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**IN THE STATE COURT OF HENRY COUNTY
STATE OF GEORGIA**

STATE OF GEORGIA,
Plaintiff,

v.

CHRISTOPHER RYAN SHUMATE,
Defendant.

CASE NO.: 2014-ST-SR-01512

TRIAL TESTIMONY OF
MATTHEW MALHIOT

Partial Transcript of Proceedings Held in Henry County State Court
In Open Court before **Honorable Jason T. Harper**
On June 11, 2014.

APPEARANCES:

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INDEX OF WITNESS EXAMINATION

<u>Witness</u>	<u>Page:Line</u>
Matthew Malhiot	
Direct examination by Mr. Abbott.....	3:17
Cross-examination by Ms. Lavelle.....	35:24
Redirect examination by Mr. Abbott.....	52:8
Recross-examination by Ms. Lavelle	53:17

LEGEND

--	interruption, break in thought
...	trails off
(unintelligible)	words audible but unable to be distinguished, interference during takedown
(inaudible)	verbal response not heard
(sic)	grammatically incorrect or unconventional spelling but shown exactly as stated
(ph)	phonetic spelling

1 ***** P R O C E E D I N G S *****

2 (IN OPEN COURT ON June 11, 2014.)

3 (WHEREUPON, during the proceedings the following
4 transpired:)

5 MR. ABBOTT: Judge, at this point, we call Matthew
6 Malhiot.

7 (WHEREUPON, **Matthew Malhiot** took the witness
8 stand and the following
9 transpired:)

10 MR. ABBOTT: Sir, would you please raise your right
11 hand and take an oath.

12 Do you solemnly swear the testimony you shall give in
13 this hearing shall be the truth, the whole truth, and
14 nothing but the truth so help you God?

15 MR. MALHIOT: Yes, I do.

16 MR. ABBOTT: Please have a seat, sir.

17 **DIRECT EXAMINATION BY MR. ABBOTT:**

18 Q Please explain to the judge, jury, and the court
19 reporter who you are.

20 A Good afternoon. My name is Matthew Malhiot and it's
21 spelled M-A-L-H-I-O-T and it's pronounced Malhiot, M-Y-I-T.

22 I'm the proprietor of Forensic Alcohol Consulting and
23 Training which is a limited liability corporation based in
24 Canton, Georgia.

25 Q And what does this corporation do, sir?

1 A We provide expert consulting, expert training, expert
2 witness services to the legal practitioner in both criminal and
3 civil matters that may have alcohol as an element.

4 Q Do you work for prosecutors or just criminal
5 defendants?

6 A My services are available to anybody. At present, I
7 have no prosecutors in pending cases. I have in the past but
8 not right now.

9 Q How many times have you been qualified as an expert
10 witness in forensic alcohol toxicology?

11 A In toxicology, a few times, not a vast amount; more
12 in standardized field sobriety, forensic breath testing,
13 forensic breath alcohol analysis; but specifically toxicology,
14 I am not a toxicologist.

15 Q What is the difference between forensic breath
16 testing and toxicology?

17 A Toxicology is the study of drugs and its effect on
18 the human body. Specific alcohol is one specific drug. A
19 toxicologist does the entire realm of drugs. I specialize in
20 specifically ethyl alcohol, its effects on the human body,
21 effects of ethyl breath testing for ethanol. But toxicology is
22 a much wider field. I specialize specifically in alcohol.

23 Q Okay. How many times have you been qualified as an
24 expert witness in forensic alcohol toxicology?

25 A Forensic alcohol breath testing and forensic alcohol

1 toxicology, probably hundreds of times both working for the
2 state and in private practice.

3 Q Where did you work before you began your business?

4 A I started my own business in 2010. Prior to that, I
5 worked for the Florida Department of Law Enforcement's alcohol
6 testing program and that's Florida's equivalent of the Georgia
7 Bureau of Investigation's implied consent program.

8 Each state has an oversight agency that has oversight
9 over blood and breath alcohol testing and I worked for the
10 state agency that had oversight in Florida. I was responsible
11 for approximately a hundred different law enforcement agencies'
12 breath alcohol testing program.

13 Q And for how long did you hold this position?

14 A I was a department inspector with the Florida
15 Department of Law Enforcement for eight years, 2002 through
16 2010.

17 Q Did you leave under good terms?

18 A I did. My daughter graduated college. I had some
19 changes in my personal life and I was able to move on. I left
20 under good terms and was referred back to Florida to different
21 agencies by my old supervisors. So, yes, I left under good
22 terms.

23 Q After leaving employment with the State of Florida,
24 were you ever retained by Florida agencies as an independent
25 contractor?

1 A Yes. Specifically, the 12th Judicial Circuit I was
2 asked back to many different hearings and subpoenaed many times
3 for breath alcohol instrumentation and the scientific as an
4 independent consultant. I was also retained by Bay County
5 which is Panama City on a capital murder case where alcohol was
6 as element in the self-defense of impairment. And I was called
7 back as an independent expert and consultant for the state so
8 those two specific judicial circuits.

9 Q Please explain the training which you completed with
10 the Florida Department of Law Enforcement.

11 A Certainly.

12 The first nine months of my employment from January
13 2000 through September was a training program. I would be
14 assigned to a training officer and a forensic toxicologist and
15 I completed training on alcohol and lower molecular structured
16 molecules -- ethanol, isopropanol, butanol, the different
17 alcohols and different chemicals in the alcohol family.

18 I completed specific training on infrared
19 spectroscopy and that is the science in which breath testing
20 works. Infrared light absorption, it's how the Intoxilyzer
21 works.

22 I completed training on gas chromatography, fuel cell
23 technology, different methods of analysis for specimens.

24 I completed training on the Intoxilyzer 5000. I went
25 to CMI, Incorporated, which is the manufacturer of the

1 Intoxilyzer and completed the factory course on the Intoxilyzer
2 5000 and I'm certified by the factory to operate, maintain,
3 repair, calibrate, and teach others on the Intoxilyzer 5000.

4 When I worked in Florida, for the first four years
5 Florida also used the Intoxilyzer 5000. In 2006, they switched
6 to another instrument.

7 Part of my training was I was sent to Indiana
8 University to a course entitled the Borkenstein Course and Dr.
9 Borkenstein, in the 1950s, was the inventor of the
10 Breathalyzer; thus, the course was named after him. And that
11 course was specifically on alcohol highway traffic safety
12 research and litigation and different alcohol pharmacology and
13 toxicology, pharmacokinetics, and pharmacodynamics of ethanol.
14 And those are fancy words on how alcohol gets in the body, what
15 the body does to alcohol, how alcohol is metabolized, the
16 effects of alcohol, those different things.

17 When I completed the Borkenstein Course at Indiana
18 University, I was sent to Lafayette, Louisiana, and completed a
19 course entitled Ethanol Measurement and its Interpretation,
20 ethanol being the molecule we find in human consumables --
21 beer, wine, and liquors. That course was sponsored by the
22 Southern Association of Forensic Scientists and certified by
23 the Southern -- by the Forensic Toxicology Certification Board.

24 After I completed that, I was sent back to Indiana
25 University and completed a course for state administration of

1 forensic programs where we learned about quality assurance,
2 quality control, writing rules, how to manage breath testing
3 programs and blood alcohol testing programs at the state level.

4 Also during that nine-month training, I would have
5 tests; boards, oral boards; presentations on different methods
6 of analysis; also statistical measurement, how we statistically
7 look at quality control in different aspects.

8 Upon completing the nine-month training program, I
9 had to complete a written examination and oral board to be
10 certified as a department inspector for the State of Florida.
11 During that time, I was also certified as a breath test
12 operator and a breath test inspector in the State of Florida.

13 Q Where did you work before you were employed by the
14 State of Florida, sir?

15 A I was a reserve deputy with the Cascade County
16 Sheriff's Office in Montana and, also, I retired from the Air
17 Force with 20 years in law enforcement with the Air Force.

18 Q What were your duties with the Cascade County
19 Sheriff's Office?

20 A I was certified by the Montana, at the time, Division
21 of Forensic Sciences as a breath test operator, breath test
22 senior operator, and breath test technician. And at the time,
23 Montana also used the Intoxilyzer 5000. I was the one
24 responsible for doing weekly calibration checks and repairs,
25 maintenance, and teaching for breath testing for the sheriff's

1 office, city police department, and division of the highway
2 patrol.

3 Q What training did you complete in order to work for
4 the Cascade County Sheriff's Office?

5 A Well, I completed the POST certification which is
6 Police Officers Standards and Training. I also completed work
7 with the Division of Forensic Science and certified as a breath
8 test operator, senior operator and technician. I also
9 completed training with the Montana Highway Patrol in
10 standardized field sobriety and DUI detection.

11 I went on and completed the standardized field
12 sobriety instructor course and taught that course many times at
13 different law enforcement academies.

14 I also completed the U.S. Department of
15 Transportation instructor facilitator course, which helped me
16 teach those curricula, plus many other courses in law
17 enforcement generalized police training courses.

18 Q Where did you work before you worked for Cascade
19 County?

20 A There was an overlap but I retired from the Air Force
21 as a police officer from 1979 to 1999.

22 Q Where did you begin your work in forensic alcohol
23 toxicology?

24 A In Montana in the early '90s when I was stationed
25 there in the Air Force, that's where I started my training with

1 the Montana Division of Forensic Science.

2 Q And do you have any formal education?

3 A Yes. I hold a bachelor of science in criminal
4 justice administration with coursework in anatomy, physiology,
5 criminalistics, forensics, and the basic sciences.

6 Q Do you have any training in the area of DUI
7 enforcement?

8 A Yes. As I've mentioned, basic law enforcement
9 academy, then the standardized field sobriety, standardized
10 field sobriety instructor, plus numerous courses in forensic
11 breath alcohol testing, police video operations, numerous
12 courses in DUI detection and instructor level courses.

13 Q Are you trained in the interaction between alcohol
14 and the human body?

15 A Yes. I've had specific training in pharmacology,
16 toxicology, pharmacokinetics, pharmacodynamics specifically of
17 ethanol.

18 Q Where did you get the training that you just
19 described?

20 A Starting in my undergraduate -- actually, starting in
21 high school. I completed a vocational high school and
22 specialized in medical occupations where anatomy and physiology
23 were very strong course works; but my undergraduate work was
24 with biology, anatomy, physiology, and those are core level
25 courses that help the understanding of infrared spectroscopy,

1 forensics, and criminalistics; and then my coursework with
2 Borkestein at Indiana University, my work with the Southern
3 Association of Forensic Scientists, my forensic toxicology
4 work, also with the Montana Division of Forensic Science and
5 the Florida Department of Law Enforcement. So all throughout
6 my adult professional career I've had continuing education in
7 alcohol.

8 Q What courses have you attended on DUI and alcohol
9 testing?

10 A Well, I think I've mentioned them all. Starting with
11 basic law enforcement academy, even some undergraduate classes
12 on forensics and criminalistics talked about infrared
13 spectroscopy and things of that nature, but breath test
14 operator, breath test senior operator, breath test technician,
15 State of Florida, same certifications, DUI detection,
16 standardized field sobriety, DUI detection, standardized field
17 sobriety instructor.

18 And also, I went to the University of North Florida
19 Police Institute of Management and Technology and completed
20 instructor updates. As new curricula comes about and new
21 research, we continually improve our education. I've completed
22 update courses.

23 Q Do you have any training on the CMI Intoxilyzer 5000?

24 A I do. I was certified in Montana and Florida as an
25 operator, inspector, and repair technician. I'm currently

1 certified by the factory as an operator, instructor, repair
2 technician, and calibration of that instrument.

3 Q And are you acquainted with the Georgia software for
4 the CMI Intoxilyzer 5000?

5 A I am. The Georgia software -- the differences
6 between states is not how it analyzes alcohol but it may do
7 different sequences versus state to state but the software, the
8 analytical portion of the software, is the same state to state.

9 One thing about Intoxilyzers is the states that use
10 them also share information so we have what's known as annually
11 Intoxilyzer users group and persons from Georgia, Florida, and
12 many other states would join together and cross-train on their
13 different instrumentations and procedures and practices. So
14 I'm very familiar with Georgia's software, inspection protocol,
15 breath testing protocol, and have done all those tests
16 personally on the Intoxilyzer 5000.

17 MR. ABBOTT: Judge, as I plan to qualify Mr. Malhiot
18 as an expert on forensic alcohol toxicology and the
19 Intoxilyzer 5000, I pass him for the purpose of voir dire
20 only.

21 THE COURT: Do you have a curriculum vitae with you?

22 MS. LAVELLE: Your Honor, we'll go ahead and
23 stipulate to him as an expert. I'll address my issues on
24 cross.

25 THE COURT: All right. That's fine. I will accept

1 the stipulation based on no objection from the prosecutor.

2 **BY MR. ABBOTT: (resuming)**

3 Q Would you please explain in general terms how the
4 Intoxilyzer 5000 works?

5 A Certainly.

6 As I mentioned earlier, it is an infrared
7 spectroscopy, s fancy word for infrared light absorption. What
8 happens inside the Intoxilyzer, there is a sample chamber. And
9 to visualize the sample chamber, if we take a roll of paper
10 towels and use up all of the paper towels and we have that
11 cardboard tube left, that's pretty much what the sample chamber
12 -- same size, same diameter. It's about the same as the 5000
13 sample chamber.

14 At one end there's a projector lamp very much like we
15 find in the projector showing us the video. At the other end
16 is a light meter very much like if we go to the photographer
17 and we sit for a portrait and the photographer holds up a light
18 meter to measure how much light energy is hitting. Well,
19 that's the same thing in the 5000. There's a light detector
20 and it takes that energy and changes it into an electrical
21 signal.

22 What happens with breath testing is there's a filter
23 wheel that spins in front of this meter, this detector, and it
24 blocks out all the other light, all the visible light, and it
25 just looks at specific wavelengths of infrared light. Alcohol,

1 ethanol, and all volatile organic compounds will absorb light
2 energy. So when there's no alcohol in the sample chamber, the
3 light passes. The same voltage that started is at the end.
4 There's nothing being absorbed, none of that energy.

5 As alcohol enters that sample chamber, it absorbs
6 some of that light so the amount of energy hitting that
7 detector is decreased so there's a voltage change. Those
8 voltages are sent to the microprocessor internal computer on
9 the breath test machine and that converts it into a breath
10 alcohol.

11 A good way to understand it is if you drive to work
12 in the morning and it's dark out and your headlights shine for
13 five blocks. The very next day you drive to work, take the
14 exact same route, exact same time, but it's foggy out now and
15 your headlights only shine for two blocks or one block. What's
16 happening is the light is being absorbed by the moisture in the
17 air so the light's not shining as far.

18 The same thing with the 5000, that the alcohol is
19 absorbing some of that light energy and it changes the amount
20 of light that hits that detector. That's the basic principle
21 behind breath testing on the 5000.

22 Q What is the margin of error of the Intoxilyzer 5000
23 when it is used correctly?

24 A What it is used correctly, inspected, calibrated, and
25 used properly, the margin of error is a generic term that

1 encompasses a few different things.

2 One, you have an instrument accuracy standard and
3 that's generic. State to state picks their own standard and,
4 particularly in Georgia, it has a five percent instrument
5 accuracy standard. If it's given a known concentration, it can
6 measure that within five percent of the known value.

7 We also have what's known as measurement uncertainty.
8 And measurement uncertainty is how accurate of a measuring
9 device is it. A good way to give you an example of measurement
10 uncertainty is at springtime we set all the clocks in our house
11 ahead one hour. We come back a few months later and every one
12 of them is a minute or two off. Well, what's happening is the
13 measurement uncertainty of those clocks.

14 We get up in the morning, we get on the bathroom
15 scale, and it says we weigh 198 pounds. Get up, get back on
16 the scale, and now it says you weigh 201 pounds. Well, you
17 didn't gain or lose three pounds in twenty seconds. It's
18 measurement uncertainty of the scale, so same thing with breath
19 testing. And in Georgia the breath testing measurement
20 uncertainty with two samples of breath is seven percent.

21 Also, we have what's known as variance between
22 samplelizations. Because Georgia requires two samples, we
23 allow a variance between those two and that's a fixed rate at
24 .02. It must be within .02 of each other. And at one-oh,
25 that's a twenty percent variance.

1 I hope that answers your question because, you know,
2 error rate is a generic term that encompasses a lot of
3 different things.

4 Q It does.

5 Would you please explain to the jury what a ketone
6 is?

7 A A ketone is a molecular byproduct of the metabolism
8 of ethanol. Ethanol goes through and metabolites and changes
9 into different chemicals. Ultimately, it changes into carbon
10 dioxide and water leaves the body. Ethanol is metabolized 95
11 percent by the liver and then some of it leaves the body as
12 ethanol.

13 A ketone is one of the things that is produced during
14 the metabolism of ethanol and the body can produce them other
15 times in diabetic situations and fasting situations but
16 generally for this purpose it is a product -- byproduct of the
17 body's metabolism of ethanol.

18 Q Is a ketone an intoxicant?

19 A It can be depending on the quantities and its ability
20 to affect the body.

21 Q If it is a byproduct of digestion, would a ketone be
22 an intoxicant?

23 A Generally not as a normal intoxicant as we think of
24 intoxicants but anything can intoxicate in high enough
25 quantities.

1 Q Can the Intoxilyzer 5000 confuse ketones with
2 alcohol?

3 A The Intoxilyzer 5000 tries to distinguish between --
4 that's why I say -- keep saying "ethanol" versus the word
5 "alcohol." Alcohol is a family of molecules. Ethanol is the
6 specific one we find in human consumables. The Intoxilyzer
7 tries to identify different molecules. A ketone it does not
8 always see. Isopropanol it does not always see. But that's
9 more of what's known as interfering substances and the
10 Intoxilyzer is designed to see interfering substances but does
11 not see them always all the time. It's only tested against
12 acetone; it is not tested against any other chemical.

13 Q When the Intoxilyzer 5000 is calibrated in Georgia,
14 what is the protocol for calibrating it?

15 A The calibration protocol for the State of Georgia is
16 it's not done. Georgia does not calibrate the instruments at
17 all unless they're removed from service and sent back to the
18 factory. What Georgia does is a quarterly inspection and
19 checks the calibration. They do not calibrate.

20 Q What procedures ought Georgia to follow to ensure
21 that the Intoxilyzer 5000 it uses functions accurately?

22 A Well, there's a whole realm of quality assurance
23 measures that should be implemented. At present on the 5000,
24 they're checking it once a quarter. The National Safety
25 Council recommends that it be tested with an external control

1 test with every single breath test. The 5000 is not -- they're
2 not doing that in the State of Georgia. They're doing a .08
3 check once a quarter. They're not checking any other alcohol
4 concentrations. They're not calibrating the instruments.

5 There's a litany of quality assurance measures that
6 could be implemented should the state decide to do so. With
7 their new instrument, they are implementing a lot of new
8 measures.

9 Q Please explain what an external control is.

10 A Certainly.

11 In breath testing you have two different ways to
12 check calibration externally. Basically, it's a yardstick or a
13 measuring device to make sure the breath test machine is
14 measuring properly.

15 If we have a bathroom scale and we want to make sure
16 it's working properly, we take a ten-pound weight, put it on
17 there, ten pounds. If we take a 50-pound, put it on there, 50
18 pounds. We can check it with weight and make sure it's
19 measuring properly, same thing with breath testing.

20 We have simulators that simulate human breath or
21 simulate a specific alcohol concentration and that's what you
22 use once a quarter in Georgia. It has a liquid in it that has
23 a specific alcohol concentration. That liquid is heated up and
24 then air is passed through that liquid so now you have vapor
25 that contains alcohol. That vapor is pumped into the breath

1 test instrument and is tested against that known standard. We
2 know the standard is a .08, what does the machine tell us it
3 is, and that's how you externally check the calibration.

4 Q How often does Georgia do that?

5 A With the Intoxilyzer 5000, they do once a quarter.

6 Q When was the Intoxilyzer 5000 invented?

7 A 1970s and 1980s technology.

8 Q Is it still manufactured?

9 A It is not.

10 Q When did CMI stop manufacturing it?

11 A Selling new ones, probably within the last five
12 years.

13 Q Is more modern breath testing equipment available?

14 A Yes. In fact, Georgia has approved the Intoxilyzer
15 9000 and is in the transition phase to the new instrument now.

16 Q And is the Intoxilyzer 9000 more or less accurate
17 than the Intoxilyzer 5000?

18 A It's more. It has more specificity meaning it can
19 identify the molecule better. It has controlled testing with
20 every breath test. It has a lot more quality assurance and
21 quality control measures associated with the program than the
22 breath testing the 5000 did.

23 Q In Georgia, how often is the breath testing equipment
24 typically used between quarterly calibrations?

25 A Well, that strictly depends on the police agency that

1 has it. If I understand you correctly, how many breath tests a
2 month or a quarter are being run on a machine. It depends on
3 the county. Some could be hundreds; some could be one or two.

4 Q Okay. And do you know what that figure is in Henry
5 County?

6 A I do not. I have seen breath test logs but I don't
7 know specifically and it fluctuates from quarter to quarter.

8 Q Would you please explain to the jury what a partition
9 ratio is?

10 A Certainly.

11 Breath testing is reported in grams of alcohol per
12 210 liters of breath. 210 liters of breath is about 55
13 gallons. Nobody blows 55 gallons into these machines. They
14 blow about two and three liters.

15 So where is that number coming from? It's coming
16 from the partitioned ratio.

17 When we blow into a breath test machine or a person
18 blows in, they're trying to measure alcohol from the blood.
19 What happens is alcohol diffuses out of the blood into the
20 breath and we blow into the machine. Back in high school we
21 learned that we breathe in oxygen and breathe out carbon
22 dioxide because those molecules cross the barrier in the lung.
23 So same with ethanol, as we blow out, ethanol passes the
24 barrier in the lung and into the breath test machine.

25 There's a specific ratio between breath and blood.

1 That's the partition ratio. There's the same amount of alcohol
2 in 2100 breath as one blood so -- and that's based on a
3 population statistic, not individual people but statistically a
4 population.

5 Q Are there different partition ratios for different
6 people?

7 A Partition ratio changes all the time. An individual
8 can change. If a person has a fever, that partition ratio
9 changes. So it's based on a population statistic, not a
10 specific individual.

11 Q How great is the variance of individual partition
12 ratios within the population?

13 A They can vary as low as 1400 to 1 all the way up to
14 2800 to 1. I've seen research studies done on those -- that
15 much of a variable.

16 Q And how would the variation in individual partition
17 ratios affect the accuracy of a breath test?

18 A Well, it's -- the breath alcohol in the machine may
19 be perfectly accurate but if the partition ratio is different,
20 it would not accurately represent what's in the blood so it
21 could change 50 percent. If, hypothetically, you're talking
22 2100 to 1, so probably at the extremes not quite 50 percent but
23 probably 30 to 40 percent change.

24 Q Is a person intoxicated by alcohol in his blood or
25 intoxicated by alcohol in his breath?

1 A Well, technically, neither. He's intoxicated by
2 alcohol in the central nervous system. It is a central nervous
3 system depressant. It's got to be in the blood to get to the
4 central nervous system but that's where the impairment or
5 intoxication takes place.

6 Q Can a breath test produce misleading outcomes for a
7 person with an unusual partition ratio?

8 A It can.

9 Q Explain how.

10 A Well, like the previous question, if your partition
11 ratio is off -- is at 2100 to 1 but is 40 percent off, the
12 breath test result is going to be 40 percent off.

13 Q And could that turn a .07 into a .11?

14 A That's about 40 percent. It could.

15 Q Now I want to move on to the case of Chris Shumate.

16 A Okay.

17 Q What did you do to prepare to testify in this case?

18 A I read the police report, I looked at the breath test
19 information, I did what's known as an instrument audit, I
20 looked at the quarterly inspections on the instrument, I looked
21 at the breath test print card, and I watched the video.

22 Q Okay. What is the serial number of the piece of
23 breath testing equipment that was used in this case?

24 A An Intoxilyzer 5000, Serial No. 68-013224.

25 Q Do you have any idea when that was manufactured?

1 A It would be an estimate. I would say the late '90s.

2 Q Is that based upon the equipment's serial number?

3 A Yes.

4 Q Please explain what an observation period is.

5 A In Georgia and most states -- as a matter of fact,
6 all states -- require a pre-test deprivation observation
7 period. As I explained earlier, a person's breath alcohol is
8 that alcohol which is diffusing out of the lungs into the
9 breath and blown in. You do not want consumed alcohol or
10 alcohol from the digestive system to be measured.

11 So to prevent that, one of the first and initial
12 safeguards to prevent that is a pre-test observation period.
13 In Georgia, that pre-test observation period is 20 minutes.
14 Twenty minutes preceding the breath test the individual must be
15 in a controlled environment and must be monitored for two
16 things: one, denied access to alcohol. We don't want them
17 drinking anymore, common sense.

18 But we also must monitor them for regurgitation to
19 make sure no alcohol that's in the stomach comes back up into
20 the oral cavity. Obviously, vomitus would be the obvious one
21 but belching and burping may be signs of regurgitation so we
22 want to observe them and monitor to make sure they haven't
23 regurgitated or consumed any alcohol and that's for 20 minutes
24 preceding the breath test.

25 If we look at the CMI print card on the bottom left,

1 there's a spot here that says "time first observed" and that's
2 designed for the officer to put that -- when they're brought
3 into the controlled environment, when they stop their -- start
4 their observation to enter a time.

5 On this particular print card, it's blank.

6 Q What would be the effect of failing to implement a
7 proper observation period?

8 A Well, it's the first and primary safeguard against
9 mouth alcohol contamination.

10 You have two parts of a breath test. You have the
11 samplelization and analyzation. The sample is capturing the
12 sample. Well, part of that is to watch them for 20 minutes;
13 explain how to blow into the machine; make sure they haven't
14 regurgitated make sure they don't have anything in their mouth;
15 make sure there's no dip, gum, candy, those type of things;
16 watch them. That's how you capture the sample and then the
17 machine will do the analyzation.

18 So if you -- you can't have a good analysis without a
19 good sample so it's paramount to get a good sample and that
20 20-minute observation is part of the samplelization.

21 Q Based upon the records you have inspected in this
22 case, is there any evidence that Officer Horne observed the
23 20-minute observation period?

24 A No, there's no --

25 MS. LAVELLE: I would object to that, Your Honor, I

1 think that would be speculation. He testified that he saw
2 the video, I think he read the report, and he saw the
3 documentation related to the Intoxilyzer machine. So he
4 would be speculating as to what the officer did 20 minutes
5 before he took the breath test.

6 THE COURT: Mr. Abbott?

7 MR. ABBOTT: I am asking for his opinion based upon
8 the records he has inspected and he is qualified to give
9 his opinion as an expert witness, Your Honor.

10 THE COURT: He can't give a qualified opinion as to
11 something he observed if he didn't observe it. I thought
12 your question was what did he do for the preceding 20
13 minutes or was he able to do X during the preceding 20
14 minutes.

15 How, based on what he's told us he's observed or
16 witnessed by watching a video, would he know what occurred
17 20 minutes prior unless it was all on video or all
18 documented sequentially by minute?

19 MR. ABBOTT: He testified that the beginning of the
20 observation period wasn't recorded on the breath testing
21 card, Your Honor.

22 THE COURT: You can ask further questions but I'm
23 going to sustain her objection.

24 Disregard the answer to the last question.

25 Unless you lay a better foundation that he has a

1 basis for knowing the answer to that, I'm not going to
2 allow it.

3 **BY MR. ABBOTT: (resuming)**

4 Q Are there protocols for using the Intoxilyzer 5000?

5 A There are.

6 Q Are there protocols as to what an officer is supposed
7 to record?

8 A There are.

9 Q What is the officer supposed to record?

10 A Well, specifically in Georgia, they record the data
11 that they enter at the time -- time of violation, subject name,
12 driver's license, time of offense, those types of things.
13 Those are the required reportings.

14 Q Okay. And how is that data entered?

15 A That specific data that I had mentioned -- there's a
16 keyboard on the Intoxilyzer just like a computer and there's
17 questions the officers ask and he types in the answer to those
18 questions.

19 Q Can a test be corrupted if the person taking it
20 burps?

21 A If that burp contains alcohol and is brought back
22 into the oral cavity, yes.

23 Q Okay. If a person has drunk beer, can that cause
24 that person to burp?

25 A Any carbonated substance can cause burping and beer

1 is a carbonated substance.

2 Q What is the volume of the testing chamber in the
3 Intoxilyzer 5000?

4 A Depending on the model, it's -- I want to say 82
5 milliliters but it's an open-end testing. It's not a
6 fill-it-up test. As you fill one end, it's leaves the other
7 end so you don't fill it, measure it. It's an open system.

8 Q Okay. When a person takes the test on the
9 Intoxilyzer 5000 if their true breath alcohol content is .08,
10 how many grams of alcohol would they blow into the breath
11 testing chamber?

12 A That would probably be a very hard mathematical
13 equation because it is based on grams of alcohol per 210 liters
14 but they're only providing maybe two liters so that would be
15 divided by 50. You cannot answer that question because one of
16 the things that is not reported is breath volume so we don't
17 know how much volume they blew in there. Without that, you
18 cannot calculate that answer.

19 Q How much alcohol would it take in a person's mouth to
20 corrupt the outcome of the test?

21 A Well, significantly less than the specific number
22 that's being reported because what's being reported is based on
23 a partition ratio of 2100 to 1. So if there's corrupt alcohol
24 in the oral cavity, it's not a 2100 to 1 ratio; it's raw
25 alcohol. So it can exponentially affect a breath test.

1 Q Is each gram of alcohol in a person's mouth
2 equivalent to 2100 grams in their breath for purposes of the
3 outcome of the test?

4 A That makes common sense and I understand your
5 question but I don't think you can apply that because a gram of
6 alcohol in the mouth is not equivalent to 2100 in the blood or
7 vice versa.

8 We have to understand that the calculation the
9 machine is making is based on the ratio so the exact number of
10 grams you cannot calculate without a volume. I understand your
11 question. I don't know if I can concur with your question but
12 it makes sense.

13 Q If there is --

14 A If that makes sense.

15 Q If there is one drop of alcohol in a person's mouth,
16 what would that do to the outcome of the test?

17 A I personally have done what's known as mouth alcohol
18 testing where you put a drop of alcohol on your tongue and blow
19 into the machine, just a couple of drops or drop on your
20 tongue. That raw alcohol can give you a reading as high as .2
21 because it's raw alcohol going into the machine, not divided by
22 the ratio.

23 Q What effect could a fraction of a drop of raw alcohol
24 have on the outcome of the test?

25 A It all depends on how much of the vapor gets into the

1 sample chamber. It can affect it -- it can artificially raise
2 the result. How much? I don't know because it depends on how
3 many -- how much of that alcohol gets into the machine.

4 Q Would it depend upon where that raw alcohol is in the
5 test-taker's mouth?

6 A It could. What the bottom-line effect is what gets
7 into the machine to be measured. That's the bottom line.
8 Irrelevant of where it is in the oral cavity, it's not going to
9 affect at all unless the vapors get into the machine. So,
10 obviously, alcohol on the tip of the tongue right by the
11 mouthpiece has a higher probability of getting in the machine
12 than something on the tonsils, if that...

13 Q Can a burp corrupt the outcome of the test?

14 A If alcohol is brought up along with that burp from
15 the stomach, yes.

16 Q Would that burp have to be obvious to corrupt the
17 test?

18 A No. It just has to contain alcohol from the
19 digestive tract.

20 Q What degree of vigilance is appropriate during the
21 observation period?

22 A Well, you define the observation of the goal of the
23 observation. It doesn't have to be a staring contest but you
24 have to reasonably ensure they have not regurgitated so you
25 have to be sitting with them, you have to watch and monitor

1 them.

2 It is my opinion that you cannot do a proper
3 20-minute observation driving to the police station with a
4 person in the backseat and a cage between the two of you as
5 you're trying to pay attention to the road. The 20 minutes
6 does not mean just in custody; it means you have to observe.
7 You define the observation by the goal of the observation.

8 Q And could you observe the test-taker appropriately
9 while keying their identifying information into the breath
10 testing equipment?

11 A Well, if I'm sitting here entering data and the court
12 clerk who's three feet away, and that's the distance I'm
13 monitoring, it could be. Do I have to sit and stare? No.

14 Q Did you have the opportunity to watch the video of
15 Officer Horne performing the field sobriety test upon Mr.
16 Shumate?

17 A I did.

18 Q Okay. What are the protocols for performing a proper
19 horizontal gaze nystagmus test?

20 A Well, the first thing is they have to be medically
21 cleared for the test. And that's very simple, three specific
22 things. One, they have no resting nystagmus; two, they have
23 equal pupil sizes, both eyes look the same; and three, they
24 must be able to follow the stimulus smoothly, their eyes have
25 to track together. That's medically clearing them.

1 Then the officer must hold the stimulus 15 to 18
2 inches in front of the nose and elevated slightly. The
3 stimulus is moved horizontally in specific timing looking for
4 are the eyes following it.

5 And then the second clue is nystagmus at maximum
6 deviation and it's just not the presence of nystagmus but it
7 must be sustained. So the officer moves the pen out, holds it
8 for a minimum of four seconds to see if that eye is still
9 jerking, then moves to the other side, and repeats both eyes.

10 The last -- well, not the last but the next clue is
11 how soon on that degrees does it start. And halfway between
12 the end and middle is 45 degrees so does that pinging start
13 before or after 45 degrees and the officer takes -- it should
14 take about four seconds to move from center out to the end of
15 the shoulder. And as they're moving as soon as they see that
16 nystagmus or pinging, they stop and hold the pen or the
17 stimulus or penlight or finger and confirm that it's still
18 moving. Then they do the other eye and confirm.

19 So you're looking at specific clues twice in each
20 eye.

21 Q What effect would be blue strobe lights have on a HGN
22 test?

23 A Rotating and flashing lights can cause what's known
24 as optokinetic nystagmus. The best way to explain optokinetic
25 nystagmus is something in the field of vision that moves away.

1 And we've all experienced it. If you're driving down
2 the road and the railroad gates come down and you're the first
3 person in line behind the railroad gates, as that train goes by
4 our eye has a tendency to try and follow the train and you can
5 feel yourself eye pinging. That's optokinetic nystagmus. That
6 also happens with blue flashing, red flashing lights, rotating
7 lights, strobe lights.

8 Q What ought law enforcement do with their blue strobe
9 lights while they are performing a HGN test?

10 A Two specific things: one, if officer safety and
11 environmental safety allows, turn them off, very easy. The
12 second is, if you can't and you have to have them on for
13 highway safety or whatever the issue is, the person should be
14 facing with their back facing -- faced away from the strobe
15 lights, ensure they don't see them in their field of vision,
16 find a location that doesn't allow them to see the strobe
17 lights to eliminate that potential cause of nystagmus.

18 Q Okay. At this point, I want to review a portion of
19 the tape.

20 (WHEREUPON, a video was played after which the
21 following transpired:)

22 **BY MR. ABBOTT: (resuming)**

23 Q Okay. Were blue strobe lights visible during the
24 portion of the tape I just played?

25 A There was a reflective -- something off the white

1 car. Whether it was blue strobe lights -- I saw a red-blue
2 reflection off the car. I don't know if they -- where they
3 were but you could see a color difference but I can't say that
4 it was blue strobe lights specifically.

5 Q Was that portion of the car pointed in the direction
6 that Chris was facing?

7 A I don't know if it was pointed in that direction or a
8 reflection. I couldn't testify to that. I know that the light
9 was visible in that direction, meaning it wasn't behind him.
10 It was behind the camera I would say is the best way to
11 describe it. I can't say where exactly though.

12 Q And Chris is -- is Chris facing towards the area
13 behind the camera?

14 A He is.

15 Q Could those lights have affected the accuracy of the
16 test?

17 A They could.

18 Q Okay. What is the proper procedure for the
19 walk-and-turn test?

20 A The walk-and-turn test is broken down into two
21 specific parts, the instructional phase and the execution or
22 the walk-and-turn phase. The individual is placed into an
23 instructional stance. They're given the instructions. They're
24 given the demonstration. The person performing the test is
25 asked and confirms that they understand all the instructions

1 and then they're asked to perform the evaluation.

2 There's eight specific clues the officer should be
3 looking for and document those clues as they appear. A
4 reasonably level and free of debris -- you don't have to have a
5 line. It's preferable but you can do an imaginary line.

6 Q Does demonstrating four clues on the walk-and-turn
7 test mean that a person is unsafe to drive?

8 A No. The field sobriety was never designed other than
9 to associate it as a above or below a specific alcohol
10 concentration, not a driving task.

11 Q Okay. And does demonstrating two clues on the
12 one-leg stand test mean that a person is unsafe to drive?

13 A No. It's associated with a pass-fail decision-making
14 capability for officers with an alcohol concentration.

15 Q Would you please explain to the jury what a screening
16 test is?

17 A Well, there's many different kinds. I'm assuming
18 you're talking an alcohol sensor or alcohol screening device, a
19 PVT. Is that --

20 Q I am talking about the field sobriety tests.

21 A Well, a field sobriety test is a decision-making
22 guide for officers. It is -- for lack of better term, it's
23 very simple. It's an arrest/don't-arrest decision guide for
24 law enforcement.

25 Q Are there people who haven't drank anything at all

1 who cannot pass the walk-and-turn test?

2 A Yes.

3 Q Are there people who haven't drank anything at all
4 who cannot pass the one-leg stand test?

5 A Yes.

6 MR. ABBOTT: Those are all my questions, Judge.

7 THE WITNESS: Thank you, Counselor.

8 THE COURT: Ms. Lavelle?

9 MS. LAVELLE: Your Honor, I have an extensive
10 cross-examination and I really need a break to double
11 check the childcare arrangements of my child. Can I do
12 that quickly?

13 THE COURT: That is fine. We're not going late
14 tonight so you may be cross-examining in the morning so I
15 don't know --

16 MS. LAVELLE: Yes, that's fine.

17 THE COURT: -- what time you needed to make child
18 arrangements but we're stopping at 5:00 o'clock so --

19 MS. LAVELLE: Okay.

20 THE COURT: Do you need to stop?

21 MS. LAVELLE: I'm ready if we're stopping at 5:00
22 o'clock.

23 THE COURT: Okay.

24 **CROSS-EXAMINATION BY MS. LAVELLE:**

25 Q Mr. Malhiot, my name is Brittany Lavelle. I don't

1 think we've had the pleasure of meeting in person so it's nice
2 to meet you.

3 A Nice meeting you, Counselor.

4 Q I have several questions for you going back a little
5 bit to your training and experience.

6 So you testified about the Air Force, Montana,
7 Florida. You've never worked as an officer in Georgia?

8 A I have not.

9 Q Okay. But you do live here in Georgia?

10 A I do.

11 Q When you were employed with the Air Force, you
12 testified a little bit earlier, you were employed as a police
13 officer, correct?

14 A I was.

15 Q Okay. So you didn't work in any capacity as a
16 scientist there for the Air Force?

17 A No.

18 Q And at the time, you didn't hold a college degree?

19 A No. I earned my degree, actually, soon after
20 retirement.

21 Q Okay. So when you obtained that degree, that degree
22 is from Park University; is that correct?

23 A It is.

24 Q Okay. And that's a university located in Missouri?

25 A It is.

1 Q So you did that via long distance when you got that
2 degree?

3 A No. We have training sites, physical classroom on
4 the Air Force base so I was in a physical classroom with a
5 professor present for all my classes. There's nothing online
6 or no videoconferencing or anything like that.

7 Q Right. But that wasn't actually at the university.

8 A Correct. I was not physically on campus in Missouri.

9 Q And your degree is in criminal justice
10 administration?

11 A It is.

12 Q Okay. And is that a comprehensive study of a
13 criminal justice system, not a science degree?

14 A Well, it differs in that it's not a criminal justice
15 bachelor of arts where it's more of a management degree, in
16 that it's a bachelor of science where basic sciences,
17 criminalistics, forensics were part of the core study.

18 Q Okay. You wouldn't disagree with me that the
19 description of your degree from the university catalog of Park
20 University is that the basic aim of the criminal justice
21 administration bachelor of science degree is to develop a
22 comprehensive understanding of the total criminal justice
23 system within the larger society? You wouldn't disagree that
24 that's your university's description of your degree?

25 A I don't know what document you're reading from, what

1 date. I can't disagree with it because I don't know what it
2 says.

3 Q And you're not disagreeing that you don't have a --
4 you don't have a degree in chemistry?

5 A I do not have a chemistry degree.

6 Q You don't have a degree in biology?

7 A I do not.

8 Q You don't have a degree in computer science?

9 A I do not.

10 Q And a lot of what deals with the Intoxilyzer machine
11 is based on the computer source code. Would that be correct to
12 say?

13 A Yes, yes. Source code is a big part of the
14 Intoxilyzer and source code is computer language.

15 Q And during your obtaining your degree there from Park
16 University, how much actual lab science work did you do?

17 A Probably three classes.

18 Q So three classes of actual science work where you did
19 anything in a lab?

20 A Correct.

21 Q Did you ever take organic chemistry courses?

22 A I did not.

23 Q Did you ever take instrumental analysis?

24 A I did not.

25 Q Qualitative chemistry?

1 A No, ma'am.

2 Q Quantitative chemistry?

3 A No, ma'am.

4 Q Pharmacology?

5 A No, ma'am.

6 Q Toxicology?

7 A No, ma'am.

8 Q And are you familiar with the International
9 Association for Chemical Testing?

10 A Yes. I am an active member of that organization.

11 Q Okay. And they are one of the main organizations
12 that address issues regarding breath alcohol testing?

13 A They're a nonprofit organization that addresses
14 issues, yes.

15 Q Okay. When you were employed there in Florida, what
16 was your role?

17 A I was a department inspector. I was responsible for
18 rule writing, analysis of breath testing, blood testing
19 permits, inspection and calibration of instruments, repair of
20 instruments, oversight of law enforcement agencies, research in
21 forensic breath testing and instrumentation, expert testimony,
22 consultations, training.

23 Q And there you had a supervisor there in Florida,
24 right --

25 A I did.

1 Q -- you weren't the head person?

2 Let's talk a little bit about your testimony in this
3 particular case. You testified to several things. You would
4 agree that if the result of the first and the second sample on
5 a breath test on the Intoxilyzer are within a .02 grams per 200
6 milliliters, that is an accurate test?

7 A It could be, yes.

8 Q Why do you say it could be?

9 A Well, because there may be other issues that affect a
10 breath test that the .02 agreement didn't catch.

11 Q Okay.

12 A But it's designed as a quality assurance measure,
13 yes.

14 Q I'm going to let you review State's Exhibit No. 4.
15 I'm sure you've already seen that, Mr. Malhiot.

16 A Yes, ma'am.

17 Q And on that document does there appear to be a
18 problem with the breath test?

19 A No. There are no error messages associated with the
20 breath test.

21 Q Okay. And that document is well within the .02
22 differential; is that correct?

23 A In fact, it's .002 so it's --

24 Q So very close?

25 A -- two-thousandths of a gram.

1 Q And you've testified in many cases back when you were
2 in law enforcement, right?

3 A I did.

4 Q You worked with the Intoxilyzer 5000 back in Montana?

5 A I did.

6 Q And did you also work with the 5000 in Florida?

7 A I did.

8 Q And in all of those cases where you testified, you
9 used the Breathalyzer, the Intoxilyzer 5000, when you made DUI
10 cases; is that right?

11 A I did. A lot of times, yes.

12 Q And you never testified in any of your cases that a
13 document such as the one you have there where it is within the
14 .02 differential and there are no errors messages that there
15 was a problem with the test. You have never testified to that?

16 A You're correct. And if I may explain, in Florida and
17 in Montana I was responsible for the calibration checks. And
18 there have been times where calibration checks or inspections
19 or there were problems with breath testing instruments that I
20 would notify the prosecutors and, obviously, we wouldn't get to
21 the point where I would testify and the prosecutor would be
22 blindsided and did not know about it.

23 But you are correct in that I have never testified on
24 those cases that there was a problem. I have notified
25 prosecutors that there were problems with breath testing

1 instruments due to inspections or other issues.

2 Q But you're not testifying to this jury that based on
3 the -- you have the certificate of verification of the actual
4 testing. I'm assuming this is a certificate of inspection that
5 you looked at that you testified for the jury that you've seen
6 in this case. And you also have the breath test to review. I
7 think you said you also reviewed the video. You're not
8 testifying for this jury that there's a problem with that
9 certificate of inspection or that breath test?

10 A Correct. The quarterly inspections meet the
11 objective standard established by the GBI and there are no
12 error messages associated with the print card.

13 Q And those are the specifications that are used here
14 in the State of Georgia with the GBI that you testified that it
15 meets?

16 A Correct. Those are their standards, yes.

17 Q And the State of Georgia is not the only state that
18 uses the Intoxilyzer 5000, correct?

19 A Correct.

20 Q There are several other states that use the 5000?

21 A It's changing all the time. But, yes, there are
22 other states.

23 Q Let's talk a little bit about mouth alcohol.

24 Now, you would agree that the observation period does
25 not have to be a face-to-face observation?

1 A It's not a staring contest but you would define it by
2 the objective, what are you trying -- what is your objective.

3 Q Well, it's not face to face; you would agree? You
4 would or you wouldn't?

5 A In we define face to face as being a staring contest,
6 I would agree. Can we be in another room? Not necessarily.

7 Q Well, it's a fairly simple question that I'm asking.
8 Are you saying it's got to be face to face?

9 A You don't have to stare. You have to be in the room,
10 yes.

11 Q Okay. And you've taught courses actually before
12 where you've said it does not need -- I'm going to quote your
13 actual notes -- "It does not need to necessarily be
14 face-to-face contact."

15 A That's an Intoxilyzer 8000 course I taught, yes.

16 Q But yet that's a course --

17 A Yes.

18 Q -- that you taught?

19 A Yes.

20 Q And you're not telling the jury that the observation
21 period for the Intoxilyzer 8000 is any different than the
22 observation for the Intoxilyzer 5000 --

23 A Oh, it, in fact, is.

24 Q Okay. So you're telling them that me watching you
25 for 20 minutes is different if I'm using one machine than

1 another machine?

2 A Well, in different states have different
3 requirements. Some states have 15 minutes; some states have
4 20.

5 Q That's not what I'm --

6 A Specifically on the Intoxilyzer 8000, you have to
7 enter the time first observed in the keyboard and the
8 Intoxilyzer 8000 locks up and won't let you proceed for 20
9 minutes. So there are differences in the 20-minute
10 observation.

11 Q Okay. But we're -- you just mentioned 15 minutes.
12 We are --

13 A In some states, yes.

14 Q The course that you taught was talking about a
15 20-minute observation period, correct?

16 A Correct, under the Florida rules, under the Florida
17 curricula, for a different instrument. But yes.

18 Q And you said in that case it doesn't need to be a
19 face-to-face observation.

20 A Correct.

21 Q And going back to some of your earlier testimony, it
22 was your testimony earlier that if a burp contains alcohol
23 that's brought back into the mouth, that can alter the results
24 of the breath test.

25 A It can affect a breath test, yes.

1 Q Okay. But you previously talked concerning
2 regurgitation that burping and belching are not signs of
3 regurgitation and do not warrant an additional observation
4 period if they occur.

5 A Correct. That is the Florida Intoxilyzer 8000
6 curricula that's being taught to Florida attorneys. Georgia's
7 curricula especially says if regurgitation is suspected in a
8 belch or a burp, restart the 20-minute observation.

9 Q Okay. Well, let's talk a little bit about this.
10 You're not --

11 A Certainly.

12 Q You're certainly not talking -- when we're talking
13 about whether Mr. Shumate burped or not, we're not talking
14 about the machine he's blowing in. You taught in the course
15 that burping and belching usually do not affect a breath test
16 due to the rapid movement of the small quantity of alcohol from
17 the mouth.

18 A Correct. That's why I clarified my answer on direct
19 that if alcohol is brought up at the same time, then it is a
20 regurgitation situation. But to burp or belch unto itself
21 alone does not. Alcohol has to be brought back from the
22 digestive tract up into the oral cavity.

23 Q So let's be clear. Burping and belching does not
24 affect the breath test.

25 A If there is no alcohol brought up from the digestive

1 tract, that is a correct statement.

2 Q Okay. So that directly contradicts what you stated
3 earlier because now you're talking about regurgitation, not
4 burping.

5 A No. The question I was asked --

6 MR. ABBOTT: Judge, I would object. Counsel is
7 mischaracterizing his previous testimony.

8 MS. LAVELLE: He certainly can --

9 THE COURT: He's on cross.

10 Go ahead.

11 MS. LAVELLE: -- explain, Your Honor.

12 **BY THE WITNESS: (resuming)**

13 A My question that I was asked earlier on direct was,
14 "Does burping or belching, can they affect," and my answer was,
15 "If alcohol is brought back up into the oral cavity." So
16 that's exactly as my answer is to you now.

17 **BY MS. LAVELLE:**

18 Q And that's called regurgitation?

19 A That is regurgitation.

20 Q Yes, which is separate than your average burp.

21 A Correct.

22 Q And you would agree that mouth alcohol, that
23 dissipates over time, right?

24 A It does.

25 Q And the Intoxilyzer 5000 has safeguards built in to

1 detect mouth alcohol?

2 A It has one specific computer algorithm called slope
3 detection to detect mouth alcohol or regurgitated alcohol.

4 Q Can you just explain what slope protection is for the
5 jury?

6 A Certainly.

7 It's an algorithm that the computer uses inside the
8 Intoxilyzer. It looks at the alcohol concentration as a person
9 blows. The normal profile is it continues to rise and levels
10 off. If it continues to rise and drops off, that's called a
11 slope detection because the presumption is that if the alcohol
12 in the oral cavity is higher than it is in the lungs, it'll
13 have a negative slope. If the machine see a significant
14 negative slope, that's slope detection and it will create an
15 error message.

16 Q And do replicate samples also help to detect the
17 presence of mouth alcohol?

18 A They do.

19 Q And both of those are present in the Intoxilyzer 5000
20 used in this case?

21 A They are.

22 Q And there was no indication of mouth alcohol in Mr.
23 Shumate's case?

24 A That is correct.

25 Q And, Mr. Malhiot, you mentioned a little bit about

1 the Borkenstein school. Is that -- did you take a course from
2 Dr. Borkenstein? What experience do you have with that?

3 A I attended their course -- two separate courses at
4 Indiana University. The one was a six-day course and one was a
5 five-day course.

6 Q Okay. And in those courses you learned about what?
7 What did you learn about?

8 A Well, pharmacology, toxicology, instrumentation,
9 retrograde extrapolation, alcohol measurement, many different
10 areas.

11 Q Did you learn about interference with a potential
12 breath testing machine?

13 A Yes. Interfering substances is part of the course,
14 yes.

15 Q And you would agree with Jim Wigmore of the
16 Borkenstein school that alcohol --

17 A Well, he was not part of the school when I attended
18 but he is -- I know Mr. Wigmore personally. But, yes, go
19 ahead.

20 Q Okay.

21 -- that alcohol from the stomach from possible hiatal
22 hernias or gastro-esophageal reflux disease has been found to
23 cause no significant mouth alcohol effect?

24 A That's part of one of his documents.

25 Q Are you disagreeing with that?

1 A Well, he didn't do the research. Dr. A.W. Jones did
2 the research and part of what he's saying in the research is
3 that additional research is needed. That's...

4 Q So that is involved in a study from a gentleman at
5 the school under which you trained?

6 A *(No response.)*

7 Q Yes? That's what you testified to.

8 A Yes, he's an instructor at that course now.

9 Q And when you were teaching, did you teach courses --
10 I think you're actually already testified about this -- about
11 operation of the Intoxilyzer?

12 A I have.

13 Q Okay. And when you taught that, did you teach the
14 people there who were presumably learning how to operate the
15 Intoxilyzer that a test result, as the same you have here in
16 Mr. Shumate's case, appears not to have interference with --
17 from mouth alcohol? Is that what you would have taught?

18 A Yes. Two samples with .02 agreement and no error
19 message appears not to have an interfering substance affect
20 that breath test.

21 Q You mentioned some external controls earlier in your
22 testimony. It is not your testimony certainly that a breath
23 test is scientifically unreliable here if it doesn't have the
24 external control.

25 A Not as a standalone missing an external. A control

1 test does not make a unreliable test, that is correct.

2 Q So the test here without the external control you
3 would say is a reliable test?

4 A It could be reliable, yes.

5 Q And you didn't use standalone external controls when
6 you were using the Intoxilyzer 5000, say, back when you were in
7 Montana.

8 A No. The recommendation from the National Safety
9 Council was published in 2008. I started using them in 2006 so
10 it's a relatively five or six years recommendation.

11 Q And during that time when you were not using those
12 controls, you never testified that the tests were unreliable.

13 A No. As I discussed earlier, when we found an
14 unreliable situation, we notified the prosecutors before trial.

15 Q And that was based on the certification of
16 inspection, those type of things, when you inspected the
17 machine?

18 A Or audits of breath testing or any issues that may
19 have come up, software issues, not necessarily inspections.

20 Q And talking a little bit about the inspection, it's
21 Georgia's process that if they were, say, to run the inspection
22 and the machine were to be off, that's when they would actually
23 send it back to the company to be worked on?

24 A Yes.

25 Q They don't just keep the machine and keep using it

1 when it's not working properly?

2 A Correct. If it fails an inspection, they will send
3 it for repair and recalibration.

4 Q And you've been compensated to be here today by Mr.
5 Shumate?

6 A Yes, I've been compensated for my time today.

7 Q And what is that rate?

8 A \$180 an hour.

9 Q And you received that rate also when you reviewed the
10 case?

11 A No. I charge a flat \$600 to review all the documents
12 and consult with the attorney.

13 Q How many hours did you spend doing that review?

14 A Getting public records, reviewing, probably four to
15 five hours with consultations.

16 Q So it's a \$600 flat rate and then \$180 for every hour
17 that you're here?

18 A Correct.

19 Q And this is how you make your living, through this
20 company?

21 A Partially, yes.

22 Q How else do you make your living?

23 A Well, I'm retired Air Force. I get a retirement
24 check every month.

25 Q But this is your daily job?

1 A It is.

2 Q And you've never testified for a -- anyone but the
3 defense here in Georgia?

4 A Other than civil litigation, that is correct.

5 MS. LAVELLE: Nothing further, Your Honor.

6 THE WITNESS: Thank you.

7 THE COURT: Mr. Abbott?

8 **REDIRECT EXAMINATION BY MR. ABBOTT:**

9 Q Good afternoon again.

10 Are employees of the GBI available to testify for the
11 prosecution in criminal cases?

12 A Absolutely.

13 Q Are they paid?

14 A Well, I would imagine they're salaried employees like
15 I was when I was in Florida but, yes, they -- that's they're
16 living.

17 Q Do you testify in every case in which you are
18 retained?

19 A No. I testify in probably less than 25 percent of
20 the cases I'm retained.

21 Q Why is that?

22 A Well, a number of reasons. One, my findings don't
23 support the defense findings. My findings are put in a report
24 and I give them to the attorney and I may not hear back what
25 happens. So it could be multiple reasons why I don't testify.

1 Q What quantity of alcohol in a test-taker's mouth
2 would it take to corrupt a breath test on the Intoxilyzer 5000?

3 A Minimal. I would speak from my personal experience
4 that a few drops of alcohol on the tongue can cause a
5 Intoxilyzer 5000 to give readings in the two-oh range. Exactly
6 how much it would take to do, I don't -- I'm just speaking of
7 personal experience. A few drops can produce a two-oh.

8 Q Would a burp that regurgitated a few drops
9 necessarily be obvious?

10 A It may or may not. It doesn't have to be obvious,
11 no.

12 Q Is that why a proper observation period is important?

13 A It's one of the reasons, yes.

14 MR. ABBOTT: Those are all my questions, Judge.

15 THE COURT: Ms. Lavelle?

16 MS. LAVELLE: Yes, Judge.

17 **RE-CROSS-EXAMINATION BY MS. LAVELLE:**

18 Q But you would agree, Mr. Malhiot, if you don't get
19 hired by someone, you're not making money for your firm, right?

20 A Well, if I don't get hired or retained --

21 Q If you aren't reviewing cases and testifying, you're
22 not making money.

23 A Oh, no. I do teachings; I do trainings; I do a
24 number of other things. I don't --

25 Q And who are those teachings and trainings for?

1 A Lawyers, judges, any member of the Georgia bar,
2 Colorado bar, Florida bar.

3 Q Who specifically in Georgia?

4 A The majority is members of the defense bar that come
5 to my training.

6 Q What judges have you done trainings for?

7 A I scheduled one for municipal court judges in Athens
8 coming up.

9 Q But you haven't actually --

10 A In Florida I've done three specific trainings for
11 county court judges.

12 Q But here in Georgia with the Intoxilyzer 5000, at
13 this point you haven't done any teachings --

14 A Not for judges, no. But they're members of the bar
15 and are more than welcome to come to my training.

16 Q And you'd also agree that sometimes you may not get
17 hired because the client can't come up with the money to hire
18 you. I mean, you don't testify for free, right?

19 A Well, correct. And there's a lot of times people
20 can't come up with the money to hire a lawyer. So, you know, I
21 agree with what you're saying.

22 Q And when did you find out you were going to be here
23 today to testify?

24 A May I refer to my notes?

25 (*Reviewing documents.*)

1 June 2.

2 Q That would have been last week sometime?

3 A Today's the 11th. Nine days ago.

4 Q And you testified a little bit earlier about a drop
5 or two drops on the tongue breathing at a .20.

6 A Correct.

7 Q You would agree that part of the machinery that the
8 Intox has to help rule out mouth alcohol is the fact that you
9 take two readings?

10 A That's, yes, the replicate samples as we've discussed
11 previously. Yes.

12 Q Because that mouth alcohol dissipates very quickly?

13 A It does.

14 Q And if the two samples were to be very far off --
15 say, if you burp during the test and it were to come out at
16 very different readings, would the Intoxilyzer actually tell
17 you that you were outside of the acceptable range?

18 A Yes. Georgia software does the math and says,
19 "outside the .02 agreement requirement."

20 Q And what else does it tell you to do following that?

21 A Do another 20-minute observation and retest the
22 individual.

23 Q And that is not printed on the breath test?

24 A It is not.

25 Q And you have no evidence in this case, because you

1 weren't there, that there was a burp or a regurgitation by Mr.
2 Shumate.

3 A Correct.

4 MS. LAVELLE: Nothing further, Your Honor.

5 THE WITNESS: Thank you.

6 THE COURT: Mr. Abbott?

7 MR. ABBOTT: No further questions on this witness.

8 THE COURT: May he be excused?

9 MR. ABBOTT: Yes, sir.

10 THE COURT: All right. You're free to go today.

11 THE WITNESS: Thank you, Your Honor. Have a good
12 day.

13 (WHEREUPON, this testimony was concluded and the
14 trial continued.)

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**IN THE STATE COURT OF HENRY COUNTY
STATE OF GEORGIA**

STATE OF GEORGIA,
Plaintiff,

v.

CHRISTOPHER RYAN SHUMATE,
Defendant.

CASE NO.: 2014-ST-SR-01512

TESTIMONY OF WITNESS IN
JURY TRIAL

***** CERTIFICATE *****

I, Julie A. Willard, Certified Court Reporter in and for the State of Georgia,
do hereby certify that the foregoing proceedings
were reported and transcribed by me
and the same is true and correct in the above-stated case.

This 22nd day of June 2014.

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