IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

BEFORE THE HONORABLE MICHAEL GAFFEY, JUDGE

Department No. 517

THE PEOPLE OF
THE STATE OF CALIFORNIA,

Plaintiffs,

vs.

No. 560543A

GUMARO BAEZ,

Defendant.

_____/

REPORTER'S TRANSCRIPT OF PROCEEDINGS

PRELIMINARY HEARING

SPECIAL CIRCUMSTANCES

HAYWARD HALL OF JUSTICE
HAYWARD, CALIFORNIA

February 17, 2011

Volume III

A P P E A R A N C E S

For the People: STACIE M. PETTIGREW
Deputy District Attorney

For the Defendant: ALBERT J. WAX, ESQ.
RICHARD F. HUMPHREY, ESQ.

The Defendant was also present in custody.

Reported by: LEINAALA YEE GRAY, CSR #2941
SHERREE FRANICH YOUNG, CSR #3657

I N D E X

WITNESSES FOR THE PEOPLE:

MARK BENNETT

EXHIBITS:	FM	ID	EVID
(None marked.)			

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P R O C E E D I N G S

THE COURT: We'll go back on the record in People versus Gumaro Baez.

The Court has read the People's memorandum of law and reread Mr. Wax's motion. Is there any argument before we call a witness or are we going to call that witness now?

MS. PETTIGREW: Yes.

MR. HUMPHREY: I guess I've been nominated, Judge. My understanding was we were going to go ahead and call the witness since there's no jury and we'll -- after the testimony is in, there will be some argument, I suppose.

THE COURT: Perfect. That's fine. We can handle it that way, too. Do you want to call your witness then?

MS. PETTIGREW: Sure. I just kind of wanted to address the aspect of -- that I raised in my motion and inquire as to whether -- if we are trying to establish that this area or field of science is generally accepted within the scientific community, it seems to me it's a great deal more in depth that this examination would go and perhaps even into a further witness to establish that if, in fact, that's where we're going. So would it be possible to somewhat settle that before we begin the inquiry?

THE COURT: All right.

MR. HUMPHREY: Judge, may I respond briefly?

THE COURT: You can, but let me see. Do you have another file?

THE CLERK: I have the file you gave me. This

file right here. Those are the transcripts.

THE COURT: Well, let's see here. I'm just looking at the defense did file a motion. Let's see. Let me find their -- it's called a motion. Notice of motion and motion to exclude or limit the expert's evidence of firearms identification and related testimony.

So are you withdrawing the motion?

MR. HUMPHREY: No.

THE COURT: I didn't hear you say that.

MR. HUMPHREY: No. We're not withdrawing the motion but I thought I should speak to the prosecutor's caveat.

The way that the original motion was filed by Mr. Wax, it cited *Frye*.

THE COURT: Correct.

MR. HUMPHREY: And the foundation of *Frye*, as I'm sure you're aware, Judge, is general acceptance.

In 1928 I suppose and -- and when *Frye* was decided, the toolmark identification such as it is was generally accepted. The methodology -- I won't call it a science because I don't believe that's what it is. I think today there's a raging controversy as to whether or not toolmark identification as it exists at least in the State of California and in the general agreement area upon -- and that's the area upon which *Frye* sits, is -- is logical, is reasonable.

But if you have read Mr. Wax's motion, I think it isn't outside the realm of reason to accept that there is,

in fact, a raging controversy as to whether or not there is general acceptance of the kinds of subjective determinations that are made.

And so I think the prosecutor's pointing out to the Court -- I think that's at the heart of this and I -- I will be, if given the chance, attempting to establish with Mr. Bennett the fact that there are disciplines outside his limited understanding or his limited application of methodology that would discredit the purely subjective view of whether or not a -- a single scratch or a -- or one or two similar scratches on a bullet casing or impressions made on a casing by a receiver or scratches on a bullet match -- match another bullet to the extent that he can say they are from the same firearm.

Throughout his -- we'll get into it when the witness is on the stand, Judge, but throughout his reports he talks about sufficient corresponding individual microscopic marks.

Sufficiency has never been explained. He is not required to explain that. There is no objective standard applied to what is sufficient and what is insufficient. It is left entirely up to you to determine whether Mr. Bennett -- whether his finding of sufficiency is -- is sufficient.

And so I think the prosecutor goes right to the heart of the question. Her -- in her responsive motion she talks about, well -- and I think I have it here somewhere if you give me just a minute, Judge --

THE COURT: Hang on. Before we get to that, let me ask you a question. Isn't every expert called upon to give an opinion?

MR. HUMPHREY: Yes.

THE COURT: That's the nature of an expert's testimony.

MR. HUMPHREY: That's correct, Judge.

THE COURT: So how is this any different than any other expert that gets to come in here and give an opinion?

MR. HUMPHREY: You heard from a DNA expert in this court who had hundreds of pages of methodology that she was required to follow, and as she -- as she followed along to determine whether or not there is sufficient number of alleles and DNA to make a statistical match, she had an objective approach to her opinion.

I think the difference is, Judge, that there is no objectivity in toolmark identification at all. It's completely subjective. And there's no way that I as a litigant could convince you by objective, empirical data that this witness is incorrect because the witness is basing his opinion upon his opinion.

THE COURT: He's not the only expert in the world, is he?

MR. HUMPHREY: He is not, Judge.

THE COURT: So couldn't another expert -- I mean, when they do this firearms identification or the cartridge -- are we talking cartridge or casings? Or the casings -- or cases, cartridges, or slugs? Which is it we

are going to have a comparison of?

MR. HUMPHREY: There's a combination, Judge.

THE COURT: So in experience that I have had with this type of evidence before, usually they put it under a microscope and they take pictures of these things and there's photographs, so it's not all just opinion. It's opinion based upon some physical evidence that they are looking at. I mean, it's just not out of whole cloth.

MR. HUMPHREY: Correct.

THE COURT: So couldn't these photographs be shown to other experts to see if --

MR. HUMPHREY: Well, they could, Judge. The difference is between, say, DNA and toolmark identification, if you take a -- what they call a comparison microscope -- it's actually a macroscope because there's low magnification -- but if you were to take a casing or a slug and you -- on one side and another one on another slide -- side, you are taking a small slice of that entire picture. This is 2-D; not 3-D. Although there is 3-D technology out there, it is not employed by the Oakland Police Department.

So I think what I'm trying -- what I'm getting at is one might take two dissimilar casings or two dissimilar slugs, continuing to turn them until a sufficient number of matching microscopic defects are found. Whatever that means. You don't see the entire back side of the -- of the -- whatever it is we're looking at.

THE COURT: Don't you get to cross-examine him about that?

MR. HUMPHREY: I do. I hope.

THE COURT: That's what I mean. It doesn't mean --

MR. HUMPHREY: I thought that's what her argument was going to. That the guts of this has already been decided by *Frye* so we're not going to go there.

THE COURT: Well, I think you get to cross-examine the expert. Okay. I look at *Leahy* which is --

MR. HUMPHREY: Yes, Judge.

THE COURT: I don't know if it was cited or --

MR. HUMPHREY: It is cited.

THE COURT: So in *Leahy*, don't they say that if it's been -- if there's a reported case that governs where the science has been used, then you don't get a *Kelly/Frye*?

MR. HUMPHREY: Yes, Judge, that's true. But we don't have science. What we have is a methodology. It isn't science. At least from my perspective.

THE COURT: Okay. So then if you're saying it's not science, why would we get a *Kelly/Frye*?

MR. HUMPHREY: Well, because it's a methodology that's -- that has morphed its way into the moniker of science. I don't know how that's happened. You're correct --

THE COURT: Do we get a *Kelly/Frye* every time we are going to call a psychologist who is going to tell us about some new syndrome or something like that?

MR. HUMPHREY: Are we going to have a *Kelly/Frye*?

THE COURT: Uhm-hmm.

MR. HUMPHREY: I don't know, Judge. I just know that in the scientific community -- there isn't this raging conflict in the psychiatric community that there is in the toolmark community.

Right now there are -- there's disagreements all over the world by experts in toolmark and firearms identification over the type of -- or over the lack of objectivity. And this is going on and has been. And we have, as I'm sure you're aware, the *Daubert* case is federal. Federal takes a different view.

THE COURT: Well, let's take a look at *Daubert*. *Daubert* makes it easier to get in. I mean, the whole *Daubert* perspective was that *Daubert* and *Kumho Tire*, they talk about they don't want to keep out new evidence. So that standard, it seems to me, based on the federal, would make it easier to get in this kind of thing; not more restrictive. It's been accepted in California for many, many years, so under *Daubert*, I don't think that makes it harder to get it in. I think it may encourage it to be in.

MR. HUMPHREY: Well, I certainly wouldn't argue with the Court's reading of either of those cases. However, *Daubert* set out six, if I recall, and I can recite them if you wish --

THE COURT: I've read the papers. I know what -- I've read your papers. I've read her papers.

MR. HUMPHREY: Which *Kelly* does not. The firearms expert in this case is a -- one that we're all familiar with. At least --

THE COURT: I'm not.

MR. HUMPHREY: Okay. Well, I am. And, however, the methodology that he employs -- and that's what I thought the prosecutor was talking to -- the methodology that he employs is -- is not without objection in the scientific, if you will, community. It is no longer a generally accepted principle.

There was a time, as this Court is aware, where mariners would not travel far from shore because it was an accepted principle that the world was flat.

There was a time when the earth was thought to be the center of the universe and we all thought that the sun and the planets revolved around the earth. But that has been --

THE COURT: Some of us still think we're the center of the universe, don't we?

MR. HUMPHREY: Okay, Judge.

THE COURT: Go ahead.

MR. HUMPHREY: But I guess what I'm trying to speak to, I thought I heard from the prosecutor, Hey, Humphrey, you don't get to do this stuff because this has all been decided long ago. We have had it for years. And she cites that in her -- in her papers, and what's the big deal?

Well, the big deal is, Judge, that there's no -- the whole *Frye* analysis is based upon a -- a general acceptance, and I guess what I'm arguing to you this morning is general acceptance is no longer the state of affairs when

it comes to toolmark identification and firearms examination.

THE COURT: Okay. I have read your papers. It appears -- and I've read the citations to some of the -- the cases and the paragraphs that you refer to. I've read your attachment, Exhibit Number 1.

It seems to me that what is going on when you talk about a raging controversy is that science undoubtedly progresses. We have -- you know, we don't use buggy whips and horses and buggies anymore. We progress.

Some, quote, unquote, experts will make a handsome living telling us why what we've been doing for a hundred years is wrong or what we've been doing with DNA is wrong and that -- that -- there was a raging controversy on the admissibility of DNA for years which was certainly -- I don't know if you want to say caused by or perpetuated by Dr. Grimbaum, I think, if I'm not mistaken, was the guy's name. Probably made a handsome living.

Now you've cited to this Strengthening Forensic Science in the United States from the National Research Council. I certainly don't put that in the same boat as Dr. Grimbaum.

However, in looking at your papers and in looking at what you've described and what the article describes, I think what they are saying is that with enhanced science, we can improve practices, Number 1.

There's another somewhere -- I don't remember where it was in here -- one of these reports that was cited

was talking about creating a national database and the feas- -- it was a feasibility study for a national database for toolmarks on casings, cartridges, and slugs, and they decided they weren't going to do that. They recommended against doing that. Maybe because the science isn't ready. Maybe because the computer systems aren't ready.

But there could be many other reasons. It could be that there's not enough money to do it. I mean, we all would like to drive a Rolls Royce maybe, but certainly none of us can afford -- or some of us can't afford a Rolls Royce.

The State of California would like to do tons of stuff and in doing tons of stuff they got a 20 billion dollar deficit so now they're going to have to pull back and not do all the things they wanted to do.

I'm not sure that simply because some study recommends against a firearms database is necessarily saying that all the science that we've used up until now is not a valid basis for forming a database. It could be that they -- it's not appropriate.

Looking at who is fighting over this, you have the FBI wants to have one database, the ATF wants to have a different database. There's turf wars between some of these federal agencies. There could be lots of reasons why some people are recommending against having different kinds of computerized databases.

Another thing is DNA is the kind of thing that every person in the United States has -- has it. Every

animal has it. When we're talking about firearms databases, we're talking about a very small number of cases, criminal cases that are prosecuted involve firearms. You can have murders all the time with strangulation, stabbing, getting hit by cars, people, you know, doing all kinds of things, and you don't need a database for any of those cases that relates to firearms.

So firearms is a somewhat narrow science as compared to reasons why you would want to have a DNA database. And they have that CODA system. Somebody's got that NIBIN, National Identification -- I don't even know what NIBIN stands for but I have heard talk of that or saw it in your papers or one of the articles I was reading.

I'm not convinced that you're entitled to a *Kelly* hearing. It's not a new scientific technique. You yourself has said he's using old science or old non-science.

For the -- one is in looking at a couple of cases, *People versus Huggins*, interesting Alameda County case decided by the Supreme Court in 2006. That involved hair comparison. Different than what we have here. Hair comparison was permitted.

The defendant in *Huggins* asserted that there were developments in other jurisdictions that called into question the introduction of hair comparison. They cited to a Canadian study, a federal district court case, a book by one Barry Scheck that challenged hair comparison, Law Review articles, and the California Supreme Court said in *Huggins*, well, all that being said, still California courts have long

assumed that hair comparison is the sort of evidence that has some logical bearing in the case and the jury gets to hear it, and in *Huggins* they said that was fine related to hair comparisons.

One of the cases cited by the prosecutor is *People versus Hawkins*, 1995 case, 10 Cal.4th, and in *Hawkins* they had two qualified ballistics experts who said that the bullet in Crime One was fired by the same gun as the bullet in Crime Two. They recognized that, quote, it's not an exact science, and, quote, but there can be acquired knowledge of when enough -- I'm having problems here with my writing -- similarities -- let me strike that second quote.

Essentially what my notes from reading this case last night seemed to say is that an expert can acquire enough knowledge when having enough similarities on a bullet to know that it -- to form the opinion that it's from the -- they are both fired from the same gun.

So I think that *Huggins* says that while there may be people who are naysayers out there, there may be studies, there may be cases out there that take a different view if it seems to be relevant to the crime, and it's -- it's up to the jury or the fact finder -- in this case I guess it would be me -- to determine whether or not it's reliable enough. But it is relevant.

And then under *Hawkins*, they seem to be saying it's not the holding of the case, admittedly, but it is the California Supreme Court saying that that was the basis for linking those two crimes together was -- among other items,

was the ballistics evidence. They didn't find that to be inadmissible and they did say that there was some questioning of the expert as to the nature of the science and how much information he had upon which to base his opinions.

There are other cases cited in the prosecutor's memorandum that go back many, many years. We've got firearms evidence used in the State of California going back into the -- at least 50 or 60 years.

I think the Evidence Code outlines areas that you can cross-examine the expert on, but it doesn't -- I don't think you get a *Kelly/Frye* hearing. We're not going to have one of those. You can cross-examine him. I've read through the Evidence Code sections and California Evidence Manual by Justice Simons on cross-examining of experts last night so hopefully I have in mind the parameters of what your scope of cross-examination will be.

MR. HUMPHREY: Judge, may I make one comment?

THE COURT: Please.

MR. HUMPHREY: The Association of Firearm and Toolmark Examiners, AFTE, an organization which Mr. Bennett belongs to and an organization whose dictates control in California -- and this is along the lines of -- of any trier of fact and to making a determination as to whether or not what you're hearing helps you -- I would cite you to page 7 of Mr. Wax's motion in which -- which describes the state of things wherein an AFTE examiner may make an identification.

And if I may just briefly read it, and I quote,

"Agreement of a combination of individual characteristics and all discernible class characteristics where the extent of agreement exceeds that which can occur in the comparison of toolmarks made by different tools and is consistent with the agreement demonstrated by toolmarks known to have been produced by the same tool."

Judge, I think what I'm trying to say here is that being the trier of fact in this hearing and having that standard, it's very difficult to know what that means other than it's a match when it ain't a match and I know it's a match when I see it.

That is not science. That is what Mr. Bennett is basically going to be testifying to this morning when he said -- when he opines that he's found sufficient microscopic striations or indentations to make a match. There's no way for you to make an objective determination as to whether or not what he's found is sufficient for a match or not.

That is -- I would submit it, Judge.

THE COURT: Anything?

MS. PETTIGREW: Submitted, Your Honor.

THE COURT: All right. I'll bear in mind the paragraph from lines 8 through 10 on page 7.

MR. HUMPHREY: Thank you, Judge.

THE COURT: But I trust your cross-examination will try to extract from him what he basis his opinion upon.

MR. HUMPHREY: I will, Your Honor.

THE COURT: All right. So the motion for a

Kelly/Frye hearing is denied. Okay.

MS. PETTIGREW: People call Mark Bennett to the stand.

MARK BENNETT,

called as a witness on behalf of the People, having been first duly sworn by the Clerk, was thereafter examined and testified as follows:

THE WITNESS: I do.

THE CLERK: Thank you. Please be seated.

Please state your name for the record, spelling both your first and last name.

THE WITNESS: My name is Mark Bennett, M-A-R-K B-E-N-N-E-T-T.

THE CLERK: Thank you.

THE COURT: Go ahead, Miss Pettigrew.

MS. PETTIGREW: Thank you, Your Honor.

DIRECT EXAMINATION BY MS. PETTIGREW

MS. PETTIGREW: Q. Good morning, Mr. Bennett.

A. Good morning.

Q. What is your current occupation?

A. I am a criminalist, a forensic scientist.

Q. How long have you been a criminalist and forensic scientist?

A. With my current employer or in total?

Q. Let's talk about your current employer. Who is your current employer?

A. I'm currently employed by the Oakland Police Department and I am the supervising criminalist in the

firearms unit and I've been there now for eight years.

Q. Can you describe your employment prior to coming to the Oakland Police Department?

A. I was employed for three-and-a-half years with the Metropolitan Police Forensic Science Laboratory at Scotland Yard and I was employed for four years with the Florida Department of Law Enforcement.

Q. Can you describe your educational background?

A. I have a Bachelor's degree in physiology and a Master's degree in forensic science from the University of London.

Q. What are your duties as the supervising criminalist in the firearms unit at the Oakland Police Department?

A. I specialize in firearms and toolmark examination which is the discipline in forensic science which is both an identification discipline in which we do comparison, comparison analysis of fired bullets, fired casings. We examine firearms, function test firearms. We also can do shooting incident reconstructions, trajectory analysis.

My normal day-to-day duties other than the supervisory role administration, things like that, is examination of firearms and firearms-related evidence from crimes.

Q. Can you describe the training that you received in the area of firearms and toolmark identification?

A. My initial training was at the Metropolitan Police lab in London. Traditionally firearms examination is an

in-house training program so you usually start with a science degree and maybe some knowledge of firearms.

At the Metropolitan Police lab there is a full training program which includes the study of the history of firearms, the design of firearms, how they work, the operating mechanisms, the manufacture of firearms, how firearms are made, the machining processes that go into making barrels, and the different components of firearms which is important when you come to do the comparison training.

Comparison microscopy training involves looking at the marks -- the microscopic marks left on fired bullets and fired casings from the firearms or firearms that fired them and assessing those markings, comparing those markings qualitatively in order to determine the origin of those marks. In other words, did a particular firearm fire a particular bullet or casing, or if in the case of two casings, were the two casings fired from the same firearm.

The training in comparison microscopy is fairly lengthy and basically it involves studying the marks left by what are called known match characteristics that -- how many -- what degree of correspondence of lines or impressed marks would you expect to see from, say, bullets fired from the same gun.

And you also look at what are called known non-matches. Known non-matches are bullets fired from different guns. And the degree of correspondence of marks that you get from known non-matches.

And there is a significant difference between known non-matches and known matches and the comparison microscopy training process is developing that ability to find the marks, know the significance of the marks, and then do a comparison and determine whether you have sufficient agreement for the comparison.

My training in London also included shooting incident reconstruction and also gunshot wound analysis.

At the Florida Department of Law Enforcement, again, I worked as a firearms examiner, and while working there I also trained in the part of toolmark examination which involves actually tools. So in London my training was limited to firearms being essentially the only toolmarks that I examined. In Florida I was trained in toolmark examination and that sort of expanded to things like screwdrivers and bolt cutters and the marks that they leave.

The principles are exactly the same. You have a hard -- tools which is a bolt cutter or screwdriver -- leaving a mark on a softer surface, and comparing those marks to, say, exemplar marks that you make from the tool. The principle is the same. It's just a different skill set for toolmarks.

So I completed my toolmark training in Florida. I also while in Florida had an opportunity to tour a number of firearms manufacturing facilities such as Colt and Smith and Wesson, Winchester, Ruger, Sig in order to examine firsthand how they manufacture their guns, the tool machining processes, and really get down to the nitty-gritty of things

like how often do they sharpen their tools, how often do they change their tools, which again is important to assess the marks that guns leave.

Q. Can I stop you right there before you go into further training?

A. Yes.

Q. Why is that important, what you've just talked about with learning how the firearms are made, how often they sharpen their tools and that sort of thing? Can you expand upon that and why it's important?

A. Well, in -- to be able to make an assessment on uniqueness and therefore identity -- because really what we're trying to do is determine an identification as to -- or an elimination as to whether a particular firearm fired a cartridge case -- you really need to assess the marks that are on those casings and bullets. You need to know a background of how those marks arise and is there any possibility that those marks may not be unique.

So, for example, in manufacturing a barrel, you have a tool which may make a run of 200 barrels before it's replaced or sharpened. You know, it's reasonable to think, well, maybe those 200 barrels all made by the same tool will have the same set of marks.

But because of the usual wear and tear of tools, the very tip of the tool initially is sharp and it's constantly being worn because you have a hard tool which is the cutting tool of, say, a barrel, and then a barrel which is still fairly hard material, steel, but not as hard as the

cutting tool, but that steel is going to wear that bar- -- that tool fairly rapidly.

And also part of the training is doing studies, looking at consecutively manufactured barrels, looking at the persistence of toolmarks in barrels. It's quite an in-depth field in which, you know, you assimilate all of this information and so you can apply it to the marks that then you see in casework.

Q. Okay. Can you go on describing the training that you received either more in Florida or once you came to the Oakland Police Department?

A. Yes. I -- I've taken a number of what are called armors courses. Armors classes are classes that are provided by firearms manufacturers. Usually -- mainly not from a firearms examiner point of view but more how the gun works, how you maintain it, how you take it apart and put it back together.

Armors classes are used for function testing of firearms, determining if firearms have been altered or -- or maybe converted to fire fully automatic, things like that. So I have taken a number of armors classes.

I've taken an FBI class in what is called distance determination and that is a -- sort of a subcategory of reconstruction analysis, determine how far away a gun was when it was fired based on residue patterns around bullet holes.

I have been trained by the ATF in serial number restoration.

I routinely go to training conferences in order to maintain current knowledge of any new developments in the field.

I'm a member of the Association of Firearms and Toolmark Examiners which is the scientific body set up to further the science of firearms examination and to oversee -- set certain standards and quality controls for the discipline.

The Association of Firearms and Toolmark Examiners provide a certification program in conjunction with the NIJ, the National Institute of Justice. This certification program is voluntary currently. I took the certification which involves a written test and also a practical test which is comparison of bullets and casings, determining -- matching them to the barrels that fired them.

And so I took that test and I'm currently certified by AFTE.

Q. A-F-T-E?

A. AFTE, yes.

Q. And that's a acronym for the Association of Firearms --

A. And Toolmark Examiners.

Q. Thank you. Do you routinely -- let me ask you this. When you started at the Oakland Police Department, did you just come in one day and start doing examinations and testifying in court or was there a training process that you had to pass?

A. There -- there's a training process with the

Oakland Police Department even if you are a fully qualified fire examiner which is what I was at the time that I started.

There's still a -- a journey level training process where you really need to learn the protocols of the -- the laboratory, read the operating procedures manuals and safety manuals, things like that.

You -- you go through an assessment phase which is a number of co-signed cases -- cases which are co-worked by a senior examiner at the laboratory -- for a period of time until then they are satisfied that you are competent in the field.

You do a final competency test, which I completed the competency test, passed the competency test, and then became an independent examiner.

Q. Do you routinely take proficiency tests?

A. Yes.

Q. How often do those proficiency tests occur?

A. Annually.

Q. Can you describe generally what those proficiency tests entail?

A. The proficiency tests are provided by an external independent agency called Collaborative Testing Services or CTS. They provide a -- a number of items such as fired bullets, for example, fired casings, and a brief scenario.

And then the test is that you will examine the bullets or casings, do comparisons of the bullets or casings, and make a determination as to an identification,

an elimination, or an inconclusive based on your comparisons.

There are firearms-related tests and then there are the toolmark-related tests, and I do one of each, each year.

Q. Have you ever failed any of those proficiency tests?

A. No.

Q. Does the Oakland Police Department have a protocol for the firearms and toolmark identification -- or examination?

A. We -- yes. We have a procedures manual and a quality manual.

Q. Okay. When you do your casework working on individual cases, do you follow that protocol?

A. Yes.

Q. Do you have any idea how many cases you've worked on in your career with respect to firearms and toolmark identification?

A. I would say approximately 2,000. It varied from different labs but it usually works out to around about 200 cases a year. 150 to 200 cases a year.

Q. Have you ever testified in court as an expert in the field of firearms and toolmark identification?

A. Yes.

Q. Do you have any idea how many times you have qualified as an expert in that field?

A. Over 100 times.

Q. In what courts have you qualified?

A. I have qualified in the British Crown Court system in the U.K.; in the Florida both state and federal courts; here in Alameda County; City of San Francisco; and, Sacramento.

MS. PETTIGREW: Your Honor, at this time I would offer Mr. Bennett as an expert in the field of firearms and toolmark identification fully qualified to give an opinion as to whether cartridge cases and bullets were fired from a single firearm.

THE COURT: All right. Does anybody want -- you have an opportunity to voir dire him. Would you like to voir dire him?

MR. HUMPHREY: May I integrate the voir dire with cross-examination?

THE COURT: Of course.

MR. HUMPHREY: Thank you, Judge.

THE COURT: All right.

MS. PETTIGREW: Q. Can you describe generally how you do comparisons of cartridge cases?

A. Comparison of cartridge cases is a -- is a qualitative analysis looking at microscopic marks that are on the cases, for example, within a firing pin impression or extractor or ejector or other marks that are made on the casing by the firearm.

THE COURT: Can I hold you up for a second? You're going to, I anticipate, use particular words that apply to particular parts of a bullet. Could you -- and a

gun. Could you please describe what those -- how you would describe them? Because you're using -- already using terms of art that I just want to make sure I understand what you're referring to when you use words like cartridge, casings, and things like that, okay?

THE WITNESS: Yes, Your Honor.

When I refer to a cartridge casing, I'm referring to -- so initially you'll start out with a single unit of ammunition which comprises of a bullet which is the projectile, a casing which is the case that holds the bullet, and within the casing you have gun powder, and then on the head end of the casing is a primer. A primer is the percussion cap which causes the initial spark to burn the gun powder.

When a cartridge is fired in a gun, the bullet is projected down the barrel because of the burning gun powder and gases which expand. The casing is what it -- remains, either -- in the case of a revolver, it would remain in the chamber of a gun. In the case of a semi-automatic firearm, it will typically get extracted and ejected from the firearm.

When I refer to a firing pin, a firing pin is the part of the gun that strikes the primer of the casing and it's that impact which causes the initial ignition of the cartridge.

An extractor is in self-loading guns, semi-automatic guns. It's a hook mechanism in the gun which hooks onto the casing and then during recoil it will pull

the casing from the chamber of the firearm.

And an ejector is really just a metal post which sticks out, and as the casing is extracted from the chamber, the ejector strikes the casing and it actually ejects the casing from the firearm.

THE COURT: Okay. When you refer to cartridge casing then, you're just talking about the remainder of what's left after the projectile leaves the gun?

THE WITNESS: Yes. So sometimes referred to as a spent shell.

THE COURT: Okay. I think if -- if you're done, then I'll go back to Miss Pettigrew. She can ask a question.

MS. PETTIGREW: Thank you.

Q. So can you describe what a class characteristic is? Is that a term of art in your field?

A. Yes.

Q. Okay. Can you describe what that means?

A. A class characteristic is something -- is a characteristic that is not unique but rather it's something that's designed -- the best way for me to describe it is an illustration by using a barrel of a gun.

The barrel of a gun, in its design, the manufacturers will choose to rifle that barrel with a number of grooves and they can -- different manufacturers use different numbers of grooves.

So, for example, Colt will use six grooves with a left-hand twist of rifling and a particular width of groove.

This is a class characteristic of that particular barrel and it's not unique because every barrel that is made to that specification will have six grooves with a left twist.

Consequently, when you fire a bullet through that barrel, the bullet will have markings from six grooves that have a left twist on it. And that's a class characteristic.

If I have a firearm that has five grooves with a right twist and I have a bullet that has six grooves with a left twist, then I can use that class characteristic to exclude that gun because there's no way that bullet could have been fired in that gun.

If I have a gun with six grooves and left twist and I have a bullet with six grooves, left twist markings, I can say this gun could have fired that bullet. It's a possibility. However, the class characteristics are not unique and so any firearm with six grooves, left twist, could also have fired that bullet.

Q. So when --

A. So --

Q. I'm sorry. I didn't mean to cut you off.

A. So class characteristics or characteristics as referred to in firearms examination, they are not unique but they can allow you to eliminate or include without -- without identification.

Q. When you are asked to do an identification and you're asked whether this bullet was fired from this gun, what other type of characteristics can you look to in order

to make such an identification?

A. In order to make an identification, you have to find what are called individual characteristics. Individual characteristics, if you like, are a more detailed set of marks that are left on the bullet which are known to be from a process which is completely random and unique in nature.

So, for example, staying with the rifling of a barrel, the rifling is cut with a broach. The broach wears and chips and picks up metal chips as it goes along. The barrel then has a set of marks on it which it could leave marks which are from a totally random process.

And the other part of the barrel which is the bit that's not cut by the grooves is called the raised -- the raised areas of the barrel are called lands, L-A-N-D-S, and the tops of the lands of a barrel are typically reamed. And a reaming tool is a -- kind of like a drill but with long cutting edges and it's to size the hole to a specific size. It leaves a series of concentric circles on the tops of the lands of the rifling.

Again, there is -- it is completely unreasonable to think that any two barrels would ever receive exactly the same set of reaming marks.

Q. Why?

A. Why?

Q. Yes.

A. Well, the -- the process of reaming, for a start, you get these concentric circles which go around the barrel, around the circumference of the barrel.

If you look very closely at those circular marks, on the very tops of those rings there's going to be a very jagged edge. I mean, to the naked eye you wouldn't see it. Under a microscope you might see the rings, and then under an electro microscope you would see a very jagged edge.

So what you have in the jagged edge really arises from the metallurgy; the metal crystals are just breaking in -- in random nature. So you get a whole series of these rings.

The bullet then passes across all of these -- they pass along the tops of the lands. They pick up the marks from the reamer and they -- they themselves then pick up a completely individual set of marks.

Q. As to cartridge cases specifically, do those pick up these similar marks?

A. Cartridge cases can pick up marks from reaming -- the reaming tool. One example is the -- the chamber of the gun. So at the -- the rear end of the barrel where the rifling ends, or wherever it starts, and where the cartridge gets fed into the chamber of the gun, that chamber is also sized to a specific size using the reaming tool.

When the cartridge is fired, the cartridge case expands and is pressed against the side of the chamber. And then on the recoil it moves backwards. So it ends up scraping against these same types of reaming marks. So chamber marks are one example where you can get a set of individual marks due to reaming.

But cartridge cases can also pick up marks from

other similar machining processes which are equally individual.

Q. Can you expand upon that?

A. Another example would be breech face marks. When a cartridge is chambered into the chamber of the gun, it initially is locked in position in the gun. It has to be locked in there because of the high pressure that develops when you fire a cartridge.

Then due to that high pressure and recoil, the -- what's called the head end of the cartridge case -- this is the back of the -- the cartridge where the primer is, it gets impressed onto the hard supporting surface of the gun which is called the breech face. And the breech face is manufactured using a number of different methods which end up making it a -- a unique surface also.

The breech face can be broached. It's typically broached to size. It then goes through a tumbling process where the slides go into some sort of a ceramic tumbling mechanism which leaves a whole lot of -- it's designed to smooth out the surface of the breech face but it leaves a lot of random marks on there.

And then usually the final step is a hand filing process, and this hand filing process again adds to the randomness of the breech face.

THE COURT: What do you mean by "broached"? What does that mean?

THE WITNESS: Oh, sorry. A broach is very similar to a file. It's a tool which has a set of teeth on it and

a -- so for a breech face, it would look like a long, file-like tool with a set of teeth and then the broach comes and shaves the surface of the metal with these teeth.

Within a barrel, the broach is a little more specialized. It has a set of teeth in a circle and each tooth cuts the groove in the barrel. But it's the same process. It has very sharp, chisel-like teeth which make the cuts.

THE COURT: And that's -- you were talking about broaching of the breech, and that's the back where the --

THE WITNESS: The breech face.

THE COURT: -- the casing head would abut the broach?

THE WITNESS: Yes, Your Honor.

THE COURT: All right. Go ahead.

MS. PETTIGREW: Q. Do semi-automatic firearms leave any unique marks on casings when those casings are ejected from the firearm?

A. Yes.

Q. Can you describe how that occurs?

A. As I mentioned before, now if we're talking about semi-automatic pistols, the mechanism is such that when the cartridge case is extracted and then ejected from the gun under quite high velocity, the slide is blown back on the recoil. The ejector is simply a post which hits the softer brass material of the cartridge case and then knocks the casing out of the gun. So it can leave an impression of itself on the casing.

Q. Okay. Have we talked about the extent of all of the various ways unique markings can be left on casings?
A. Yes.
Q. Okay.
A. Oh, well, not all of them. I mean, there's -- I mean, like I said, firing pin impressions, firing pin drag, ejection port marks. There's magazine marks. There are a lot of marks. But the principle for all of them is the same in making an assessment of class characteristics versus unique characteristics, and then comparing -- doing a qualitative comparison of those marks.
Q. And your comparison of those marks happens under a comparison microscope; is that right?
A. Yes.
Q. Can you describe what a comparison microscope is?
A. A comparison microscope is really just two microscopes that are joined together and it allows -- it allows an examiner to examine two items of evidence simultaneously with what's called an optical bridge and so you can look at, say, the rifling marks on one bullet on the left stage of the microscope and the rifling marks of another bullet on the right stage of the microscope, and you can rotate those bullets and you can look at them side by side with a dividing line down your field of view.
Q. Does the comparison microscope also allow you to take photographs of what you're looking at?
A. Yes.
Q. Directing your attention to the cases involved in

this hearing, were you asked to compare nine cartridge cases booked into the Oakland Police property section under report number 08-008638 and compare those to three cartridge cases booked in the Oakland Police property section under report number 08-008267?

THE WITNESS: Your Honor, can I refer to my notes?

THE COURT: Did you have any with you?

THE WITNESS: Yes.

THE COURT: But you haven't taken them out. So go ahead. If you need to use those to refresh your memory, take them out.

Does the defense have copies of everything or have you provided the prosecutor with copies of everything you're going to refer to?

THE WITNESS: I have, Your Honor.

MR. HUMPHREY: We have those two reports, Your Honor. Thank you.

THE COURT: Excellent. Thank you. It looks like Mr. Baez has it, too.

MR. HUMPHREY: He is looking at mine right now.

THE COURT: Oh. Very good.

THE WITNESS: Could you ask the question again so I can check the numbers?

MS. PETTIGREW: Q. Sure. Were you asked to compare nine cartridge cases relating to 08-008638 with three cartridge cases booked under report number 08-008267?

A. Yes.

Q. And were there also a variety of partial slugs and

fragmented bullets associated with those two reports?

A. Yes.

Q. And were you asked to make comparisons of those items as well?

A. Yes.

Q. Did you compare all of these various evidence items?

A. Yes, I did.

Q. And just for clarification, do you compare cartridge cases to cartridge cases, and then compare bullets to bullets, or are you able to cross compare cartridge cases to bullets?

A. In this case I compared cartridge cases to cartridge cases and bullets to bullets. It is possible sometimes if there are marks there to compare a bullet to a cartridge case and that's because the bullet is initially seated within the cartridge case and then when it's fired the bullet leaves the casing and it gets -- picks up a set of scrape marks from the casing.

So occasionally you can match bullets to casings, but that in my experience is really not that often that you can do that. One of the reasons is that typically the rifling of the barrel will then obliterate any marks picked up by the bullet from the casing.

Q. Okay. Can you describe how you went about comparing the items of evidence associated to those two report numbers?

A. So the one report I have nine fired 9-millimeter

Luger caliber cartridge cases.

I compared them with each other using the comparison microscope. So each of the nine I compared with the remaining eight until -- and then basically it's a process of searching the casing for -- how I described before -- these individual characteristic marks.

So I compared the nine casings with each other, made an assessment of the marks, and then took photographs of any identifications that I made on these casings.

I also then examined the three fired casings from the second case. Similarly using the comparison microscope, made comparisons between the three. Searched for individual marks. Made comparisons and photographs of those.

And then finally I compared the set of nine with the set of three to intercompare the two sets.

Q. When you compared the set of nine to each other, did you make a determination as to whether those nine had been fired from a single firearm?

A. Yes, I did.

Q. When you compared the three to each other, did you make a determination as to whether those three had been fired from a single firearm?

A. Yes.

Q. And when you compared the nine to the three, were you simply comparing the photographs that you had already taken or did you do another comparison? Physical comparison?

A. No. I performed the physical comparison of the

items of evidence to each other.

Q. Okay. And did you make a determination with regard to those 12 fired cartridge cases?

A. Yes.

Q. And what was your opinion?

A. I found sufficient marks on all 12 casings so I form -- for me to form the opinion that they were all fired by the same gun.

Q. And when you say sufficient marks, are there a number of marks that you need to find or are required to find?

A. There's not a quantitative number. It's a qualitative comparative analysis. And so the degree of correspondence of lines have to exceed what in training you see or would expect to see in what are called known non-matches.

So a known non-match is, say, two cartridge cases from two different guns. You know that they are -- in theory, they should not have the same set of marks. And so in training, you look at these known non-matches and you see what kind of correspondence of marks you expect to see which might be just by chance.

And in training you also look at what are called known matches and they are cartridge cases from this -- fired from the same gun, presumably picking up the same set of marks from that same gun, and you look at the degree of correspondence of marks in that particular instance.

And there's a distinct difference between the

degree of correspondence of unknown non-matches and degree of correspondence that you find in known matches. And this is the basis of the criteria that we use for identification.

So in this particular case I looked at the marks on these casings and I looked at the quality and quantity of marks and I made an assessment of the pattern and I -- as a reference then I used my experience of what you would expect to see in a known non-match.

And the degree of correspondence in these casings far exceeded anything that I would ever see in a known non-match and it was consistent with what you would see in matching -- known matches.

That's the basis of the comparison and in this particular case I found sufficient agreement for identification.

Q. And did you do a comparison of bullets from these two cases?

A. Yes.

Q. And can you describe your findings?

A. Again, exactly the same as the casings, I compared the bullets and the bullet jacket fragments from the one case, intercompared them, made a determination of identification within those bullets.

And then there was a single fired bullet in the second case. I also compared that bullet to the fired bullets and fragments in the 8638 case and I was able to again identify the same set of marks were on the one fired bullet as I found on the five bullets in the 8638 case.

MS. PETTIGREW: Okay. I don't have any further questions at this time.

THE COURT: All right. Would now be a convenient time to take the morning recess and then you could begin your cross?

MR. HUMPHREY: Yes, Judge.

THE COURT: How about we take a 15-minute break and we'll reconvene at 11 o'clock?

MR. HUMPHREY: Thank you, Judge.

(Recess.)

THE COURT: Go back on the record in Gumaro Baez.

You didn't think of any more questions, did you?

MS. PETTIGREW: No, Your Honor.

THE COURT: All right. Mr. Humphrey.

MR. HUMPHREY: Thank you, Your Honor.

CROSS-EXAMINATION BY MR. HUMPHREY

MR. HUMPHREY: Q. Good morning, Mr. Bennett.

A. Good morning.

Q. My name is Dick Humphrey and I'm one of the lawyers representing Mr. Baez. You and I met briefly in the witness room. Give me just a moment to get organized here.

Just a couple of general questions, Mr. Bennett. You indicated that -- in your direct examination that you were a member of the AFTE; is that correct?

A. Yes.

Q. And that those are the standards that you pretty much follow as a -- as a toolmark examiner and firearms examiner with the Oakland Police Department?

A. Standards in what respect?
Q. Set out by the AFTE as to -- as to the procedures and testing procedures that you use?
A. Well, every laboratory has their own in-house procedures manual, quality manual. AFTE do have a procedures manual that you can use as guidelines in order to produce your own procedures manual. And I think, in fact, most laboratories have a very similar set of procedures which really stem from the AFTE guidance and training.
Q. Okay. So I guess in general, would it be a fair statement to say that the -- the tests that you apply when you look at the scratch marks or striations on either a casing or a bullet would be the general ac- -- general acceptance test? Would that be true?
A. It's a test that is generally accepted in -- in the general scientific community, yes.
Q. Well, it's the test that is espoused by AFTE as well, is it not?
A. They have a criteria for identification which is what we adhere to.
Q. I guess maybe I'm not asking the right question. You heard of the term "CMS"?
A. Yes.
Q. And could you tell the Court what that means?
A. CMS stands for consecutive matching striations and what it is is basically taking patent recognition, this assessment of identity due to the quality of the correspondence of marks -- taking it one step further to

then manually count consecutive lines.

With a patent recognition where you don't count the lines, you are still taking into consideration consecutiveness. That's all part of making your assessment of the patent.

Some laboratories, some firearms examiners will then go another step and actually count how many lines are consecutive and put that in their report as a basis to support their conclusion.

Q. Sure. When you say pattern, when you look at -- as an expert when you look at a -- as you put it, a pattern of lines, you're either consciously or unconsciously taking into account how many of the lines or how many -- how many matching lines there are, whether you write them down as such or not; is that what you are saying?

A. Yes. You're making a more -- more an overall visual assessment of the spatial arrangement of the lines, the thickness of the lines, depth of the lines. It's essentially you're -- you're assessing the topography of the surface of the toolmark that you are looking at.

Q. And I think when you ended up talking -- or answering one of the prosecutor's questions about when you're making that assessment, you're assessing how many of those lines in your opinion are -- are the same as opposed to how many of the lines that aren't -- are not the same. In other words, the ones that are the same outweigh the ones that are not the same and in your opinion as an expert that gives you the ability to say that one casing is identical to

another; is that correct?

A. If you count the lines, then, yes, how many. If you don't count the lines, it's more of a qualitative assessment. So not so much how many.

Q. So when you say qualitative, I think you used the word "analysis" under the prosecutor's questioning, we're really talking about a subjective opinion, are we not?

A. Well, when you say subjective, I -- I believe there's different levels of subjectiveness. I mean, you have something that's totally objective so when we look at class marks, for example, the number of grooves, you count them, six, it's totally objective. You know, there's no opinion there at all.

So on the other end of the spectrum, something that's completely subjective is maybe your taste in music. Like, you know, country music is good music --

Q. No --

A. -- that's completely subjective. Everybody has their own opinions, widely varied.

Comparison of toolmarks I would argue is more towards the objective end than the very subjective end on the basis that a suitably qualified and experienced firearms examiner, no matter who they are, can look at the same set of marks and they will come to the same conclusion.

And so it is subjective, I agree. It's based on experience and there is opinion. It's an opinion-based, but that opinion would be shared by any qualified examiner that was to look at the same comparison.

Q. Okay. So I guess what I'm -- what I'm getting at, following the AFTE standard or general guidelines of what we've talking about, and that's a general agreement as opposed to consecutive matching striae or scratch marks, your methodology would be more with the former than it would be with the latter. More with general agreement, in your mind, of imperfections?

THE COURT: I don't understand that question.

MR. HUMPHREY: Thank you. I don't either.

THE COURT: Okay.

MR. HUMPHREY: Q. Would you agree that there are -- that CMS is a test? Is a testing protocol?

A. Yes.

Q. Would you agree that general agreement is a testing protocol?

A. Yes.

Q. Would you agree that general agreement and CMS are different?

A. Not --

Q. Or strike that. I'm sorry to interrupt. Would you agree that they -- that they ask you to employ different methodology?

A. No. No.

Q. You would not?

A. No. The two would use the same principles, the same methodology.

As I said, CMS is just a different way to document your findings and so it's -- one of the advantages of CMS is

that I can come here and say I found -- I counted six lines in a row. This is our criteria for identification; therefore, it's an identification.

That is easy to -- easier to explain than, I assessed this pattern and came to the conclusion based on my experience of looking at these types of patterns and that this pattern exceeds anything that I've seen in known non-matches. That's a harder thing to explain than to say, Yeah, I counted six lines and that is more -- more than you will see in a known non-match.

Q. All right. So you said when you were explaining it just now to the Court that the pattern exceeds that which you have seen in a non-match?

A. Yes.

Q. So are you saying that when we're talking about pattern analysis, if it's -- if it's not a non-match, it's always a match?

A. It could also be inconclusive if it's -- there is always a -- there's a gray area in between an exclusion where you can say this is not the gun because there's clearly a big difference in the marks, an identification where these marks all line up, the degree to which I have never seen in two casings or two bullets from two different guns, and then there's an area where you've got a few lines, some similarities, and it's not sufficient for an identification. It may be an identification but you don't know. You can't prove it. I mean, it doesn't meet your criteria. So you have this area of inconclusive also. So

it's not a cut-off line.

Q. Okay. But when you're making your determination, Mr. Bennett, based on your training and experience, it's -- and please stop me if I'm wrong -- it's my understanding that you are not going down a protocol of check-off procedures. In other words, you're not going down 1 through 250 to determine whether casing A matches casing B. You are merely looking at casing A and casing B either with the naked eye or through augmentation of a macro or microscope, and using your training and experience, and that's where you get the pattern. You see a pattern as an expert.

A. Uhm-hmm.

Q. As opposed to, I took the bullet out of the package. I looked at it from right to left. I turned it, I rotated it 180 degrees, that sort of thing. You don't do that?

A. Oh, yes.

Q. Oh, you do that?

A. Yes. I mean, the comparison part is only pretty much the conclusion. You're getting to the end of your protocol.

But as you say, there is a whole -- if I was to start from going to property, sign the chain of custody, collect the evidence, make notation of the packaging, the seals, remove the bullet, make notes of the condition of the bullet, whether it has damage, whether it has trace material on it, maybe the design and style of the bullet, maybe what kind of manufacturer made the bullet, make some measurements

then of the diameter of it to get caliber, I can make measurements of lands and groove measurements.

These are all the procedural steps and then part of that procedure comes when you then compare those bullets to one another. So it's all in the protocol manual.

Q. Okay. So you do have a manual. So if you were -- Toolmark Examiner A could -- and in a hypothetical, Toolmark Examiner B, could he or she pick up the manual, go through the exact same steps in the exact same order you did and then either come to the same conclusion or perhaps a different conclusion? But what I'm getting at is going through a -- a protocol.

A. Yeah.

Q. Okay.

A. I --

Q. Go ahead.

A. I was going to say that I've now worked in three different laboratories and one of them in a foreign country and it's very surprising that the protocols are pretty much the same with a few different, you know, quirks, but pretty much protocols from laboratory to laboratory in terms of firearms examination or any other examination I believe are essentially the same.

Q. All right. And I think you told us that you were trained in England and got your firearms training at the Metropolitan Police Department which in this country we commonly call Scotland Yard?

A. Yes.

Q. Did they employ CMS, do you know?

A. They do not.

Q. And we'll get -- strike that.

Just so you and I are on the same page, I have the two reports referred to by the prosecution and one is 8267, Lab Number 5330, Request 1. And it has some numbers in the lower right-hand corner, Mr. Bennett, we call Bate-stamp numbers. They are just consecutive numbers, 1224 through 1233. Do you have that, sir?

A. I don't have the numbers.

Q. Okay. Yours is not stamped?

A. No. Mine is just a copy of my original notes.

Q. It starts out in heavy italicized, "Receipt of evidence," correct?

A. Yes.

Q. And mine ends with "Request is made for: Examine, type and class the casings." Is that what yours said?

THE COURT: On the last page is where Mr. Humphrey is looking.

MR. HUMPHREY: Q. May I show you this, sir? Just so we have the same document. Because I'll be asking some questions.

A. Yes. We have the same.

Q. Now, as the judge pointed out, my last page may be different from yours, sir. Here. Why don't you thumb through this and see if you can determine any differences that are significant.

A. Yeah. I think you have the original request for

service, this form, and I didn't include that. I don't know why I don't have that. But this is the request that was brought up I think my Sergeant Cruz requesting me to -- to examine the bullet.

MR. HUMPHREY: And for the record, Your Honor, the witness is referring to the last page of a document stapled to a group of documents I have that apparently is at Sergeant Cruz's request to him to make the comparisons that we're talking about.

Q. Is that correct?

A. That's correct.

THE COURT: What is the Bates-stamp page, Bates-stamp number?

THE WITNESS: 1233.

THE COURT: 1233. Okay.

MR. HUMPHREY: Q. The rest is the same, sir?

A. Yes.

Q. And as long as we're on the housekeeping matter --

A. Oh. I'm sorry. I do have it. In the front.

Q. Oh, you do have it. Just not on the last page?

A. Yes.

Q. If we could go to RD Number 8638, Lab Request Number 5149, Number 2, yours is -- mine are stamped so yours are not Bates-stamped, consecutively number-stamped on the lower right-hand corner? They are not?

A. No, they are not.

MR. HUMPHREY: May I approach, Judge?

THE COURT: Sure.

MR. HUMPHREY: Just to make sure the witness and I have the same.

Q. Could you take a look at mine? That's mine. And see if yours and mine agree. Just maybe thumb through it, Mr. Bennett, if you wish.

THE COURT: While the witness is looking at the document, usually the Bates-stamp I imagine would be produced by the District Attorney after they get it from the police department.

MR. HUMPHREY: I believe that's true, Judge.

MS. PETTIGREW: That's right.

THE COURT: That would probably explain why Mr. Bennett doesn't have the Bates-stamp.

THE WITNESS: Yes.

MR. HUMPHREY: Q. So you and I have the same document, sir?

A. Yes, we do.

MR. HUMPHREY: For the record, Your Honor, the witness has just looked through a stack of papers I received from the prosecution numbered 9 -- consecutively 947 through 1259 and indicated that those documents were the same as the ones he has brought today.

THE COURT: That's about 300 pages of notes there? 947 to 1259?

MR. HUMPHREY: No. No, I'm sorry, Judge. That's not -- they are not consecutive. 947 -- that's an excellent observation. 947, I have 948 and 949 and then it starts 1236 through 1259.

THE COURT: All right.

MR. HUMPHREY: I apologize.

THE COURT: Well, it appears that the parties have had discovery so I don't think this is a discovery memorialization. So it just didn't sound like 300 pages you were showing him.

MR. HUMPHREY: No. You're absolutely right, Judge.

Q. Now that we've got that out of the way, let me shift gears. You told us you are currently employed by the Oakland Police Department in a supervisory capacity, sir?

A. Yes.

Q. And are you a peace officer?

A. No.

Q. Obviously you're here testifying today for the prosecution on behalf of the work you've done as a supervisor at the Oakland Police Department, correct?

A. Well, I'm here to testify as to my findings.

Q. All right. Do you always testify for the prosecution?

A. I have been called by the defense on occasion.

Q. And you've indicated that you qualified in court as an expert in this county and in other counties and I guess in other countries as an expert about a hundred times?

A. Fairly well over a hundred times, yes.

Q. Could you opine how many of those times you qualified as a defense expert?

A. As a -- as an expert that I've been called by the

defense you mean?

Q. No. Qualified as an expert when you were called by the defense.

A. Yes. A small number. Maybe two or three times.

Q. And that's over your entire career?

A. Yes.

Q. Now, the protocol that you say that you -- that you told us about that when you -- that you follow when you're doing your examination, that is not -- that protocol is not contained, is it, in the smaller of these two piles? 8267, Request Number 1. Let's just look at that one and that -- it says, "Victim/Complainant," and name, "Brown, Terrance"?

A. Yes.

Q. Do you have that there, sir?

A. Yes, I do.

Q. The -- the protocol -- you had indicated there's a written protocol that you follow. That is not a part of this document, is it, sir?

A. No, it's not.

Q. Did you bring that written protocol with you, sir?

A. I did not.

Q. But somewhere there exists a written protocol and perhaps check-off -- check little marks that you have done certain things to come to certain conclusions?

A. There's a written protocol but we don't go through a check-off procedure. We use worksheets which are within this document because this document is my report and also my

bench notes. I make the notes at the time of my examination and the worksheets function as a check-off system. You have a box, you fill in the box.

Q. Okay.

A. So with regard to, say, bullets, you fill in the class characteristics, you fill in all aspects of the box. That's similar to a check-off.

Q. Did I mishear you, sir, or are you saying that in the Terrance Brown -- or in the "Brown, Terrance" document -- set of documents, this encompasses your worksheet as well? Or your worksheets?

A. Yes. Yes.

Q. Now, referring you, sir, to page 2 of that document, and I think that's actually if you count at least it's page 3 for me but it's headed page 2 at the upper right-hand corner, and there's a picture on that page of what appears to be a -- a casing head. Do you see that?

A. Yes.

Q. Down in the notes area, is that the -- and there's a rectangle there and there's some typing. Would that be where you're talking about your notes?

A. Well, the whole -- that whole page on page 2, it is -- is the cartridge case examination worksheet.

Q. Okay.

A. And anything that I put in there is part of my notes. So, for example, I have the page and item number. I made a note of the caliber, now I'm moving to Luger, what the headstamp is, the material of the casing, an overview of

the class marks on the casing, and then the notes area at the bottom is for any other notes that I choose to add.

Q. And you indicate there that you compared these cartridge casings with each other and found sufficient corresponding individual microscopic marks and then you refer the reader to the next page, page 3, sir?

A. Yes.

Q. Okay. And on page 3, we have what appears to be side-by-side photographs made, I assume, and the comparison -- is there a microscope or a macroscope?

A. Microscope.

Q. And of -- there are -- there are four -- would I be correct in saying four -- four shots or four photographs: Left stage, right stage, pl-3, pl-4, and pl-3 and pl-2?

A. It's actually two photographs and the left stage/right stage, the top photograph is a photograph. That is exactly what I see down the microscope and it is actually a left and a right stage with a prism line down the middle. But it's one photograph.

Q. Oh, I see.

A. And then the bottom likewise is a single photograph.

Q. And that line, is that -- that's the optical bridge separation?

A. Yes.

Q. Could you -- you've got a magnification here of 45 on the top one and 35 on the bottom. So we're talking about the -- the photograph in the top part of -- on page 3 on

Request Number 1 has been magnified 45 times; would I be correct?

A. Yes. As seen in the photograph.

Q. Yes. Okay. You had indicated, I think, that during your time at the -- I believe it was limited to the Oakland crime laboratory, but I could be wrong -- that you have never -- well, essentially you never made a mistake. Would that be fair?

A. That's correct.

THE COURT: Professionally you mean?

MR. HUMPHREY: Professionally. You're absolutely right.

THE WITNESS: In life maybe.

MR. HUMPHREY: Q. In this -- in this discipline.

A. In terms of --

Q. Of firearms, toolmark identification?

A. I mean, just as anyone human would, you know, spelling mistakes and transposed numbers, you know, things like that. That, of course, is inescapable, but in terms of comparisons --

Q. Yes.

A. -- and in terms of the proficiency tests that we do which is a real -- really the measure of your mistakes, yes, I have never had a misidentification.

Q. Okay. And you have heard the term "DNA"?

A. Yes.

Q. In your -- to your knowledge, you're saying to us, I -- or are you saying to us that, to your knowledge, there

has never been a case where DNA has proved you wrong?

A. Where DNA has proved me wrong?

Q. Yes. That -- that -- that's an awkward question.

That a later DNA analysis of biological material has proved your conclusions about who -- about who handled or possessed a firearm in more than one place was incorrect?

MS. PETTIGREW: I would object to the form of that question.

THE COURT: Compound, complex, unintelligible?

MR. HUMPHREY: That's an awkward question. I'll withdraw it.

Q. You were saying that when you're never wrong, I guess what I'm saying -- you understand what DNA is?

A. Yes.

Q. And you've said that you class yourself as a scientist, correct, sir?

A. Yes.

Q. And the -- although it's a different discipline, DNA seeks to make a comparison between a known and an unknown, does it not?

A. Yes.

Q. And the way you work, you often seek to make a comparison between a known and an unknown; is that not true, sir?

A. Between a known and an unknown?

Q. Yeah.

A. We can compare a known and unknown, which an

example of which would be if I had a firearm, I would test fire the firearm. I know that that casing or bullet came from that firearm. It would be a known, and I can compare that to unknowns, casings, or bullets recovered from a scene or autopsy. So that would be a known to an unknown.

And also we do compare unknowns to unknowns in -- or evidence to evidence.

Q. Correct.

A. Which is casings from one scene, casings from another scene. Or even within the casings of one scene.

Q. Yes.

A. It's evidence to -- I prefer to say evidence to evidence or evidence to exemplar test fires.

Q. But getting back to the error rate or the lack of error rate I guess in your case, sir, whether it's been from a later DNA analysis or from a later firearms examiner employed by the defense or otherwise, you cannot recall a case where you have been proved to be incorrect in your original analysis. Would that be fair?

A. Of me personally?

Q. Yes, sir.

A. That's correct, yes.

Q. And that would involve -- would that be true in Oakland and in Scotland -- in England?

A. Anywhere I've worked, yes.

Q. Now, the laboratory for which you work now is the Oakland crime lab, sir?

A. Yes.

Q. And you work in the -- I guess it's divided into compartments. You work in the firearms and toolmark identification division?

A. Yes.

Q. And I think you indicated that that is an accredited laboratory, or do you know?

A. It is, yes.

Q. Is that accredited by the American Society of Crime Laboratory Directors or by some other functionary or organization?

A. The Association of Crime Lab Directors, ASCLD, which -- A-S-C-L-D -- a lab division which is a laboratory accreditation board.

Q. As a person who sup- -- well, strike that.

You actually supervise other technicians in that division, sir?

A. Yes, I do.

Q. Would you have -- would you folks be audited from time to time?

A. We are, yes.

Q. Are those internal or external audits?

A. Well, we have external audits from when we are certified by ASCLD, so in that instance, external ASCLD inspectors come in and we are audited by them. That's on a five-year basis.

And then we have an annual internal audit by someone from another section who comes and does the internal audit.

Q. And when the audit is done -- I mean, when the internal audit is done, sir, would you -- for lack of a better word, would that be a comprehensive audit of procedures?

A. The audit entails -- the auditor will read the procedures manual, the quality assurance manuals. They will inspect the unit for, you know, things like are we complying with what we say we will do in the procedures manuals. They will take a selection of cases, go through the cases and again see if what we say in our procedure manual we are carrying out in our casework.

Q. So would it be a fair statement to say that somewhere in your procedures manual you have, for want of a better term, what would be a mission statement for the laboratory?

A. In the procedures manual? For the laboratory, that may be in the quality manual. An overall mission statement.

Q. In other words, you folks are following what we have -- you're not following the consecutive matching striation testing procedure. You're following a pattern-oriented, more subjective one called general agreement testing; is that not true?

A. Our procedures manual says that we will use the AFTE criteria for identification which is the qualitative assessment; not CMS, which is -- CMS is not an objective method either.

Q. So when you say qualitative, we're back to