Trooper Gomb.

Howard Street as you told me, now what is it?

A. I talked to that approximate number, Sir.

Q. That is right. Okey, by the way, just a few more questions that I missed on the search of the car, did you find the girl's ear ring?

A. No, Sir.

Q. You did not?

A. No, Sir.

Q. Did you find a girl's clothing of any sort?

A. No, Sir.

Q. Did you find your, in your search there were, however minute, any blood particles anywhere in the car?

A. No, Sir.

Q. Did you find anywhere in the car that there was damage to the interior of the car, particularly the seat, the fabric, anything of that nature other than normal wear and tear?

A. No, Sir.

Q. That is all.

By Mr. Ertel:

I have no further questions.

(Excused from witness stand.).

JAMES L. MILLER, being duly sworn according to law, testified as follows:

## DIRECT EXAMINATION

By Mr. Ertel:

It is stipulated that Corporal Barto took Commonwealth Exhibit No. 80, which is mud or dirt, whatever you want to call it,

taken from the left side of the road where there was a tire impression approximately 26 feet from the main road at the Sylvan Dell Road.

By Mr. Fierro:

Go ahead.

By Mr. Ertel:

Q. State your full name, please?

A. James L. Miller.

Q. Your occupation?

A. Chemist at the PennsylvaniaState Police Laboratory in Harrisburg.

Q. How long have you been employed there?

A. May 1, 1972.

Q. What is your educational background, training and experience?

A. I have a Bachelor Degree from Lycoming College, 1969, majoring in Chemistry. I completed the requirements for a Master's Degree from West Virginia University in Organic and Analytical Chemistry. I received orientation and training at the Laboratory upon commencing employment there, that is basically in the investigation of materials which relate to crime and crime scenes.

Q. I offer him as an expert, Chemist and Criminologist. By Mr. Fierro:

Chemist, not Criminologist.

By Mr. Ertel:

All right, it is so stipulated.

Q. Did you have the occasion to receive certain materials

from Corporal Houser?

A. Yes.

Q. Did you take physical possession of those?

A. Upon his arrival at the Laboratory, yes.

Q. Without going through each and every item, did you make certain analysis of certain materials?

A. Yes, Sir, <sup>1</sup> did.

Q. Now, turning first to the mud samples, can you tell us what analysis you made of the dirt or mud samples? By Mr. Fierro:

I think your Honor, that I would like to know Exhibit by Exhibit. If, for example, there is one we stipulated to, if you want to start with that, but I don't want any generalized statements.

By Mr. Ertel:

I think that he can pin it down to Exhibits eventually.

By The Court:

What Mr. Fierro is asking for the record that the Exhibit number be on record.

By Mr. Brtel:

Q. Have you examined them all, Mr. Miller?

A. Yes, I have.

Q. Mr. Miller, you examined what is marked as Commonwealth's Exhibit No. 98, Commonwealth's Exhibit No. 99, Commonwealth's Exhibit No. 73, Commonwealth's Exhibits Nos. 72, 81 and 80, is that correct?

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A. Yes.

Q. What process did you go through in examination of these materials?

A. The samples that are submitted in all of these Commonwealth Exhibits are dirt samples or soil samples, and a general comparison was made, each sample being treated separately, but the results being compared collectively, and a result was from, was formulated from the analysis of all of these samples. It was found that the samples, which isCommonwealth's Exhibit No. 80 and the sample which is Commonwealth's Exhibit No. 81 were found to be extremely similar.

Q. Now, can you identify where they were taken from by the tags?

A. From the tags, Exhibit No. 80 was the dirt sample taken from the left tire impression at the crime scene and the Commonwealth's Exhibit No. 81 was removed from the Dye-Tex Corporation.

Q. Did you compare anyother of the samples?

A. The other ones were collectively compared, the samples that were removed from the Hubbard vehicle, which is Commonwealth's Exhibit No. 99 were different than those in items of 80 or 81 and also different from those that are in items No. 72, those found near the scene of the victim.

Q. Did you compare the Commonwealth Exhibit, the material found in the tire impression or near the tire impression and Dye-Tex with the material found at the scene of the body?

A. Yes, I did.

Q. Are they similar?

A. They are dissimilar.

Q. They are not the same?

A. That is correct.

Q. Did you draw anyother conclusions from the dirt

atall?

A. There was one other sample yet, Exhibit No. 98, was from the, from here it says the left side of the vehicle and the right side of vehicle, these samples were also different from those in Commonwealth's Exhibit No. 80 and 81, which was the tire impression and Dye-Tex.

Q. Now...

A. They were also different from the samples found at the scene or in, or in Item No. 72. To state my conclusions again, the two samples that were found to be similar were the ones found in the tire impression and the ones in the coffee can, or Exhibit No. 81. The scene, and the dirt from the scene was different from the tire impression or the Dye-Tex Corporation, and also the dirt from the scene was different from that on the car, on the vehicle, and also the vehicle was different from that at the Dye-Tex Corporation or the tire impression.

Q. Did you examine also Commonwealth's Exhibit No. 106?

A. Yes, I did. I might make mention here also..... By Mr. Fierro:

Excuse me, before you make mention. Side Bar, plea (Side Bar consultation not made a part of the record.).

By The Court:

Mr. Ertel, Mr. Fierro asked for an offer on Commonwealth's Exhibit No. 106, and what Mr. Miller is going to testify.

By Mr. Ertel:

He will testify that this is a torn fingernail that heexamined under a microscope, that he cannot definitely establish who it was from or relate it to Jennifer Hill. By Mr. Fierro:

We object on the grounds that evidence carries no probative value and if the offer is as the District Attorney states, if the Court allows it, it will allow the Jury to speculate maybe it could have been, without any reasonable basis for drawing that inference.

By The Court:

Over ruled.

(END OF SIDE BAR.). By Mr. Ertel:

Q. I am sorry, did I ask you if you examined the fingernail which is contained in No. 106?

A. Yes, Sir, I examined this, and I recognize this because it bears my initials as do all of the other items that have been talked about so far.

Q. And I show you marked as Commonwealth's Exhibit No. 71....

By Mr. Fierro:

Is this something different?

By Mr. Ertel:

This is a fingernail taken from the victim. By Mr. Fierro:

Proceed.

By Mr. Ertel:

Q. Did you examine that also?

A. Yes, Sir, I did.

Q. Just for clarification, Commonwealth's Exhibit No. 71 is a fingernail taken from the victim?

A. Fingernail removed from the right middle finger of the victim.

Q. Did you examine under a microscope the fingernail in 106, the fingernail taken from the car?

A. Yes, I did.

Q. What conclusions did you draw by your microscopic analysis?

A. My examination was a comp arison between 106 and 71, and from the comparison I could draw no conclusions as to the source or the identify of the fingernail. There were no comparison as to the particular two items.

Q. You could not, why couldn't you make a comparison? By Mr. Fierro:

I object, he has said he could not.

By The Court:

The objection is sustained.

By Mr. Ertel:

I believe the reason why he could not is relevant

to this Jury, the background. By The Court:

Do you care to come and make an offer, and I will reconsider my ruling.

(Side Bar consultation not made a part of the record.). By The Court:

Mr. Fierro, your objection is to the entire line of questions.

By Mr. Fierro:

Yes, your Honor.

By Mr. Ertel:

Q. Why couldn't you draw any comparisons, what were the reasons for that?

A. They were, from dimensions of the fingernails, the structures, the characteristics of the two fingernails, they, they were of such difference that the two fingernails could not have come from the same finger. Other conclusions like this, in the microscopic examination did not lead itself to the identity or identicalness that they were identical in any shape or in any respect.

Q. In other words if they came from two different fingers you couldn't compare them? By Mr. Fierro:

I object to leading the witness.

By The Court:

Sustained.

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By Mr. Ertel:

Q. What, if anything, did you determine as to 106 as to its' characteristics where it was severed from the other part of the nail?

A. I am sorry, I don't quite understand your question.

Q. At the breaking point from the, what would be considered the main part of the nail, what was on the body, whose ever body, what did you determine as far as the breaking characteristics of it?

A. It appeared that the fingernail in Item No. 106 appeared to have been started to have been broken, and then the remaring of it had been clipped off.

Q. Now, did you make other comparisons?

A. In respect, in other items of the case.

Q. What other items did you compare?

A. There were several hair samples, there were several items of clothing from the victim, many hair samples, some from the clothing, some that were brought in from the suspects, or received from suspected people, items of clothing from the victim, nail scrapings from the victim, besides the dirt samples.

Q. Let's start with the ....

A. In general, the nails, the hair and the clothing.

Q. I show you marked as Commonwealth's Exhibit No. 68?

A. Collectively this is known as Commonwealth's Exhibit No. 68, and these are each individual nail scraping from each of the fingers of the victim, and upon analysis of these fingernail scrapings, in each of the cases nothing of probative value was found within the scraping material itself. Q. Did you find any blood indications at all?

A. No, Sir, I did not.

Q. You found no foreign material that you could substantiate in any way?

A. No, Sir.

Q. Now....

(Commonwealth's Exhibit No. 107 marked.).

Q. I show you marked as Commonwealth's Exhibit No. 107, can youidentify that, please?

A. Yes, I can, and I will have to go through each one of these individually to explain what they are.

Q. All right.

Q. These were samples that I removed from the victime clothing upon examination, and they were placed in these plastic bags after they were totally analyzed one by one and they were compared to samples that were received from the victim herself. The first one here is a hair sample that was removed from the blue football jersey that she had on at the time. There is also a sample removed from pajamas that were inside the plastic bag. There was a hair sample removed from the blue jeans that were inside of the plastic Glick bag. There was a hair sample, or samples of hair, two fragments of hair that were removed from the light blue jeans she was wearing, and there is a hair sample, several hairs here from the grey-blue jacket she had covering her body. These were compared with her hair and they were highly similar to her hair, but they were also highly similar to other standard hairs submitted in this case also.

Q. Similar to what other standards of hair? By Mr. Fierro:

I object to that.

By Mr. Frtel:

Q. Were you able to draw any conclusions whatsoever from it?

A. No, Sir, I was not.

Q. (To The Court.). Your Honor, we will follow up with the identification of the following hair samples, and how they were obtained, they were transported, and we would follow that up, I would like to get this man off of the stand rather than....

By Mr. Fierro:

I have an objection, in fact I want an offer at Side Bar.

(Side Bar consultation not made a part of the record.). By The Court:

The objection is over ruled on the basis, Mr. Ertel, youwill follow up from the person that obtained each of these samples?

By Mr. Ertel:

Yes, I will.

By The Court:

And they were kept in custody until such time as they were delivered to the Gentleman? By Mr. Ertel:

We will show a chain of custody complete to him.

Q. Mr. Miller, did you examine the hair samples which I put before you?

A. Yes, I did.

Q. Will you identify the ones you examined?

A. I had examined Commonwealth's Exhibit No. 82, Commonwealth's Exhibit No. 83, Commonwealth's Exhibit No. 84 and Commonwealth's Exhibit No. 85, Commonwealth's Exhibit No. 86, Commonwealth's Exhibit No. 69, Commonwealth's Exhibit No. 75, Commonwealth's Exhibit No. 70.

Q. What, if any, conclusions, were you able to draw?

A. Thesewere examined, 82, 83, 84, 85, 86 were examined, and these were different suspects, and it was found th three of these suspects had hair of a class characteristic very similar to that of the victim's, and that the victim's hair as compared with these three people could not be differentiated.

Q. Whose hair were they?

A. The three people that I am talking about similar characteristics are the hair from Kim Lee Hubbard, which is Exommonwealth's Exhibit No. 85, also from Dorisann Hubbard, Commonwealth's Exhibit No. 86, and to a lesser extent the hair sample from Ruth Marie Hubbard, Commonwealth's "xhibit No. 84.

Q. Which ones were dissimilar?

A. The hair sample provided from Ard Stetts, Commonwealth Exhibit No. 82, and a hair sample provided from a Colleen Whitenight, Commonwealth's Exhibit No. 83.

Q. Now, in comparison to those that, what we would call as guides or samples, did you compare that to a hair sample from

the head of the victim?

A. Yes, Sir, I did.

Q. How about the hair sample found under the victim's body, Commonwealth's Exhibit No. 75?

A. Yes, they were all compared, they were examined and all compared and there was no conclusion could be drawn whose the hair beneath the victim's body belonged to.

Q. Of course, the public hair sample, were you able to compare that with other samples?

A. They were collectively examined, but they were not similar to the pubic hair.

Q. The hair on the victim's clothing that you were able to get off of it, could you compare that with the particular ones?

A. Yes, they were compared with the four people, that is the victim and Kim Lee Hubbard, Dorisann Hubbard and Ruth Marie Hubbard, and they were also similar and all of these hairs were the same characteristics as to those. I could draw no conclusion as to where these hairs came from.

Q. You can draw the conclusion they did not come from Ard Stetts or Colleen Whitenight?

A. That is correct.

Q. Did you compare the hair found in the automobile with the standards?

A. Yes, Sir.

Q. Did you compare that with what is marked as Commonwealth's Exhibit No. 100?

A. Yes, I did. All of these hair strands, which were 11 of them from the Hubbard vehicle all had the same characteristics as those from the four mentioned people.

Q. Which four are you referring to?

A. Referring to Kim Lee Hubbard, Doris Hubbard, Ruth Hubbard and the victim.

Q. Anything else that you examined which we have not covered?

A. Well, there were several packages of corn stalks which led to no probative value. There was also the clothing that the victim was wearing which I examined, but they essentially led to no probative value other than being soiled or things like that.

Q. Did you find any blood on the clothing at all?

A. No, I did not.

Q. None whatsoever?

A. None whatsoever.

Q. Thank you. Cross examination.

By The Court:

Mr. Fierro?

### CROSS EXAMINATION

By Mr. Fierro:

Q. Outside of the dirt, leaving the dirt aside for the moment, actually whatever you testified to here leads to no probative value, isn't that true? By Mr. Ertel:

I object to that, that is a conclusion.

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James L. Millm

By The Court:

The objection is over ruled.

By Mr. Fierro:

Q. Isn't that true?

A. Other than the soil samples?

Q. Other than the soil samples?

A. All of the examination led to conclusions.

Q. Led to no probative value?

A. No probative value, however they were examined for purposes to prove this.

Q. And examining for purposes to prove it, your conclusion other than soil samples that they have no probative value, isn't that the answer?

A. That is, basically.

Q. For example, you are talking about hair, can you prove anything by this hair that you have examined? I will withdraw the question. This hair that you looked at, don't they have general characteristics that can apply to thousands of people?

A. The hair samples were subjected to different tests and the conclusions were drawn because of the similarities between these samples, however there were two hair samples that I could eliminate due to also these characteristics.

Q. I am asking you if hair, unlike fingerprints, doesn't belong to a class, and that these classes of hair will have similar characteristics, is that correct?

A. That is correct, and I will qualify it this way, that

hair does fall into a non-fingerprint, non-exact type of hair, and that there are similarities that a cross section of the population will have a general, will have hair very similar, and this is the conclusions I have drawn.

Q. In other words that you can get hair samples from exactly millions of people in this country that are similar to the Hubbards' and the deceased girl, isn't that correct?

A. That is highly speculative.

Q. That is a pretty good conclusion?

A. Percentage-wise it does prove out over a large group.

Q. That is why you are saying the hair made no difference in this case to you?

A. That is correct.

Q. So that we don't waste too much time, you said that the fingernail that you have there, you said it appeared that part of it was broken off, but the rest appeared to you, on examination, to have been clipped off, or that is to say using some instrument like a nail clipper or scissors or something like that?

A. Yes, Sir, I did.

Q. And that indicates to you that some human being, perhaps the decedent herself may have dilberately with some instrument removed that nail?

A. That could be correct.

Q. And you said that you couldn't tell whose nail that

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1t?

A. That is correct.

Q. So again that carries no probative value, does

A. Essentially none, that is right.

Q. You understand what we are trying to do here, trying to give this Jury something that either can say it is a fact or opinion of your's they can sink their teeth into, and when we say "no probative value", we are trying to let the Jury understand it means in effect nothing as far as this case is concerned, right?

By Mr. Ertel:

Objection to that, that is a conclusion the Jury would have to make, not him.

By The Court:

Q. Do you understand the question?

A. I don't understand all of the connotations of it.

Q. Reword your question.

By Mr. Fierro:

I will go on.

By The Court:

Proceed.

By Mr. Fierro:

Q. What probative value can you pass on to this Jury when they deliberate concerning this fingernail?

A. None whatsoever.

Q. Doctor Catherman testified concerning two scratch marks on the victim's face, and said that in his opinion that it was likely made by her, now assuming that to be true, Mr. Miller, wouldn't you find her skin and or at least minute portions of blood underneath her nails?

A. You would assume that, yes, but in this case from the fingernail scrapings there was no blood found.

Q. None of her skin?

A. Nothing of foreign matter, no, Sir.

Q. You say "foreign matter", did you find any of her skin under her nails?

A. I found what is subcutaneous of the fingernail in the scrapings, no skin was removed from the victim's fingers.

Q. What were these scrapings, tell us what these scrapings were?

A. From my recollection of it, of the samples, it was just taken by removing the contents underneath the edge of the fingernail and placing them on this and this is what I examined and these would be the foreign, loose material, plus the material of the fingernail that would come off with the scrapings, which was present.

Q. When you say "nothing foreign", for example dirt, skin, blood, clothing, you found nothing like that in the scrapings?

A. There was no blood, no, Sir.

Q. Was there any of her skin included in the scrapingr"

A. Not that I could recognize and discern from the examination.

Q. Was there anybody else's skin involved in those

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scrapings?

A. No, Sir, there was no skin found.

Q. Let's make it flat, there was no skin found in the grapings?

A. There was fingernail material, or fingernail structure itself.

Q. From her own fingernails?

A. I would assume it was from her, yes.

Q. Just like if I would take a file and put it under my fingernails, I would get some of my own fingernail scrapings, that is what you are talking about?

A. Yes, Sir.

Q. We covered the fingernail, scrapings and hair, now let's go to the last item is dirt, am I correct these are the only four items you testified about, in case I am mistaken, dirt, fingernail, scrapings under the fingernail and hair, is that correct? Is there something else that you examined?

A. I did examine the clothing also.

Q. But you came to no conclusion on that?

A. That is correct.

Q. Clothing, no conclusion either. Now we are up to the dirt, please correct me if I am wrong, did I understand you to testify that whatever dirt samples you examined off the Hubbard car that you found that that dirt was different than, when I say "dirt", soil, different than the dirt or soil at the scene of the crime, not the scene of the crime, the scene where the child was found?

A. Yes, as compared, the dirt samples from the Hubbard vehicle were compared with the dirt removed from the area where the victim was found, and they were different.

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Q. They are different, is that correct?

A. That is correct.

Q. I wanted to be sure. However, the dirt from a certain tire impression with the dirt that came from Dye-Tex Plant are the same?

A. That is correct, the dirt from the tire impression of which I don't remember what number it was anymore, 80 and 81, the dirt from the tire impression, No. 80, was the same as the di or very similar to the dirt from Commonwealth's Exhibit No. 81, which is from the Dye-Tex Plant.

Q. Mr. Miller, can you explain to us, and I will withdraw that and restate it, when you may the dirt from the Hubbard car was different from that at the scene where the body was found, do you mean the dirt that was supplied to you by the State Police gotten from the Hubbard car?

A. That is correct.

Q. Now, was that dirt, or was it explained to you as to what portions of the Hubbard car that dirt was obtained from?

A. No, Sir, I took the samples that were submitted to me and compared them and from reading or anything, I may have determined where they were from, but they were not explained to me.

Q. In other words, the dirt from the Hubbard car that

you examined, could have come from different parts of the car, including the tires?

A. Yes, Sir.

Q. You don't know?

A. That is correct, I took the samples that were supplied to me from the Hubbard vehicle, they were compared together also, they, as a class themselves would be found to be very similar, the five soil samples that were taken in Commonwealth's Exhibit No. 99 were found to be highly similar in the five themselves, but then those five were different from the Dye-Tex or the tire impression from the scene.

Q. That is exactly what I am getting at, because the last thing you said, or from the scene, I am going to restate it again, everything concerning the dirt or sil given to you by the State Police taken from the Hubbard car, is not the same as the dirt, the soil, call it whatever you wish, obtained from the scene where the body was found, is that a correct statement?

A. That is correct.

Q. Thank you, Sir, that is all.

## RE-DIRECT EXAMINATION

By Mr. Miller:

Q. You said that you could draw no conclusions from your examination of the clothing, did you find any blood?

A. No, Sir, I did not.

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James L. Miller.
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By Mr. Fierro:

He asked that question before.

By The Court:

Sustained.

By Mr. Ertel:

I will follow it up.

Q. Is that a conclusion, there was no discernible blood on the clothing?

A. That is right.

By Mr. Fierro:

I object.

By The Court:

The objection is sustained, it is striken from the record and the Jury is instructed to disregard it. By Mr. Ertel:

Q. What, if any, conclusion were you able to draw as to blood on the clothing?

By Mr.Flerro:

I object, it is repetitious, it was asked before.

By The Court:

You may answer?

A. I found no blood on the clothing.

By Mr. Ertel:

That is all.

By Mr. Fierro:

No questions.

By The Court: May this witness be excused? By Mr. Fierro: I guess, can he be recalled, I want him subject to recall. By The Court: But that would be by phone, if necessary. (Excused from witness stand.). By The Court: The Court is going to adjourn at this time. The Defendant is excused. The Jury is excused. (Off-the-record discussion.). By The Court: On the record, Mr. Feese, Mr. Ertel, you are moving into evidence all photographs that have been marked and identified by somebody on the stand? By Mr. Ertel: Yes. By Mr. Fierro: I do not object. By The Court: Except to the two slides? By Mr. Fierro: Yes. By The Court: The two slides were admitted. By Mr. Ertel: I move in the tires.

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By Mr. Fierro:
              Some of these, you are only talking about right
now one tire I think has been identified.
By Mr. Ertel:
              All three has.
By The Court:
              Hold that. He will not move those in.
By Mr. Ertel:
              I move in the casts.
By The Court:
              They are already in. The sample casts will not
go in.
                                                                 (Arr
By Mr. Ertel:
              I will not move those in. All I am moving is
the tire casts.
By The Court:
              They are in.
By Mr. Ertel:
              I move the tire castings, 91 through 94.
By Mr. Fierro:
              No objection.
By The Court:
              They are admitted without objection.
(Commonwealth's Exhibits Nos. 91, 92, 93 and 94 admitted into
evidence.).
                                                                  1 is an
By Mr. Ertel:
              Now, the next thing we ought to move in is the victim!
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clothing.

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By The Court:

Any objection?

By Mr. Fierro:

Yes, because, Judge, it carries no probative value. By The Court:

The clothing you can mark being admitted over the objection of Defense Counsel. (Commonwealth's Exhibits Nos. 60, 61, 62, 63, 64, 65, 66 and 67 admitted into evidence.) By Mr. Ertel:

I also move the Glick bag that was processed. By The Court:

The one she had is all right, but not the identical one.

By Mr. Ertel:

The one found with the body, No. 66. (Commonwealth's Exhibit No. 66 admitted into evidence.). By Mr. Ertel:

I move in Commonwealth's Exhibit No. 49.

By Mr. Fierro:

I object.

By The Court:

You object, and the objection is sustained. By Mr. Ertel:

The newspaper.

By Mr. Fierro:

I object.

1.8 By The Court: The objection to the newspaper we are going to sustained. By Mr. Fierro: She testified about the time of the program. By Mr. Ertel: What about the mud? By The Court: The only ones I will let in is the two specific ones, 80 and 81. By Mr. Ertel: I move them all in. By Mr. Fierro: I object. By The Court: Sustained to all of them except No. 80 and 81. (Commonwealth's Exhibits Nos. 80 and 81 admitted into evidence.). By Mr. Ertel: We move the fingernail scrapings, which is all one exhibit. By Mr. Fierro: I object. By Mr. Frtel: They are relevant. By The Court: 1 I am sustaining the objection.

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By Mr. Fierro:
              And the fingernail, I object to that.
By Mr. Ertel:
              I don't care about that. I will move it in.
By Mr. Fierro:
              I object.
By The Court:
              I will sustain the objection.
By Mr. Ertel:
              We move the boots in.
By Mr. Fierro:
              We agree to that.
By The Court:
              They are admitted.
(Commonwealth's Exhibits Nos. 96 and 97 admitted.).
By Mr. Ertel:
              Sneakers from the car and the boots.
By Mr. Fierro:
              Objection.
By The Court:
              They are admitted.
(Commonwealth's Exhibit No. 102 marked.).
By Mr. Ertel:
              I guess that is it.
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By The Court:

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Court is adjourned. (Adjourned at 12:20 P.M., EDST.).

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