. And I don't think we need to go through all of
19
    the things that he would testify to at trial to decide
20
    these issues.
21
                   MS. ST. JOHN:
                                  I understand, your Honor.
22
    And what I was hoping to do is, first we looked at a
23
    comparison microscope, which is the traditional method.
24
    I would now, like to take you to a confocal image so the
25
    Court can see he is looking at substantially the same
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1 thing. It's the same training he has always had to
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- 2 look at the tool marks, the different striations. So
- 3 | the Court can see that it not only follows the training
- 4 | that he received but the transparency of the process
- 5 and how he carefully documents, which increases the
- 6 reliability, and allows the jurors themselves to look
- 7 at it.
- 8 So we are not going to go into each of these
- 9 points.
- 10 | Q I am now going to take you into one of the
- 11 | confocal areas. And can you tell the judge what we are
- 12 looking at?
- We can, again, see a guideline on the left.
- 14 | It appears to be test-fire 1 on the right, the autopsy
- 15 bullet; is that correct?
- 16 A Yes.
- 17 | Q And you have marked something land impression one.
- 18 Do you see that on the right-hand side?
- 19 A Yes.
- 20 Q And then on the left-hand side we can see these
- 21 | little tiny white lines. What are those markings?
- 22 | A Those are notes to me to show me the areas we are
- 23 | looking at and in case an examiner goes behind me to
- 24 recreate what I did.
- 25 | Q So these little tiny striations in this area, is

```
1 that what the white lines are marking?
```

- 2 A Yes.
- 3 | Q And we can see that the edges don't quite line up
- 4 | in this image. Can you explain that to the judge?
- 5 A That's part of the variances in the test-fire and
- 6 | the autopsy bullet.
- 7 If you go to land impression No. 2, there
- 8 | would be a good example there. Or if you can click on,
- 9 | I think, the red one at the bottom.
- 10 Q This bottom red one?
- 11 A No, the other one. The comparison microscope
- 12 | circled in red. And scroll down. There's an area of
- 13 | agreement with the autopsy bullet to a test-fire No. 20
- 14 | showing the area of comparison on the base area of the
- 15 | shoulder area of the land impression No. 1.
- 16 And then if you will click out of that.
- 17 | Click on the green one or the red one. Click on the
- 18 red one.
- 19 Q So we are looking at that same land impression
- 20 No. 2 you were talking about?
- 21 \mid A Yes, and which is the visual of what the 3-D was
- 22 | showing on that shoulder area. I saw it on the
- 23 | comparison microscope and I saw it there.
- 24 Q So you are saying you see more detail in the
- 25 | confocal microscope and the computer imaging?

```
1 A Yes.
```

- 2 Q There's questions about the ability to change the
- 3 | filter or lighting or the color to see it better. Are
- 4 | you creating something that isn't already there as is
- 5 | scanned in by the microscope?
- 6 A No, it's the same thing we do with the comparison
- 7 | microscope. It's filters. Also, the visual technology
- 8 | we have, as far as digital cameras and comparison
- 9 microscopes, lighting can be changed through that, as
- 10 well.
- So it's -- The reason I use the brass look is
- 12 | because it's similar to what I was looking at on the
- 13 | comparison microscope, a different color.
- 14 Q So you are actually able to make the color this
- 15 appears for you when you are looking at it, but that
- 16 | doesn't change the characteristics that you are seeing?
- 17 A No.
- 18 Q We won't go through it, because I understand the
- 19 | Court is urging us to move past it. But did you go on
- 20 to mark these markings, these matching striations all
- 21 | the way around the autopsy bullet?
- 22 | A My impression of the autopsy bullet, I found areas
- 23 of agreement.
- 24 | Q Did you find areas where there wasn't agreement?
- 25 A Yes, when I am doing an examination I am looking

```
1 at -- There's four possibilities in an examination:
```

- 2 | One is a positive identification, one is an
- 3 | inconclusive, one is an elimination, and one is it's
- 4 unsuitable for examination.
- 5 So when I am doing an examination, if during
- 6 | an examination it becomes an identification, I am going
- 7 to photograph the areas of identification to show, to
- 8 justify that comparison.
- 9 If I am doing an inconclusive, if there's
- 10 | variances to the photographs, I will expose those. And
- 11 | if it's an elimination, I will expose those to show
- 12 | what the basis for the elimination is.
- 13 | Q Because you don't expect it to be exactly
- 14 | identical? Some areas where you don't find an
- 15 | agreement doesn't necessarily mean it's an elimination;
- 16 | is that fair?
- 17 | A Say that again?
- 18 | Q You were saying that sometimes you don't see one
- 19 of the class characteristics -- or the individual
- 20 | characteristics carried over from one bullet to the
- 21 | next, but that that doesn't cause you to automatically
- 22 | exclude the weapon as the item that fired the autopsy
- 23 bullet?
- 24 A No.
- 25 Q And can you explain that?

```
In the study of the different test fires,
 1
         Sure.
    not only this firearm but identifiers, you can see some
 2
 3
    areas be more agreeable or disagreeable depending on
 4
    what the basis for the conclusion is. And maybe in
 5
    different land impressions where this agreement is
 6
    showing. So you have to study the way these variances
 7
    are between the test fires to be able to make that
 8
    determination.
         In addition to preparing this presentation, did
10
    you also prepare a lengthy written report which
    documents your analysis in this case and includes
11
12
    photographs both of comparison microscope and confocal
13
    microscopy that you did in this case?
14
    Α
         Yes.
15
                   MS. ST. JOHN: The State moves for
16
    admission of State's 22.
17
                   THE COURT: Any objection?
18
                   MR. PALSER: I don't see how it's
19
    relevant to this hearing, Judge.
20
                   MS. ST. JOHN: Well, I think the Court
21
    is being asked to consider the reliability of his
    evidence. And I think it should matter to the Court
22
23
    that his evidence has been carefully documented, that
24
    it's highly transparent and that it's duplicable.
25
                   THE COURT: Exhibit 2 is admitted.
```

```
1 MS. ST. JOHN: Would you mind turning
```

- 2 back on the lights?
- Thank you.
- 4 Q Now, in addition to preparing the report yourself,
- 5 do you have a second examiner look over your findings
- 6 and verify what you found?
- 7 | A Yes. Troy Ward from the Long Beach Police
- 8 Department.
- 9 Q And is that a standard practice in your field?
- 10 | A Yes.
- 11 | Q Is that actually required by the testing authority
- 12 in your field however?
- 13 A Yes. Well, they have a certain procedure that
- 14 | they like to see for a peer review. Every case that I
- 15 do for a trial is actually peer reviewed. So I do
- 16 | 100 percent with another examiner.
- 17 | Q Okay. And so this case itself was peer reviewed?
- 18 A Yes.
- 19 Q In addition to having your findings peer reviewed
- 20 by another examiner at Long Beach, have you actually
- 21 | presented on the 3-D analysis as well as your specific
- 22 findings in this case?
- 23 A Yes.
- 24 Q And where have you made those presentations?
- 25 A Mexico, Leon, France, and Interpol. And then the

- 1 country of Cypress and Montreal, and at AFTE for the
- 2 | Chicago --
- 3 Q Would you spell that?
- 4 A A-F-T-E, Association of Firearms and Tool Mark
- 5 | Examiners, which I am a distinguished member of.
- 6 Q Are those symposiums attended by colleagues in the
- 7 | firearms examination field?
- 8 A Worldwide, yes.
- 9 Q And in those presentations and in presenting your
- 10 | specific findings in this case have you ever had anyone
- 11 | approach you either questioning your findings or
- 12 | questioning your methodology?
- 13 A No.
- 14 Q I realize we skimmed over it. But as part of your
- 15 ongoing work, are you required to undergo proficiency
- 16 | testing in this field?
- 17 A Yes.
- 18 Q Can you explain to the judge what's required for
- 19 | proficiency testing?
- 20 A Proficiency testing is that they give us blind
- 21 | evidence and we examine those and give those results
- 22 | back to them. And they determine if we pass that test
- 23 or not, if it's accurate and our conclusions. And my
- 24 | last proficiency test was in June.
- 25 | Q Did you pass?

```
1 A Yes.
```

- MS. ST. JOHN: Thank you. I have no
- 3 further questions at this time.
- THE COURT: Cross?
- 5 MR. PALSER: Thank you, Judge.
- 6 CROSS-EXAMINATION
- 7 BY MR. PALSER:
- 8 Q The proficiency testing you just mentioned, was
- 9 that on the 3-D method?
- 10 A No.
- 11 | Q It's not. It's on the -- Give me a phrase to use?
- 12 | I want to use the old-fashioned way, the way that was
- 13 | done before the 3-D way. What would be the proper term
- 14 for that?
- 15 | A The same way I did in this case, with a comparison
- 16 | microscope.
- 17 | Q And you knew when you got this case from Detective
- 18 | Musik that type of comparison had already been done
- 19 here by the Tucson Police Department?
- 20 A Yes.
- 21 | Q And you knew that their conclusion using that
- 22 | method was that it was inconclusive, they couldn't make
- 23 | a call, correct?
- 24 A That's correct.
- 25 | Q And you actually did that type of comparison

- 1 yourself, correct?
- 2 A Yes.
- 3 Q And you agree with the Tucson Police Department
- 4 | that using that method to conclusion is inconclusive?
- 5 A Using those six test fires, yes.
- 6 Q Using what they did, using the methods that they
- 7 | did, the old-fashioned methods I would call them, it
- 8 | was inconclusive?
- 9 A There again, using the same methods as --
- 10 Q I didn't understand what you said?
- 11 | A I'm sorry. Using the same methods that they used
- 12 | in their test fires, yes.
- 13 | Q So the type of methods that TPD used you would
- 14 | reach the same conclusion of inconclusive?
- 15 A Yes.
- 16 | Q We mentioned proficiency testing. There is no
- 17 | proficiency testing on the 3-D method?
- 18 A No, not that I am aware of.
- 19 Q The 3-D method is fairly knew, correct?
- 20 A No, it's been around for a while.
- 21 | Q This is your fourth case using it?
- 22 | A Yes. Using it like an additional scope, yes.
- 23 Q What was the last part?
- 24 A Using it as an additional scope, yes.
- 25 Q Okay. And I apologize sir, because the fan and

```
1 everything, it's hard for me to hear.
```

- MS. ST. JOHN: If you are done with
- 3 | that, I can turn it off, Walt.
- 4 MR. PALSER: If you would, I would
- 5 | appreciate it.
- 6 Q In this case, the scanning is not even actually
- 7 | available in the United States, right?
- 8 A They are in Boston and Atlanta.
- 9 Q And in this case you took the stuff to Canada to
- 10 | have it scanned?
- 11 A Yes.
- 12 Q By the 3-D imaging company up there in Canada?
- 13 A By one of the Ph.D.s there, yes.
- 14 | Q That was in what, Montreal?
- 15 A Yes.
- 16 | Q As far as the program they use to do that type of
- 17 | scanning, you do not even possess that program in the
- 18 U.S., correct?
- 19 A No, I do not.
- 20 Q That's a proprietary program that that company
- 21 possesses?
- 22 A Yes.
- 23 | Q Do you know who wrote it?
- 24 | A Dandro Berage {phonetic}.
- 25 | Q And when did he write that?

```
1 A I don't know.
```

- 2 Q How is it coded?
- 3 A I have no idea.
- 4 Q How is the mapping done from the computer
- 5 | logarithms to the world imaging in that computer
- 6 program?
- 7 A I have no idea.
- 8 Q What portion of the computer program is one-to-one
- 9 mapping and what portion of the computer program is
- 10 | possibly interpretive, or do you know the answer?
- 11 A I don't know the answer to that.
- 12 Q Okay. I am not trying to overstate things, but
- 13 | fair to say you don't know how the computer program
- 14 works?
- 15 A Only how to use it.
- 16 | Q Okay. But what's behind the actual program that
- 17 | does the mapping, you don't have any knowledge of it?
- 18 A No.
- 19 Q You mentioned a number of your qualifications,
- 20 | which we have seen your CV, and I am not going to ask
- 21 you every one.
- When you started in the Army, they didn't
- 23 | have 3-D testing, did they?
- 24 A What?
- 25 Q 3-D imaging in the Army?

- 1 A Barrel casting but not 3-D imaging.
- 2 Q Not what we are talking about here today, yes?
- 3 This is fairly recent. You have used it on four cases,
- 4 what we are talking about here today?
- 5 A Yes.
- 6 Q So your training and experience did not apply to
- 7 | the new method, because it didn't exist back then?
- 8 A We are talking about the same method.
- 9 Q But the tool being used did not exist for the vast
- 10 | majority of your career?
- 11 A No.
- 12 | Q You mentioned one study from 2013, correct?
- 13 A Yes.
- 14 Q Are you aware of any other studies on 3-D imaging
- 15 | technique?
- 16 | A I know that NHTSA did a study in 2007 or 28, which
- 17 | is National Institute of Standards. And they did
- 18 | testing with 3-D systems back in I believe it was 2007,
- 19 your Honor.
- 20 And they were evaluated on the graphical
- 21 | engineering between poorly manufactured firearms and
- 22 better made manufactured firearms. And the study
- 23 | showed it was beneficial on the more -- the better
- 24 | quality firearms, but not so much on the poor ones.
- 25 | Q Did that have to do with interrater reliability as

- 1 far as making a call as to which bullet came from which
- 2 bunch?
- 3 A No.
- 4 Q That came from testing itself or the testing types
- 5 itself?
- 6 A Yes.
- 7 Q That was not, in other words, a test of the
- 8 examiners?
- 9 A No.
- 10 | Q Even in the 2013 study, what was the rate of
- 11 | interrater reliability in that study --
- 12 A Near zero.
- 13 Q -- to rate.
- 14 A It was zero with the 3-D system all that barrel.
- 15 Q Now, you said there were some examiners that
- 16 | couldn't make a call?
- 17 | A There were two, with one month's training between
- 18 | the two of them. And they are not from the United
- 19 | States. I believe they were from Africa.
- 20 Q Using the exact same methods and the exact ways to
- 21 | compare, does it make a difference where they are from?
- 22 | A No, it matters on the amount of training and
- 23 | expertise they have.
- 24 | Q If they had enough training and expertise to be in
- 25 | the study shouldn't they be able to make a call like

```
1 everybody else?
```

- 2 A A lot of times these studies are very variable.
- 3 | They don't differentiate on how they use those for the
- 4 studies. In other words, the training for these
- 5 | participants were from 1 month to 32 years. So there's
- 6 | no set standard on who gets them to take these tests.
- 7 Q And a lot of this testing is very subjective,
- 8 correct?
- 9 A Yes.
- 10 | Q You are the one who has to make a call?
- 11 | A Ultimately, yes.
- 12 Q It's not the computer that makes a call?
- 13 A No.
- 14 Q You don't enter a bullet, for example, an autopsy
- 15 | bullet, a test-fire bullet, into the computer and have
- 16 | them man it, and the computer says here is your answer?
- 17 A I wish it was that easy.
- 18 Q It's something that has to be interpreted by
- 19 | somebody like yourself?
- 20 A It's a combination of objective and subjective
- 21 | analysis.
- 22 | Q But, ultimately, it's a subjective call?
- 23 A As in all sciences.
- 24 | Q Okay, so that's a yes?
- 25 A Yes.

```
1
    Q
         Thank you.
 2
              You mentioned in interview with us that every
 3
    time you work with one of these systems they get
 4
    progressively much more advanced?
 5
         Based on the imagery.
         So, once again, that's a yes, right?
 6
 7
         Well --
    Α
 8
         They get more advanced every time?
         The images get better and better as to the clarity
10
    of those images.
         If this is your fourth case, is this a more
11
12
    advanced system than the previous three?
13
         It's got clearer images than the previous three,
    yes. It's 3-D, HD3, and the other one was 3-D.
14
15
         So you remember we had an interview with you on --
    looks like 11/12/13?
16
17
    Α
         Yes, sir.
18
    Q
         In my office?
19
    Α
         Yes.
20
         I suppose Ms. St. John provided you a copy of your
    interview?
21
         She did.
22
    Α
```

Have you had a chance to look at that?

MR. PALSER: As soon as I get this

23

24

25

Α

I did.

- 1 marked I would like to approach the witness, Judge.
- 2 | Q All right, I will show you what has been marked
- 3 Defendant's Exhibit A. Is that a copy of the interview
- 4 | you did with myself and Ms. St. John and Ms. Kay?
- 5 A Yes.
- 6 Q If you would glance at page 7, please, sir.
- Right towards two middle of the page, Line
- 8 No. 20, I believe we were talking about the systems
- 9 that were used. And your answer there on line 20 was:
- 10 | The system every year, every time I work with these
- 11 | systems, this is my fourth case, they get progressively
- 12 | much, much more advanced. The system that I am using
- 13 | is much more advanced than what this is.
- 14 | A That's imaging. You didn't ask me how it was
- 15 | advanced based on the imagery.
- 16 | Q Those were your words, "Every time the system gets
- 17 | more advanced"?
- 18 A Right.
- 19 Q The software would have to be changed every time?
- 20 A I don't know how they do it, but it was better
- 21 | than it was before.
- 22 | Q You don't know the nuts and bolts, but you get a
- 23 | better picture?
- 24 A I don't know how it works you, but --
- 25 Q Oh, so you don't know anything about the

- 1 reliability of the computer system itself?
- 2 A Well, they have been testing throughout the United
- 3 States and the world. They are being used worldwide as
- 4 | far as whether checking for shootings amongst other
- 5 | shootings, test fires, and then correlating those
- 6 results to pick a candidate list for comparative
- 7 | analysis. So they are being used and correlations are
- 8 being done with those as well.
- 9 Q That's based on one study from 2013?
- 10 | A No, that's since it's inception with the heritage
- 11 | system. I guess they started back in 1993.
- 12 | Q Now, you said on direct examination with Ms. Kay
- 13 | that we have had this type of 3-D system since 2007?
- 14 \mid A The one with the HD 3-D, HD 3-D has been since
- 15 | 2010. The 3-D system has been since 2007. And before
- 16 | that there were two-dimensional systems from 1993
- 17 | forward.
- 18 | Q Okay, so the 3-D system was not tested worldwide
- 19 in the 1990s?
- 20 A No, two-dimension systems were.
- 21 | Q I understand that. But the 3-D system didn't
- 22 | exist in the 1990s to be tested?
- 23 A In 2007 the existence became available.
- 24 | Q So it couldn't have been tested prior to 2007?
- 25 A No, you are right.

- 1 Q In the case that we are dealing with here today,
- 2 | that was a total of 26 test fires, correct?
- 3 A Yes.
- 4 Q Six of those done by the Tucson Police Department,
- 5 | 20 of those done by you?
- 6 A Yes.
- 7 | Q And you did not image all 26?
- 8 A No.
- 9 Q Let me back up a step. When we talk about doing
- 10 | the imaging, you yourself don't actually do the
- 11 | imaging?
- 12 A No.
- 13 | Q You took the items to Montreal. You stood there
- 14 | and watched a technician do something with a computer
- 15 | to get the imaging?
- 16 | A I watched the FHD that created the system enter it
- 17 | in the system.
- 18 Q So they do some kind type of scan while you watch;
- 19 is that fair?
- 20 A Yes.
- 21 | Q You, yourself, do not do the scanning?
- 22 A I did not do the scan, no.
- 23 | Q You don't have any way to evaluate the scanning or
- 24 | the person doing the scanning?
- 25 A I am sure he is very qualified in doing that.

```
1 Q Any studies to back that up?
```

- 2 A I mean, he create systems, a PhD, and --
- 3 | Q So you can't evaluate his work --
- 4 A No.
- 5 Q -- fair?
- Out of the 26 test fires, how many did you
- 7 image?
- 8 A Four.
- 9 Q And you specifically basically selected out the
- 10 four to use?
- 11 | A Well, they were randomly selected.
- 12 Q Okay, so randomly selected. You took all 26. You
- 13 | put them in a hopper or a hat. Let's use a hat. Put
- 14 | all 26 in a hat and you have got an assistant and you
- 15 | had them blindfolded and had them randomly pick out
- 16 four?
- 17 A No, I don't do it that way.
- 18 Q Okay. You actually looked at them all before
- 19 deciding which ones you were going to image?
- 20 A Well, I identified all 26. They are all
- 21 | identifiable with each other.
- 22 | Q You screened them all?
- 23 A Well, examined them, yes.
- 24 | Q Well, the first thing you did was screen them on
- 25 the microscope, correct?

- 1 A I scanned them, yes.
- 2 Q Okay. And you wanted to make sure that you can
- 3 | identify the test fires to each other?
- 4 A That's important in an examination, because if you
- 5 | can't -- if you can't identify the test fires to each
- 6 other, than you are not going to be able to identify
- 7 | them to the firearm that suspect, or eliminate or
- 8 agreement or anything. So the examination was done,
- 9 right.
- 10 | Q So you took before that, we are in agreement with
- 11 | each other?
- 12 A They were all in agreement with each other.
- 13 Q And you found two of them that you liked, and you
- 14 | got two from your group, two from the other group?
- 15 A I chose two from Tucson PD and two from my test
- 16 | fires that I did.
- 17 | Q If I can refer you to page 43 of your interview
- 18 | you did with me. And at the very bottom of page 43,
- 19 | were your words there you found two of them that you
- 20 liked? It's line 41, sir.
- 21 A Right.
- 22 | Q And then you continue over to the next page. And
- 23 | you indicated that you would have to look at your
- 24 | notes, but you got two of them from your group that you
- 25 | decided to take, and you picked No. 20 because of the

- 1 it was of the 20, and you picked either No. 1 or 4, and
- 2 | you go on to say, I picked one of those, not the first
- 3 one, and I took one or two of the ones from Tucson.
- 4 | And later on in that page on line 14 the question was:
- 5 | And you made sure you had four? What was your term on
- 6 that, the test fires are great --
- 7 A Right.
- 8 Q -- and your answer there on line 17, sir?
- 9 A That I could identify test-fire to test-fire.
- 10 | Q Because if you take something that's not matching
- 11 | up to itself, you are just wasting your time?
- 12 | A Like I said, they were, all 26 were, identifiable.
- 13 | Q And yet you used these four?
- 14 A As in the first time this question was asked, I
- 15 | stated that it was random.
- 16 | Q It's random after you have selected three?
- 17 A There's time constraints on that.
- 19 | fires from your group and two test fires from TPD's
- 20 group?
- 21 A Yes.
- 22 | Q You did not put them all in a box and draw out two
- 23 or four or six or eight?
- 24 A No, I did not.
- 25 Q You chose which ones you were taking?

```
1 A Which is standard. I mean, it's not something
```

- 2 | that's unusual.
- 3 Q Not saying it's unusual. I am just saying you
- 4 choose the once?
- 5 A Yes, I did choose them.
- 6 Q I want to sure I understood when you were talking
- 7 to Ms. St. John. All bullets will not reproduce the
- 8 same way every time fired from the same gun?
- 9 A I believe that replica, no, it won't be
- 10 | Q And so there will be variations between test
- 11 | fires?
- 12 A There will be microscopic variations, yes.
- 13 Q Even using the same gun?
- 14 A Yes.
- 15 | Q And you agree with me when you are doing your
- 16 | examination that you are more in tune with agreement
- 17 | than disagreement?
- 18 A No.
- 19 Q I am trying to read my own notes here.
- Sir, you have still got that transcript up
- 21 | there in front of you?
- 22 A I do.
- 23 Q Page 26, please.
- 24 A Okay.
- 25 Q Line 4. The question I asked there was: "Do you

```
1 look for disagreement?"
```

- 2 And what was your answer there or line 6?
- 3 | A I said, "I am more in tune with agreement than
- 4 disagreement."
- 5 Q So, like I said, you are more in tune for
- 6 agreement than you are for disagreement.
- 7 A In a lot of comparisons, once the agreement starts
- 8 to come into alignment I am going to start identifying
- 9 those areas of agreement. If it's elimination, the
- 10 | same way with elimination. It's not that I am more in
- 11 | tune. It's whatever that comparison is showing me and
- 12 | whatever that evidence is saying to me when we examine
- 13 | it.
- 14 Q In this examination, this was not a blind
- 15 | examination?
- 16 A No.
- 17 Q You knew what case it was?
- 18 A Yes.
- 19 Q You knew what, obviously, Detective Musik wanted
- 20 tested?
- 21 A Say that again?
- 22 | Q You knew what items Detective Musik wanted
- 23 | testing?
- 24 A Yes, he sent them to me, yes.
- 25 Q You were provided one gun?

```
1
    Α
         Yes.
 2
         You weren't provided any other guns?
 3
    Α
         No.
 4
    Q.
         There was no control guns used?
 5
         No.
    Α
         You did not do comparisons to any other .40
 6
7
    caliber guns and make any test fires from those?
8
    Α
         No.
 9
                   MR. PALSER: May I have just a moment,
10
    Judge?
11
              That's all we have for now, Judge. Thank
12
    you.
13
                   THE COURT: Ms. St. John, anything
    further?
14
15
                   MS. ST. JOHN: Your Honor, may I have
16
    just a moment?
17
              Did you need a break?
18
                   THE WITNESS: Yes, if I could go to the
19
    restroom?
20
                   MS. ST. JOHN: May we take just a
    five-minute break, your Honor? Mr. Edwards had asked
21
22
    me in advance if we could break at the halfway point.
23
                   THE COURT: This better be way past
24
    halfway. It's five after 4:00. Go ahead and take your
25
    break.
```

```
But can the lawyers stay so we can use this
 1
 2
    time?
 3
                   MS. ST. JOHN: Of course, your Honor.
 4
    He just needed a few minutes.
 5
                   THE COURT: That's fine. Go ahead.
              Did you say you had another witness you
 6
 7
    wanted to testify on this issue?
 8
                   MS. ST. JOHN: Well, I have another
    witness available. And the question is whether the
 9
10
    Court needs to hear -- The question is whether the
    Court needs to hear from Mr. Powell. We have disclosed
11
12
    Mr. Powell. He is with the Tucson Police Department
13
    laboratory. He has been there for a long time.
14
    because part of the issue raised in the defense motion
15
    is the underlying science of toolmark analysis, I have
16
    Mr. Powell prepared to testify about that, as well.
17
              If the Court's primary concern is about
18
    the -- not only the method used in this case but also
19
    the 3-D imagery in this case, then I don't know that we
20
    need call Mr. Powell. But I did want to make sure that
21
    he was available for the Court, to answer any questions
22
    that the Court had about that.
23
                   THE COURT: I assume there's no serious
24
    argument about the methods that have been used in the
25
    past?
```

```
MR. PALSER: Judge, we are focusing more
 1
 2
    on the --
 3
                   THE COURT: So we don't need to call
 4
    Mr. Powell?
 5
                   MR. PALSER: I agree. We would object
 6
    to calling Mr. Powell now. He was disclosed. We asked
 7
    for an interview with him tomorrow morning. That's the
 8
    first time he could get that scheduled on everybody's
 9
    schedule. I would object to that.
10
                   MS. ST. JOHN: That was the first time
11
    we could get him set up given the times we were given
12
    by counsel, given he was disclosed right before the
13
    Christmas holiday.
14
                   THE COURT: And you also have another
15
    witness here about this issue?
16
                   MS. ST. JOHN: I only have the two. I
17
    believe they may have subpoenaed somebody else.
18
                   THE COURT: Do you folks have testimony
19
    you want to present on any of this?
20
                   MR. PALSER: No. I would ask you to
21
    take note of the testimony and the results of
    Ms. Bishop who did the original TPD analysis.
22
23
                   THE COURT: All right, that's fine.
24
                   MS. ST. JOHN: May I advise Ms. Bishop,
25
    who is here as well as Mr. Powell, that they can be
```

```
excused then, your Honor?
 1
                   THE COURT: Actually, is it okay if my
 2
 3
    bailiff does this to save your time?
 4
                   MS. ST. JOHN: Yes, thank you.
 5
                   THE COURT: Come on back up, sir.
 6
                   MS. ST. JOHN: Thank you for allowing us
 7
    a brief recess.
                      REDIRECT EXAMINATION
 8
    BY MS. ST. JOHN:
10
         Now, Mr. Edwards, I wanted to go back over with
11
    you some of the areas that were covered just now with
12
    you with Mr. Palser.
13
              Okay, the first is this idea of being in tune
14
    with identification versus exclusion. During the
15
    course of your career, have you ever made exclusions
16
    when comparing two items?
17
    Α
         All the time.
18
         And you were asked whether there was a control gun
19
    or another .40 caliber weapon those test fires were
20
    using. Is that something that you would normally do
21
    based on your training and experience?
22
         No, not in casework, no.
23
         Is that something that's required in proficiency
24
    testing for you to then create your own additional test
```

fires from another weapon to compare?

```
1 A No.
```

- 2 Q And you were talked to about the Ph.D. who created
- 3 | a software that was used in this case. Is he, in fact,
- 4 | the same Ph.D. that worked on that 600 bullet study
- 5 | that you were discussing from 2013?
- 6 A Yes.
- 7 Q You talked to Mr. Palser about how this isn't
- 8 something where the computer takes the images and
- 9 processes it and then just pops out a result, it's a
- 10 | match or it's a exclusion, but this is something where
- 11 | you have to actually look at the imagery and determine
- 12 | whether or not it's a match; isn't that correct?
- 13 A That's correct.
- 14 Q And is it true that, in fact, your verifier also
- 15 | has to look with his own eyes and make his own
- 16 | analysis?
- 17 A Yes.
- 18 | Q And in this case you talked about -- you clarified
- 19 | with Mr. Palser that it's not, in fact, a new method
- 20 | that you are using, it's just different technology to
- 21 enhance the old method; is that correct?
- 22 | A Well, I think it's different technology. You
- 23 | have, like, a different way of looking at it. So it's
- 24 | like having, in my case I have three different
- 25 | microscopes to work with, and it's just like I have an

- 1 additional microscope. So it's just something to help
- 2 look at those areas with a bit more clarity that would
- 3 be much more difficult with a comparison microscope.
- 4 Q And when you are looking at these images on the
- 5 | bullet track system, are they just more detail of what
- 6 | you have already seen on the comparison microscope or
- 7 | are you seeing something entirely new?
- 8 A It's not seeing something entirely new. It's just
- 9 more clarity, a different type of image. But when I am
- 10 | doing this analysis, it's not so much -- 3-D is not the
- 11 | most important part of the comparison. It's the actual
- 12 comparison microscope.
- 13 | Q So your initial comparison using the comparison
- 14 | microscope, once you had the additional test fires as
- 15 | well as the barrel cast that you developed in this
- 16 | case, for you all of that information was conclusive
- 17 | before you even went on to the confocal microscope?
- 18 A No.
- 19 | Q Can you explain?
- 20 A Yes. In examining with a comparison microscope
- 21 | looking over 3-D, if there's agreement there and I am
- 22 | seeing agreement with the comparison microscope, that
- 23 | would be expected. If I am looking at the comparison
- 24 microscope and the 3-D, and I don't see any agreement
- 25 | in those areas, that would be a red flag to me.

```
1
              But for me to make an identification it has
 2
    to be done with a comparison microscope. That's the
 3
    only standard that's accepted in the United States, and
 4
    that's the standard that I used in this case and in
 5
    every case that I have ever done in 3-D. So it's only
 6
    used as a supplement, not used as the main scope.
 7
                   MS. ST. JOHN: Thank you. I have no
 8
    further questions.
 9
                   THE COURT: May this witness be excused?
10
                   MS. ST. JOHN: Unless the Court has
11
    anything further for him, certainly he may be.
                   THE COURT: Thank you. You may be
12
13
    excused.
                   THE WITNESS: Thank you, ma'am.
14
15
                   THE COURT: Mr. Palser, argument?
16
                   MR. PALSER: I am trying not to repeat
17
    everything we put in our motion, Judge.
18
              But certainly the Court has heard the
19
    testimony today. And the question here is more the
20
    question of what is science. And, you know, contrary
21
    to what Mr. Edwards said, science is not subjective.
22
    There's not some, Gee, I think it looks like something
23
    so it must be. Every call in science is made
24
    ultimately subjectively, I don't think most scientists
25
    are going to agree with that. Science is all about
```

what are the underpinnings.

1

5

8

9

10

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25

You heard nothing about, because it' not in 2 3 the evidence, what is the basis for the computer 4 program, how exactly the items are then scanned into the 3-D computer, the 3-D imaging system. There's nothing to back any of that up to determine that it's 6 7 reliable or unreliable. This Court has a paucity of evidence on that issue for sure.

And then, if you look at, Judge, and I think our line of questioning was pretty clear so I am trying to keep this as brief as I can. But when you look at the methods that were actually applied here, this is not a blind test.

This is not the type of test, Judge, where if you look at DNA -- I mean that's the gold standard. DNA testing is done -- And this is argument I know this is not in testimony. But DNA testing, the analyst is sent a blind sample and told: Give us a result. That's how they test their proficiency every year. have done a huge number of those cases and they are not told, here is what we are looking for. They are not told, here is the profile we would like you to find. Test this sample and see if you find it. That's not a blind test.

> A blind test was not done in this case. This

```
54
    reminds me of the old real estate appraisals that
 1
    under-lied the real estate bubble. They used to call
 2
 3
    them MIA appraisals, which they joked about, there's
 4
    some fancy joke for that, but it's short for made as
 5
    instructed. But that's what happens when you don't
 6
    have a blind test. That is not in any way, shape or
 7
    form science.
 8
              Then you look at the selection of the test
    fires versus random selection. And, once, again, I
 9
10
    certainly take exception, or I argue, however you want
    to put it, with what Mr. Edwards defines as random.
11
12
    Random is not -- if we look up Webster's I am pretty
13
    sure I will be right. Random is not screen out the
14
    ones I like, and I am going to take those four and test
15
    those and ignore the other 22. Random would truly be
16
    my example of putting all 26 into a hat and drawing out
17
    two or four or however many you intend to test. So
```

There's no studies backing up the 3-D imaging. Mr. Edwards kept talking, and that's why I tried to redirect him on that well. In the 1990s there are these studies. None of that stuff applies to something that wasn't in existence until 2007.

there's certainly no randomized testing in this case at

18

19

20

21

22

23

24

25

all.

And even the stuff that was in existence in

```
2007, in Mr. Edwards' own words, every time he does
 1
    this, it's a different program. It has to be if you
 2
    are going to get different fancier results or however
 3
 4
    you want to determine that it's going to be a different
 5
    program.
 6
              And the question is was this test here in
 7
    this case the product of reliable methods. And you
 8
    heard nothing at all about whether or not the system he
    was using, in his fourth case using this, he had to go
 9
10
    to Montreal, Canada, to use, heard nothing about that
    system being reliable in any way, shape or form.
11
              In addition, Judge, I think the most
12
13
    important thing is looking at the scientific principles
14
    behind this, the lack of blind examination, the lack of
15
    sample validity, the lack of any type of studies shows
16
    interrater reliability using this particular 3-D
17
    method. None of that is good science.
18
              And, as such, Judge, it's not wide enough to
    go in front of a jury.
19
20
                   THE COURT: Ms. St. John.
21
                   MS. ST. JOHN: Mr. Palser is correct,
22
    what he is saying is arguments. He has not provided
23
    the testimony of a single scientist who can come in
24
    here and tell you that the methodology used in this
```

case is improper. As the Court knows, the defense has

no obligation to disclose anything unless they intend
to use it at trial. But certainly they did have the
opportunity and exercised it to check out the gun, the
barrel cast, as well as all of the test fires and the
autopsy bullet in this case for independent testing.

And, while they have no obligation to put on evidence, if they had someone who could come in here and say that the methodology used was improper, you can bet that they would be here, and you would be hearing from them.

So Mr. Palser telling you that this should have been a blind test, when, in fact, we heard directly from Mr. Edwards that that is not the industry standard, it's sort of irrelevant. Much like a DNA sample, or a DNA test, sure, the verification can be a blind test. And we heard that Mr. Edwards has undergone that sort blind testing to receive his yearly accreditation.

However, at his proficiency testing.

However, much like with the DNA tests where you send in a known sample and you send in an unknown, and you ask whether they match, that's what was done in this case. And Mr. Edwards testified that he has made plenty of exclusions over the course of his career.

Furthermore, the idea that the bullet needed

- 1 to be randomly selected is not supported by any
- 2 industry standard by any scientific testimony that you
- 3 have heard before you.
- Finally, the issue of whether there were
- 5 | studies with interrater reliability, you, in fact,
- 6 heard from Mr. Edwards that the study done in 2010 with
- 7 | the 3-D analysis involved interrater reliability. And
- 8 | while I am not super experienced in understanding that
- 9 certainly Mr. Powell and Mr. Edwards discussed that it
- 10 | was near zero, and the fact is that there wasn't bias
- 11 between when somebody was re-examining.
- In this case, we have Mr. Edward using
- 13 | techniques that he has been trained in for over two
- 14 decades. He has honed those techniques over that time
- 15 and used the same method with some additional
- 16 | instrumentality which allowed him to see in better
- 17 detail something he was already seeing on the
- 18 | comparison microscope. So how the scans are generated
- 19 from the confocal and input into the 3-D imaging
- 20 software is irrelevant when he can say those are the
- 21 | same lands, grooves and striations that he was seeing
- 22 on the comparison microscope. It's the same bullets
- 23 | the same test fires, and it's the same analysis with
- 24 better detail.
- For all of those reasons, what he has

testified about today has indicated the hallmarks of
reliability of this method. The fact that this has
been presented specifically, his findings in this case
have been presented without challenge at peer attended
conferences, indicate the reliability.

And, although we didn't go in depth, the fact that the really high transparency of the analysis that he has engaged in, the fact that he takes so many photographs, the imagery that he developed for the presentation that is given both to me and to the defense, so that they can duplicate, look with their own eyes, the jury can look with their own eyes, and the examination he engaged in adds to the reliability.

For all of those reasons we believe we have met the Daubert standard. The Daubert case asks this Court to act as a threshold, but not as a gatekeeper. And we certainly have crossed over that threshold, I would argue well above it, and it's something that needs to be presented to the jury.

THE COURT: Mr. Palser?

MR. PALSER: Judge, I mean, and I am going to mispronounce the case, but Kungnom here clearly says the Court is the gatekeeper for this type of evidence. That's the Daubert standard. Obviously one of the things the State does not address, spent a

```
lot of time about how we got to look at the evidence,
 1
    because that's irrelevant, because that's our right,
 2
 3
    and what I think of how it looks is really not part of
 4
    today's case.
 5
              But whether we check it out and look at it or
 6
    not, that has nothing to do with your decision. What
 7
    does have a lot to do with the court's decision today
 8
    is Mr. Edwards' own testimony where he admitted
    multiple times that ultimately this is a subjective
 9
10
           This is a subjective call on his part.
              If you look at the standards under the United
11
    States versus Rich, quoting Daubert, applying the
12
13
    Daubert standard, the State hasn't met any of these
14
    standards. And the chief thing I would say in
15
    rebuttal, this is all subjective, because Mr. Edwards
16
    told you ultimately this is a subjective call.
17
                   THE COURT: The Court finds that
18
    Mr. Edwards does qualify as an expert in the area of
19
    firearms identification. He has extensive training and
20
    experience doing this, and he can testify as to the
21
    work he did and as to the opinions that he has arrived
22
    at.
23
              Although counsel argues that there's some
24
    subjectivity in arriving at those opinions, I don't
```

think that means that the evidence is not scientific.

```
Scientific evidence often can involve judgment calls
 1
    and opinion testimony by experts. And the fact that
 2
 3
    some of the opinions may be subjective rather than
 4
    entirely objective does not mean that the evidence is
    not scientific or technical and is barred.
 5
 6
              The Court finds that the testimony is the
 7
    product of reliable principles and methods.
 8
    principles and methods used in firearm identification
    have been around for a very long time. Mr. Edwards has
10
    extensive experience with them. And using this 3-D
    confocal microscopy is just a new tool to utilize the
11
12
    same principles and those that have been used forever,
13
    and that this new technology is helpful to an expert
    such as Mr. Edwards involved in this.
14
15
              The Court finds that the 2013 study gives
16
    further support for the use of this technology.
17
              Accordingly, the Court hereby denies the
18
    Daubert motion to preclude the firearms identification
19
    and finds that it's entirely appropriate for
20
    Mr. Edwards to testify to the testing that he did and
21
    the opinions that he reached as a result of that
22
    testing.
23
              Now, we have got a motions to continue the
24
            I didn't see -- I don't think I saw an
```

25 opposition. Is there an opposition to that position?

trial.

```
1
                   MS. ST. JOHN: Your Honor, I am torn.
 2
    The victim representatives are obviously really eager
 3
    to go forward. And at the time of the last defense
 4
    continuance, we adamantly objected. And this is not
 5
    information that was sought prior to the last defense
    continuance. Furthermore, I don't ultimately suspect,
 6
 7
    though I have no inside information, that this is
 8
    information that ATF is going to give up, nor do I have
    any reason to believe that it will lead to a third
10
    party that they can pursue as a defense.
11
              But I do acknowledge that they have the right
12
    to investigate third party defenses.
13
                   THE COURT: Counsel. Sorry.
14
                   MS. ST. JOHN: And with that I quess we
15
    defer to the Court.
16
                   THE COURT:
                               Thank you.
17
              Counsel?
18
                   MR. PALSER: Judge, we certainly --
19
    We -- Let's go back. I do know that the State objected
20
    last time. At that point in time, if my recollection
21
    is accurate, I had been assigned to the case maybe four
22
    or five days. And as I informed the Court that the
23
    first chair of this case had not prepared really
24
    anything on the case.
25
              We did start our investigation. We certainly
```

```
do have a right under Arizona -- or Machado versus
 1
    Arizona, or Arizona versus Machado, I can't remember
 2
 3
    which way the caption is flipped on that, but it's the
 4
    Machado case. I am highly familiar with it. We do
    have a right to investigate these third party defenses
 5
 6
    and certainly bring those out in front of jury.
 7
              The issue in this case, Judge, I think if we
 8
    look at the time line, we certainly requested that
    interview with Agent Brant. We were informed by the
 9
10
    State -- and I understand, Judge, we are not having --
    We are not having a yelling back and forth contest
11
    between myself and Ms. St. John. But at that point in
12
13
    time the State said, oh, sure we will make him
14
    available. They even went as far as to set up an
15
    interview with Agent Brant.
16
              I don't recall if we showed up to that
17
    interview or if it was one on the same day with the
18
    same case, but on that day we were told Agent Brant
19
    will not comply with an interview. We filed
20
    appropriate motions with this Court to try to get that
21
           I am going to paraphrase. The Court basically
22
    told us to go ahead and file a Touhy letter. And we
23
    provided that to Court and counsel.
24
              We have not received a response back.
```

just a couple weeks after the new year's. But

```
certainly, Judge, given the severity of the case and
 1
    certainty of the punishment that is available on this
 2
 3
    type of charge, that we should be allowed to explore
 4
    every single avenue. I have discussed the matter with
 5
    Mr. Foshay. He is willing to waive time obviously to
 6
    do this.
 7
              I think it's important -- He is in a position
 8
    now, Judge, where they can either say yes or they can
 9
    say no. If they say yes, I don't see how we can get
    this done by the trial date next week. If they say no,
10
    I would like an opportunity to explore my obvious
11
12
    options as to what we can take as the next step.
13
    Unfortunately, we are out of time. I will submit that
14
    to the Court, that that's not all on our side of the
15
    equation. But given the severity of the case, I would
16
    ask the Court to continue it.
17
              I am looking at dates. I have dates I could
18
    make available in April.
19
                   THE COURT: Let me ask, you have also
20
    mentioned that the State disclosed a portion of a free
21
    talk between the Attorney General's office and an
22
    individual indicating that someone else indicated an
    interest in killing Mr. Blackwell. Are you doing
23
24
    anything to follow up on that?
25
                   MR. PALSER: We are, Judge. That was --
```

```
I am trying to think of the right way to phrase this,
 1
    not trying to dodge your question. We were disclosed a
 2
 3
    partial portions of that -- I guess that says it
 4
    twice -- about a ten minute section of that. I have no
 5
    idea how long the whole thing is. We did request the
 6
    whole thing from the State.
 7
              Ms. St. John has informed us that's under the
    Attorney General's office, that she does not have that.
 8
    We are going to contact the assigned attorney general
 9
    on that case and request that.
10
                   THE COURT: If I understand, that
11
12
    information was new to you?
13
                   MR. PALSER: Yes.
14
                   THE COURT: All right. Given the fact
15
    that that information has recently been provided and
16
    that counsel obviously wants to follow up on that to
17
    see if it might serve as a basis for a third party
18
    culpability defense as well as defense counsel is
19
    hoping to interview Agent Brant, whether that happens
20
    or not, I don't know, but you think you would be
21
    prepared for trial in April?
                   MS. ST. JOHN: Your Honor, I am afraid I
22
23
    am not available in April. I'm sorry. I didn't bring
24
    my calendar because I was so focused on Daubert. So I
25
    am actually contacting my staff, and she is
```

```
double-checking as we speak. But I believe May 27 I am
 1
 2
    available. If I can have just a minute to verify?
                   THE COURT: I am not.
 3
                   MS. ST. JOHN: Okay, let me double check
 4
 5
    that I don't have something in April.
              I apologize, your Honor.
 6
 7
                   THE COURT: That's all right. While we
 8
    are waiting for that --
 9
                   MR. PALSER: The Court is not available
    the 27th?
10
11
                   THE COURT: Correct.
12
                   MR. PALSER: Because we could look at, I
13
    guess, the next week --
14
                   MS. ST. JOHN: Hold on.
15
                   MR. PALSER: -- the 3rd.
16
                   MS. ST. JOHN: Your Honor, what's the
    last week of April? What's that date?
17
18
                   THE COURT: The 29th, April 29.
19
                   MS. ST. JOHN: I think that works.
20
    may have just a minute?
                   THE COURT: My calendar also reflects we
21
    have some motion to compel or disclose, and I can't
22
23
    find one.
                   MR. PALSER: Judge, quite frankly, I am
24
25
    baffled. I think that is part of the Touhy issue that
```

```
just got reincorporated on the calendar.
 1
 2
                   THE COURT: You don't have that. That's
 3
    good.
 4
                   MR. PALSER: Yeah.
 5
                   MS. ST. JOHN: May I place a phone call,
 6
    your Honor?
                 Thank you.
 7
                   THE COURT: Mr. Palser, are you saying
 8
    you folks are available on April 29?
 9
                   MR. PALSER: Yes, Judge.
10
                   THE COURT: Do you still expect this to
11
    be a seven-day trial?
12
                   MR. PALSER: I think we should, yes.
13
                   THE COURT: And the next week, too.
    Ms. St. John the next week.
14
15
                   MS. ST. JOHN: Your Honor, for April 29
16
    and 2 weeks, I do have a trial the second week, but
17
    this would take priority.
18
                   THE COURT: All right, fine.
19
              And the victim representatives are available?
20
                   MS. ST. JOHN: They are available that
21
    week, your Honor.
22
                   THE COURT: All right. Good cause
23
    having been shown, the trial date of May 22 is hereby
24
    continued to April 29. Rule 8 having been waived, time
25
    is excluded until the 29th of April.
```

```
So we will start April 29, 1:15 p.m. 12
 1
 2
    jurors, seven days.
                   MS. ST. JOHN: And, I don't know,
 3
 4
    obviously we will need to notify folks of the change in
 5
    date. But if we could ask that all subpoenas remain in
    full force and effect?
 6
 7
                   THE COURT: All subpoenas will remain in
    full force and effect.
 8
 9
                   MS. ST. JOHN: Thank you.
10
                   THE COURT: Anything further?
11
                   MR. PALSER: Judge, I believe the trial
12
    for January 22 should be vacated.
13
                   THE COURT: Did I say something
    different?
14
15
                   THE CLERK: May.
16
                   THE COURT: Well, if there was a trial
17
    date in May, we will vacate that, too, because we are
18
    going to do it in April.
19
                   MR. PALSER: I'm sorry?
20
                   THE COURT: We are vacating the trial
21
    date of January 22 and resetting it for April 29.
22
    Thank you.
23
                   MS. ST. JOHN: Thank you.
24
              (Court adjourned at 4:40 p.m.)
25
```

1	
2	
3	* * * *
4	
5	CERTIFICATE
6	
7	I, Gail D. Vinson, do hereby certify that as
8	a Certified Court Reporter for the Pima County Superior
9	Court, I reported the foregoing proceedings to the best
10	of my skill and ability, and that the same was
11	transcribed by me via computer-aided transcription, and
12	that the foregoing pages of typewritten matter are a
13	true, correct and complete transcript of all the
14	proceedings had, as set forth in the title page hereto.
15	
16	
17	GAIL D. VINSON, RPR, CR Arizona License No. 50610
18	Pima County Superior Court Tucson, Arizona
19	
20	
21	
22	
23	
2 4	
25	