Fax Cover Page

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From: Carrie Clites

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:	REPORTER'S RECORD
2	VOLUME 1 OF 1 VOLUME
7	TRIAL COURT CAUSE NO.
4	THE STATE OF TEXAS) IN THE COUNTY CRIMINAL
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10	**********
11	EXCERPT OF PROCEEDINGS
13	TESTIMONY OF WITNESS
13	MARK FONDREN
14	**********
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20	On the 11th day of September, 2007, the following
21	excerpt of proceedings came on to be heard in the
22	above-entitled and numbered cause before Honorable Brent
23	A. Carr, Judge Presiding, held in Fort Worth, Tarrant
24	County, Texas:

Proceedings reported by machine shorthand.

1 <u>APPEARAN</u>CES 2 3 FOR THE STATE OF TEXAS: 4 District Attorney's Office 5 SBOT NO. 401 West Belknap 6 Fort Worth, Texas 76196 (817) 884-1400 7 AND 8 9 District Attorney's Office SBOT NO. 401 West Belknap 10 Fort Worth, Texas 76196 11 (817) 884-1400 12 13 FOR THE DEFENDANT: 11 Mr. Craig Dameron Attorney at Law 15 SBOT NO. TX24032113 3541 B Airport Freeway 16 Fort Worth, Texas 76111 (817) 222-0624 17 AND 18 Mr. Jacob Jenkins 19 Attorney at Law SBOT NO. 24036840 4514 Cole Avenue; Suite 600 1700 Pacific Ave., Ste 1860 20 Dallas, Texas 75205 75201 21 (214) 559-3311 22 23 24 25

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<u>PROCEEDINGS</u>

September 11th, 2007, 9:58 a.m.

(Open court, defendant present, no jury)

(Witness Mark Fondren seated in witness

stand)

THE COURT: Before we start -- I like the

7 Fondron, but where were we at this morning?

MR. FONDREN: I don't know. Which case is

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THE COURT: Well, this -- I want you to take a couple of -- because I've already -- I'm not trying to shoot the messenger here, but for the record, I've already scheduled it on the judges' agenda on -- I'm not criticizing the quality of the work, but the Medical Examiner's Office doesn't get to choose when I start court; and I start at 9:00 o'clock. Thore's another court waiting for me. I want you to take the message back that if they don't have enough people doing this job, they need to get some more because the next time I don't have a good reason for delaying the start of my court, then we're just not going to have a breath test because I'm going to proceed without it. Now, that

MR. FONDREN: Well, I think I --

might be fine with the Medical Examiner, but that's

what's going to happen. All right?

1	THE COURT: I don't need an explanation.
2	MR. FONDREN: That's fine.
3	THE COURT: I just want you to deliver
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5	MR. FONDREN: That works for me.
б	THE COURT: Is the State ready?
7	MR. State's ready.
8	MR. DAMERON: He ran to the restroom.
9	He'll be right back. Five seconds. Sorry, Judge.
10	THE COURT: All right.
11	(Brief pause)
12	THE COURT: Jury, please.
13	(Jury returned into court at 10:00 a.m.)
11	THE COURT: All right. Members of the
15	jury, the State has called its next witness.
16	Sir, if you would please state your name.
17	THE WITNESS: Mark Fondren.
18	THE COURT: Raise your right hand.
19	(Witness sworn) .
20	THE COURT: Proceed.
21	MR. Thank you, Judge.
22	MARK FONDREN,
23	having been duly sworn, testified as follows:
24	DIRECT EXAMINATION
25	BY MR. MARCON AND AND AND AND AND AND AND AND AND AN

- Q. Good morning, Mr. Fondren.
- A. Good morning.

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- Q. How are you currently employed?
- A. I'm employed as a senior forensic chemist with the Tarrant County Medical Examiner's Office.
- Q. About how long have you been employed in that capacity?
 - A. I'm in my thirteenth year.
- Q. What are your current duties and responsibilities as a technical supervisor?
- A. In that capacity, I oversee and manage the breath alcohol testing program of Tarrant County supervising various breath testing operators, maintaining various breath testing instruments used at various law enforcement communities, and then explain alcohol-related issues in court cases such as this.
- Q. If you could tell the jury a little bit about your educational background.
- A. I hold a bachelor of science from Baylor
 University, a master of science also from Baylor. I
 completed my post-graduate work at Ohio State
 University. And I'm board certified as a diplomat by
 the Forensic Toxicology Certification Board.
- Q. And what special training have you had regarding the operation and maintenance of the

intoxilyzer instrument model number 5000?

- A. With that instrument, I used to be a certified operator: a course which I now teach as part of the faculty at Tarrant County College. I'm certified by the manufacturer to properly repair and calibrate the instrument.
- Q. In the course of that training, have you also learned about the effects of alcohol on a person's mental and physical faculties?
- 10 A. I have.

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- Q. Can the consumption of alcohol affect a person's ability to operate a motor vehicle safely?
- 13 A. It does.
- 14 Q. How does it do that?
- A. In very general terms, as the alcohol concentration in the body rises, our ability to safely operate a motor vehicle declines.
 - Q. Do you hold memberships in any scientific or professional organizations?
 - A. I do.
 - Q. Would you please list those for the jury.
 - A I'm the past president of the Alcohol Testing Alliance. And the group I'm most active with at this point in my career is Southwestern Association of Toxicologists.

- Q. And have you also written or contributed to any professional publications or articles?
 - A. I have.

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- Q. Would you list those for the jury.
- A. Not going into the boring titles, typically what I write now are unique cases that come across my desk, something that sets it apart from all of the other cases that pass my desk. I'll write a short abstract about that, present it at one of the professional meetings that I attend allowing my peers to gain some information on why I thought the case was interesting, and allowing them to ask me questions about that particular case.
 - Q. And are those articles subject to peer review?
- A. Some are, some are not. Depends upon the actual journal that it's going to.
- Q. Have you conducted any experiments as to the workings and reliability of the intoxilyzer instrument model number 5000?
 - A. I have.
- Q. Have you conducted any experiments yourself as to the effect of alcohol on a person's mental or physical faculties?
 - A. I have.
- Q. Are you presently certified by the Texas

Department of Public Safety as a technical supervisor?

A. Iam.

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- Q. What was -- What do you have to do to receive that certification?
- A. At a minimum, one must have a bachelor's degree in one of the core sciences: biology, chemistry or physics, with at least 18 hours of chemistry. After that, one will attend a course to be a certified breath test operator. You would then attend a course at the manufacturer's facility learning how to repair and calibrate the instrument. You would then attend a course at Indiana University relating to the toxicology of alcohol and the human body. After that, you sit for a number of proficiency exams with the Department of Public Safety. Assuming you pass those, then you're a technical supervisor.
- Q. And were you certified by the Texas DPS on June 23rd of 2006?
 - A. I was.
- Q. Based upon your studies and your own experience, do you have a personal opinion as to the alcohol concentration at which a person does not have the normal use of his or her mental or physical faculties?
- 25 | A. I do.

- Q. What is your opinion?
- A. It's my opinion that all individuals once they reach a level of .08 have enough impairment from alcohol that they shouldn't be operating a motor vehicle.
 - Q. Why do you hold that opinion?
- A. It's based upon three relevant factors. First is the scientific literature on the subject. Secondly would be my experiences in dosing people with alcohol. Thirdly would be my experiences where I myself am dosed with alcohol.
- Q. And are you familiar with the basic underlying scientific theory that the intoxilyzer instrument is based upon?
 - A. Iam.

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- Q. Could you please explain that to the jury?
- A. The instruments apply a technique called infrared spectroscopy. First, let me define what is infrared. Infrared a type of light or, actually, energy that's invisible to our eyes, yet we come into contact with it on a daily basis. Common examples are electric stoves. When we turn on the eye of the stove, we feel heat. Heat is, in tact, infrared energy.

In the world of chemistry, infrared is interesting because we can take a sample, whether it be a solid sample, a liquid sample or, in breath testing, a

- 1 vapor sample and by passing a beam of infrared energy
- 2 through our sample, we get a unique chemical
- 3 | fingerprint. Either instrument or a chemist can
- 4 interpret that fingerprint and determine what chemical
- 5 compounds are present in that sample. So in breath
- 6 testing and what the intoxilyzer is going to do, it will
- 7 collect a breath sample from a given individual and pass
- 8 | a beam of infrared energy through that sample. By
- 9 looking at the unique fingerprint, the instrument will
- 10 determine if there is alcohol present in that sample.
- 11 | If there is, it will then quantitate or tell us how much
- 12 alcohol is present in that sample.
- Q. And is that theory considered valid by the
- 14 | scientific community?
- 15 A. It is.

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- Q. Can you explain how the intoxilyzer instrument actually applies that theory?
- A. Well, naturally, there would be an infrared source, an infrared detector, and we have a number of breath samples, whether it be air blanks or breath samples from a given individual, that the instrument would analyze for the presence of alcohol.
 - O. And was that technique properly applied in this case?
 - A. Naturally, since I was wasn't present at the

time of the test, I couldn't say what the operator did
or didn't do, but I can see that all of the steps were
completed and we did obtain results.

- Q. Do you know an intoxilyzer operator by the name of Esteban Martinez?
- A. I do.

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- Q. And was Esteban Martinez certified on July 23rd of 2006 by the Texas Department of Public Safety as an intoxilyzer operator?
- 10 A. He was.
- Q. Sorry, I think I may have misspoken. On the day of June 23rd of 2006?
- 13 A. He was.
- 14 Q. Thank you.
- Mr. Fondren, are you familiar with

 intoxilyzer instrument model number 5000, serial number

 SN 68-002474?
- 18 A. I am.
 - Q. How are you familiar with that instrument?
 - A. It's owned and operated by the Fort Worth Police Department. It's one of the instruments that I supervise.
 - Q. And just in general, has the intoxilyzer instrument model been approved and/or certified by the scientific director of Texas DPS?

A. It has.

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- Q. How about that specific instrument that we just identified: serial number 68-002474?
 - A. It has as well.
- Q. All right. And that -- Again, that particular instrument that we just referenced, was it certified by the scientific director of Texas DPS on June 23rd of '06?
 - A. It was.
- Q. Additionally, was that instrument part of the breath alcohol testing program which was certified by the scientific director of Texas DPS?
 - A. It is.
- Q. Now, as part of your duties, are you responsible for the maintenance and monitoring of that particular instrument that we referenced?
 - A. Yes.
- Q. Please describe for the jury, if you would, the maintenance of the instrument and how it involves certain checks and how often those checks are done.
- A. There are two types of checks that I'll utilize to determine if the instruments are operating correctly or not. One is what's called a modem check. Several times a week when I'm there at the office, I'll call each of the instruments that I supervise over a modem

line. I'll run a series of diagnostic tests. By evaluating the results of those tests, I'll reach a conclusion about that instrument's performance. Any notes I make or conclusions that I draw are placed in the file in the maintenance and inspection history of that instrument.

The second type of check is what's called an on-site inspection. Either I will personally go out and visit the instrument or one of the other technical supervisors will visit each of the instruments at least once a month. We'll look at the overall condition of the instrument. We'll make notes about the instrument's performance. And we'll actually take a number of breath tests ourselves. And, again, any notes or conclusions we draw are placed in the file of the maintenance and inspection history of that instrument.

Q. Thank you.

What was the closest date before June 23rd of 2006 that that particular instrument was checked?

- A. Looking at some notes, the instrument was actually checked via modem on the 23rd. Prior to that, the closest modem check would be on the 22rd. And my previous on-site inspection would be on the 5th of June.
- Q. And what was the operational condition of the instrument during those checks?

1 On all of the dates I just mentioned, the Α. instrument was operating correctly. How about after that date? After June 23rd of 3 '06, what was the closest date that the instrument was 4 5 checked? 6 My next modem check was on the 29th of June. Α. And then my next on-site inspection was on July 3rd. 7 How about on those checks? Was the operational 8 Ο. condition of the instrument okay? 9 10 Α. It was. All right. Now, did that instrument that we're 11 talking about require any repairs or any type of things 12 like that between the dates you checked it? $_{13}$ 14 Α. It did not. 15 Do you have an opinion based upon your experience and training as to the operational condition 16 of that specific intoxilyzer instrument on June 23rd of 17 18 2006? 19 A. I do. 20 What is your opinion? Q. The instrument was operating correctly. 21 Α. 22 Your Honor, may I approach? 23 THE COURT: Yes. 24 (By Mr. Tondren, I'm going to show Q. you here what's been marked as State's Exhibit 3. 25 Ιf

- you'll just take a look at that for me and just explain
 to the jury without going into detail what that is
 you're looking at there.
 - A. It's a copy of a breath test record with the unique breath test record of GN08674.
 - Q. And as part of this subject test or breath test, is the operator of the instrument required to have the subject continually -- continuously in his or her presence for a certain period of time?
- 10 A. They are.

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- Q. What is that period of time?
- 12 A. The period is at least 15 minutes.
 - Q. And what is the purpose of that 15-minute requirement?
 - A. The purpose is actually two-fold. First, it's a specific requirement within the rules and regulations that govern breath testing that the operator have that individual in their presence for at least 15 minutes. Secondly, the reason we have it as a strict requirement is we want the operator to take steps during that time period to ensure the subject doesn't, one, consume any other alcoholic beverages, place any foreign substances in their mouth, or regurgitate any stomach contents that may or may not contain alcohol back up into the mouth.
 - Q. Does that test record indicate that the proper

methods and testing techniques were followed in administering the test?

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- A. This test record, as with all test records, makes no mention of the 15-minute-observation period.

 But by looking at the test record, I can see that all of the steps were completed and we did obtain results.
- Q. How can you tell that from observing just the test record?
- A. The test record is what we call a complete test record; that is, it has both paragraphs: the second paragraph being the analytical data and the first paragraph being what we call biographical data.
- Q. When we talk about reference analysis solution, what is that?
- A. The reference solution is basically a quality control sample that's run with each and every breath test. It is a known composition; that is, we know how much alcohol is present in that sample. The instrument analyzes that sample with each and every breath test. It prints that value on the test record. That allows me or anybody that looks at the test record to get some idea as to the instrument's performance at exactly that time.
 - Q. Who prepares those solutions?
 - A. For instruments up here, I do.

- Q. How are those solutions prepared?
- A. They're simply prepared by taking a known amount of water and a known amount of alcohol and mixing the two together in the proper concentration.
- Q. How about the reference samples? Are those periodically checked?
 - A. They would be.

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- Q. How is that done?
- A. Before a lot of solution would ever be used out in the field, it would be tested there at the laboratory to make sure that I mixed it up to what I was intending. I would then send it to an additional group of analysts for them to analyze. Once all the reports come back and that batch is deemed acceptable, it is placed in the field. Then it would be checked daily as part of the modem checks or on-site inspection.
- Q. How and by who is the predicted value entered into the Intoxilyzer 5000?
- A. It's entered by me when I'm on-site at each of the locations.
- Q. And does the test record reflect that you have there that the reference analysis was within the tolerance of the predicted reference value?
- A. It does.
 - Q. Mr. Fondren, what happens if the reference

sample is out of tolerance?

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A. If that value is either too high or too low as compared to the predicted value, the instrument stops the testing at that point. We would not have any analytical results in the test record. We will simply have a message indicating the reference was outside its allowed window.

- Q. The test record you have there in front of you says alcohol concentration. What does that word mean or those words mean?
- A. We define alcohol concentration for a breath test referring to number of grams of alcohol present per 210 liters of breath.
- Q. If you would, please, tell the jury the steps the operator of the instrument is to follow in performing the breath sample testing?
- A. The operator is first going to have an individual in their presence for at least 15 minutes. During that time period, there can be a video that's being made, there can be some paperwork that's being taken care of. If those are not occurring or are completed, there can be idle conversation between everybody who's present.

After that, the operator would initiate the test. First, he will have to enter some

biographical data into the instrument: name, date of birth, his name, things like that.

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Then we'll start the analytical steps; first of which is called the air blank. The purpose of the first air blank is to completely purge the sample chamber. The instrument is also setting a baseline saying this is what we will call 000.

After that, the operator would ask the subject to take a deep breath, provide a long, steady breath to the instrument. Once that sample is analyzed, then the instrument will do a second air blank. The purpose of the second air blank is to completely remove the first sample from the instrument, also to make sure that it goes back to read 000.

After that, the instrument will perform the reference test. This is the quality control sample that I spoke of earlier. It will analyze that sample, followed by another air blank, at which time the subject would be asked to provide a second air sample. In breath testing, just like in most areas of science, we collect our samples in duplicate.

Then the instrument will do a final air blank. As long as that last air blank does go back to read 000 and the instrument prints a test record, the operator signs it, and we're done.

Q. Now after the operator has completed those 2 steps, what happens next? 3 After the test is printed and the operator signs it, then the breath testing portion of the evening is completed. Everybody would go about their merry way. 5 Now, does the -- Does the instrument actually 6 Ú. perform some steps by itself automatically without the 7 assistance of the operator? 8 9 Α. It does. 10 Could you please describe for the jury the 11 steps the instrument performs by itself? 12 The instrument is going to do basically everything by itself except, naturally, the operator has 13 to type in the biographical information and the subject 14 would have to be the one to stop forward and provide the 15 two breath samples at the appropriate time. 16 17 Your Honor, may I approach 18 once again? 19 THE COURT: (Moves head up and down) 20 Let me go ahead and tender State's Exhibit 3 to Defense Counsel and offer it into 21 22 evidence. 23 MR. JENKINS: No objection. 24 THE COURT: State's Exhibit 3 is admitted. 25 Thank you, Your Honor.

1 Your Honor, just for demonstrative purposes, also, if Mr. Fondren wouldn't mind just 2 3 looking at this briefly before I publish it to the jury. It's just a blown-up sample of State's Exhibit No. 3. 4 5 THE WITNESS: I see. 6 MR. Just for those with maybe some 7 sight issues. Also, may I go ahead and publish State's Exhibit 3 to the jurors? 8 9 THE COURT: You may. 7.0 (State's Exhibit No. 3 published) 11 Ō. (By Mr. For those who haven't had a chance to see it yet, Mr. Fondren, or they can't see it 12 up here, what were the two results we received on this 1.3 14 particular breath test? The first sample indicated a value of .123 15 grams of alcohol per 210 liters of breath, and the 16 second sample indicated a value of .118 grams of alcohol 17 18 per 210 liters of breath. Were these two samples that were taken within 19 Ο. the allowed tolerance specified by the scientific 20 21 director of Texas DPS? 22 Α. They were. 23 And what is the specified tolerance for breath Q. 24 samples? 25 The two samples can only differ by a value of

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.020 or less.

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- Q. What happens if the two breath samples happen to not be in tolerance?
- A. If the difference is greater than 020, then the instrument would stop the testing at that point and we would not see any of the analytical results. We would simply see a message that says the two breath samples differ by more than .020.
- Q. And are the subject's results an expression of the number of grams of alcohol per 210 liters of breath?
 - A. They are.
- Q. Additionally, are the results of breath analysis equal to or greater than an alcohol concentration of 0.08?
 - A. These results would be higher.
- Q. And lastly, Mr. Fondren, in your opinion, would a person with an alcohol concentration of .123 or .118 have lost the normal use of his mental or physical faculties?
- A. As it pertains to the operation of a motor vehicle, yes.
- 22 MR. Pass the witness, Your
- 23 | Honor.
- THE COURT: Mr. Jenkins.
- MR. JENKINS: Thank you, Your Honor. May

1	I approach?
2	THE COURT: (Moves head up and down)
3	MR. JENKINS: Your Honor, may I approach
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5	THE COURT: (Moves head up and down)
б	CROSS-EXAMINATION
7	BY MR. JENKINS:
8	Q. Mr. Fondren, earlier I daw you referring to
9	some documents. It looked like some sort of notes.
10	A. Correct.
11	Q May I see those?
12	A. Sure.
13	(Pause in the proceedings)
14	Q. There you go, Mr. Fondren. Thank you.
15	A. Uh-huh.
16	Q. All right. You talked about, earlier, a series
17	of tests that the machine goes through to make sure
18	everything is working right; is that correct?
19	A. I didn't talk to you anything about that. I
20	talked to about my role and what I do.
21	Q. Okay. Well, the machine does certain things to
22	check on to make sure the machine is working and that
23	the conditions are right; is that correct?
24	A. The instrument Every time the breath test is
25	done, the instrument will perform what's called a

diagnostic --

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- Q. Sorry. I'm not referring to -- What I'm

 talking to you about is the air blank. You said earlier
- 4 it sends an air blank to make sure to do a baseline.
- And one of the reasons for that is to make sure that there's not alcohol in the air; is that correct?
- 7 A. That's true.
 - Q. And, in fact, if it does show comething, it's going to show an ambient fail; is that correct?
- A. If there's a significant amount of alcohol,
 then it does an ambient fail. It will continue to -In the alternative, it continues to get down to reach a
 zero. If it's eventually unsuccessful, it ambient
- 14 fails.
- O. Now, in your experience, how many breath test slips do you think you've seen?
- 17 A. In my career?
- 18 Q. Yes.
- 19 A. 50,000, 60,000. I have no idea.
- Q. Have you ever seen anything other than .000 on the air blank?
- A. No, the only thing it will accept is 000. The alternative is an ambient fail.
- Q. Now, what is the reading before it registers an ambient fail?

- A. Anything greater than -- I'd have to go back and look it up. I believe it's .01.
- Q. Okay. So, as to the ambient fail, if it has something like .009, it will still read .00?
- A. If you have .009 in the room air, for example, then, yes, it will accept that as a zero. The instrument will set that as your baseline. And then it
- 8 equates 009 as equal to zero.
- Q. So just because it says .00 doesn't mean that there couldn't be some point under .01; is that correct?
- 11 A. Sure.
- Q. You also talked about the reference sample
 quite a bit. Now, that's a reference sample that you
 prepare; is that correct?
- 15 A. I do.
- 16 Q. And you prepare it at .08?
- . 17 A. The target value would be .08.
 - Q. The ones that go into service actually have 19 .08; is that correct?
 - A. Again, the target value would be .08.
 - 21 Sometimes it's a .079. Sometimes it's an 82.
 - Q. But it's a known sample?
 - 23 A. It is.
- Q. Okay. Now, as time goes through, you have to eventually replace these reference samples; is that

correct?

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- A. You do.
- Q. And it's normally because they're losing 4 | alcohol; is that correct?
 - A. Yes.
- Q. Have you ever had a situation where they gained 7 alcohol?
 - A. I can't think of one offhand.
 - Q. Okay. So just for example, in this case, the reference sample was .076. That doesn't mean the machine is reading low necessarily, does it?
 - A. No. The target value being .08, and the value you're obtaining on this particular breath test was 76. So that's pretty good.
 - Q. Okay. But the reference sample does lose alcohol at times, so it could even be below .076; is that correct?
 - A. Depending on how long it stays there and the number of tests that are run and how much the alcohol has depleted, sure. It's going to start off a certain value and over time it's generally going to deteriorate.
 - Q. Now, temperature affects the way this instrument reads things. For example, this reference sample needs to say 34 degrees centigrade; is that correct?

A. It does.

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- Q. And if that changes, then the reference check would not be valid; is that correct?
- A. If the temperature goes up, the resulting amount of alcohol also increases. If it goes down, you lose alcohol. So depending on how far it goes up or how far it goes down, that's a possibility.
- Q. Now, even though this reference sample is of a known alcohol content, the machine is still allowed the tolerance of .01; is that correct?
- A. Correct. That allows me or gives me a window when I have a target value of .08, if I make it at 075, I'm still within that window.
- Q. And this is dealing with a known substance and a known temperature, correct?
- A. Sure.
- Q. Now, earlier you said that you can just look at the slip and make sure that the things that were supposed to be done on the slip were done correctly, but you can't observe things like the 15 minutes and the administrative period; is that correct?
 - A. I would agree.
 - Q. Okay. Now, if this test had been filmed on videotape, could you have observed that and see if everything was done correctly?

- A. If it's filmed on video and if somebody asks me or gives me a copy, sure.
- Q. So it could be critiqued as to whether or not proper procedures were followed at a later date if it was preserved on video?
 - A. I suppose so.

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- Q. And, in fact, when you make -- blow in a sample in this, it makes a noise; is that correct?
 - A. It will make a tone, correct.
- Q. So you're able to see whether or not somebody gives a sufficient sample size or other things are followed just by the sound of the tone; is that correct?
- A. You wouldn't know about a sufficient sample size. Tone simply tells you that an individual is blowing.
- Q. Whether or not they're blowing properly; is that correct?
- A. I would agree with that.
 - Q. Now, part of the purpose of the 15 minutes deals with mouth alcohol; is that correct?
- 21 A. It is.
- Q. I know there's a slope detector, but isn't it true the slope detector doesn't work at levels closer to 24 .08 all of the time?
 - A. No, never heard that one.

- Q. So when you went to Borkenstein, they didn't tell you the only sure safeguard to prevent mouth alcohol is a 15-minute-observation period?
- A. No, there's -- Actually, a 15-minute

 observation is not your only safeguard. You want to

 tayer your things in there because that is an area in

 breath testing that is of concern. So not only do you

 have that 15-minute observation, you have a slope

 detector, which is the instrument, and you collect two

 breath samples separated by a given period of time. All

 of those have to work together.
- 12 Q. An important part of that is the 15-minute-13 observation period; is that correct?
 - A. Sure. That's one of the three things.
- Q. Without that, you don't have the certainty that there's not mouth alcohol?
 - A. If you don't have a 15-minute-observation period, as defined in the rules and regulations, you don't have a valid test.
 - Q. Okay. Now, we talked a little bit about the reference sample. Now, that was -- That is a plus or minus a .01?
 - A. It does.

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Q. That's 12 1/2 percent that it's allowed a tolerance difference for either a .07 or .09; is that

correct?

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- A. .070 to 090.
- Q. Okay. Now, when you start dealing with humans, the tolerance levels goes up; is that correct?
 - A. Yes, it does.
 - Q. And that's because you're involving more biological variables into the equation; is that correct?
 - A. You are.

MR. JENKINS: Your Honor, may I approach?
THE COURT: Yes.

- Q. (By Mr. Jenkins) Now, the sample is -- First off, there's two samples in this score; is that correct?
- A. There are two samples in one test.
- Q. Now, when you're doing evaluations on a particular score, you're going to plok the lower score; is that correct?
- A. Well, both have value. We're going to look at both. But if we're going to do any mathematics or statistics, we typically start with the lower of the two values.
- Q. And that's to give the benefit of the doubt to the defendant; is that correct?
 - A. It is.
- Q. Now, as to these particular scores, these are two different scores; is that correct? They're not the

same number, right?

A. Sure.

- Q. Now, as far as scientific terms, these are the same test; is that correct? This is not an indicator that his alcohol level is going down, is it?
- A. I would agree. There's -- You cannot draw a conclusion about whether somebody's alcohol concentration is increasing or decreasing when you have samples separated by only two or three minutes.
- Q. So there's not a change in .05 between these two samples?
- A. Well, the two samples differ in the amount of alcohol present: sample number one had 123, sample two had 118. I would conclude together that tells me that individual is about a .12.
- O. Okay But each particular one, there's no movement between back and forth necessarily; is that correct?
 - A. Correct. I would not draw a conclusion.
- Q. Okay. Now, since we're going to use the .118 for all purposes -- Is that what you would use if we asked you to do any mathematical calculations on this?
 - A. That's fine.
- Q. Okay. Now, if he had taken -- All right. If he had taken a third sample -- Let's say his second

- sample had been his first sample and he had taken a third sample, then the machine would have a tolerance level of .02; is that correct?
 - A. The two samples have to agree by .02 or better.
 - Q. Okay. So the machine would have then accepted a score of .138 or a .098; is that correct?
- A. That's the maximum difference between the two samples if one sample is 118.
- Q. And you said that's the tolerance level that the scientific director has allowed; is that correct?
- A. It is.

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- Q. Okay. Okay. Now, those particular samples, on the reference sample -- You said they checked the temperature; is that correct?
 - A. We do.
- 16 Q. And it's at 34 degrees Celsius; is that 17 correct?
- 18 A. It is.
- Q. Okay. Now, in this particular case, did they
 check the temperature before they did these tests as far
 as the actual breath test?
- A. The temperature of what? The individual or --
- 23 Q. Of the breath.
- 24 A. Of the subject?
- 25 Q. Yes.

- A. I would presume no, but I wasn't present. I couldn't say what did occur or what did not occur.
- Q. But the machine doesn't automatically test the temperature of the breath, does it?
 - A. No.

- Q. Now, since we're dealing with vapors, you said earlier, gases are affected by temperature. Is that a fair statement?
- A. They are.
 - Q. And, in fact, you said if the reference sample increased in temperature, the score of the reference sample would also go up; is that correct?
- A. It does.
- Q. Is it true that breath also goes up the higher the temperature of breath?
 - A. It's been the general concern -- general belief in breath testing that yes, actually, some of the data that we're looking at in research now, the newest papers, are saying there's not as much correlation as we originally thought.
 - Q. Okay.
 - A. So, yes and no.
 - Q. But you would say that there is an increase when the temperature goes up?
 - A. I would say in years past, for 30 or 40 years,

people in breath testing thought yes. The newer papers that are coming out now are saying there really isn't an effect on body temperature. So it's coming back to square one. We really don't know anymore.

- Q. You would agree that in the past you said there is an effect?
 - A. Sure. I have.
- Q. And, in fact, even earlier this year, you would have said that there is an effect; is that correct?
- A. Correct. The articles I'm referring to are hot off the press this summer and they're just very surprising.
- Q. As soon as in late May, you were still saying there was an effect as to the temperature; is that correct?
- A. Sure.

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- Q. And, in fact, you would say that for a .10 concentration, for every degree centigrade, you're looking at a difference of .026; is that correct?
- A. No. For every degree -- definitely still true for a simulator value. For every one degree Celsius increase, it is like from 34 to 35, we see an increase of .006.
- 24 | · Q. Okay. .006?
- 25 A. Yes.

1 Okay. Now, do you remember testifying in an Ο. 2 ALR hearing on May 24th? 3 Α. Not offhand. MR. JENKINS: Your Honor, may I approach? 4 5 THE COURT: (Moves head up and down) (By Mr. Jenkins) I'm handing you a transcript 6 Q. of an ALR hearing. You might remember that name because 7 it's kind of unique -- I don't know. I know you do a lot of them. But, if you would -- I have it there and I 9 closed it to show you the cover. Right there where it 10 talks about the breath sample and on to the next page. 11 Does it -- Does it not say .026? 12 13 The transcript does. Looks to me -- I would Α. conclude it's probably a typo in the transcript. 14 15 All right. So you're saying you didn't say Q. 16 that? 17 No. That's not the relationship. Α. 18 difference for one degree Celsius is a difference of So I don't know if we're talking about a three 19 degree difference then, yes -- actually, about three and 20 a half degrees Celsius. That gets you to a .02. 21 22 than that, I don't know. 23 Okay. But you will agree that that transcript Q. 24 does say that?

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Sure.

Q. So you're now saying a .006 was your previous 2 statement?

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- A. I would have to go back and actually hear the audio, if they're -- if they are. I couldn't tell you where the typo is there.
- Q. I'm not -- I don't mean as far as -- Disregard the stuff about the transcript. The transcript says what it says. We both agree that's what it says. Now you're saying you didn't say that, but what I'm saying is: What are you saying now? It's .006? Is that the number you're saying?
- A. Correct. That's the relationship between for every one degree increase in Celsius, say from 34 to 35, then we see an increase in the apparent alcohol concentration of .006.
- Q. All right. I'm sure you're familiar with the work of Dr. Kurt Dubowski.
 - A. Sure. Kurt and I are friends.
- Q. And were you aware of the study he did on breath parameters in human subjects applicable to breath alcohol analysis that was reprinted from Alcohol, Drugs and Traffic Safety?
- A. Not specifically off the top of my head. Kurt is a prolific author.
 - Q. Okay. Well, let me tell you what it's about

and maybe it will ring a bell. In that article, they 1 did some tests of end-expiratory breath temperatures 2 3 measured at the mouth. 4 Α. Okay. 5 And the range of breath temperatures ranged from 3 -- 32.41 and 36.32. Is that a fair statement? 6 I don't know. I haven't seen the article. 7 Α. 8 MR. JENKINS: Okay. Your Honor, may I 9 approach? 10 THE COURT: (Moves head up and down) 11 (By Mr. Jenkins) The chart is on the second Q. 12 page. 131 Are you referring to men, women, total? Α. 14Q. Men. Sorry. 15 Okay. The range: the low being 32.4, the high Α. 16 being 36.3. 17 Okay. And would you agree with that as a reasonable estimate of breath temperature ranges? 1.8 Sure. Those were the data that he obtained 19 Α. 20 when he did the study. 21 Q. Okay. I'll take that back for a second. 22 And when you convert human body temperature from 98.6 degrees to Celsius, it's at 37 23 24 degrees; is that correct? 25 Α. That's about right.

- Q. All right. Now, when you blow into a breath test machine, that's going to go between a different route than the simulator; is that correct?
- A. For part of the path, sure. The two will join once they're inside the instrument.
- Q. And part of the way where it passes through there is through a heated tube; is that correct?
- A. It is.

minutes earlier?

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- Q. Okay. What temperature is that tube heated to?
- A. There's no set temperature. All we want to do

 11 is keep it above the condensation point for alcohol.
- Q. So you don't -- You don't know what temperature the heated tube is?
 - A. Not offhand. It's probably going to be around 45. Some are a little hotter than others.
 - O. All right. Knowing what you know about this particular breath score, looking into all of your samples, do you have any idea as to what this individual's score would have been 2 hours and 15
- A. If the only information I have is the individual provided a breath sample of around a .12 -- I
- MR. JENKINS: Your Honor, may T approach?

 THE COURT: (Moves head up and down)

don't have the actual test record.

- A. Thank you. A 123 and 118 at about 15 minutes

 after 11:00. If we want to go back to 9:00 o'clock, 2

 hours earlier, the individual could be higher than the

 values on the test record, could be lower than, or could

 be equal to: one of those three.
 - Q. And the factors that influence that is whether or not the person's body is absorbing alcohol and the rate it's eliminating it. Is that a fair statement?
 - A. Those play into the equation, sure.
 - Q. Okay. Now, if someone's absorbing alcohol, their alcohol level absorption is rising faster than elimination, the breath alcohol level is going to rise; is that correct?
 - A. That's correct.
 - Q. And when elimination is faster than absorption, the alcohol level is going to drop; is that correct?
 - A. It is.

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- MR. JENKINS: Your Honor, may I approach?

 THE COURT: (Moves head up and down)
 - Q- (By Mr. Jenkins) So if this is a person's breath alcohol level over time, while it's absorbing, it's going to go up; is that correct?
 - A. That's true.
 - Q. And then once that elimination meets, wherever the max breath alcohol level is, it's going to go down

- 1 at a steady rate of the elimination rate. Is that a 2 fair statement?
- 3 A. It does.
- Q. When you said earlier that it could be greater, the same, or lower, it depends on what part of this curve it's on. Is that a fair statement?
- A. Sure. What you're doing is comparing two separate points on a curve.
- Q. So if it's at 9:00 o'clock and he's pulled over here, and he's tested here, your score is going to be higher; is that correct?
- 12 A. That's true.
- Q. At the same token, if he's pulled over here and he's tested here, then his score is going to be lower; is that correct?
- 16 A. That is.

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- Q. Now, we talk about how elimination is a constant; is that correct?
- A. It is.
- Q. Maybe different for every person but, in general, that person is going to be a pretty constant rate; is that correct?
 - A. It's fairly constant.
- Q. So the important factor is whether or not the person is still absorbing alcohol; is that correct?

- A. It's one of the important factors.
- Q. Okay. Now, when you say absorbing alcohol, you mean taking the alcohol, however it is put into the body, into the blood; is that correct?
 - A. That is.

- Q. Okay. So, for example, alcohol in the stomach is not absorbed yet; is that correct?
 - A. I would agree.
- Q. Would it be a fair statement that alcohol, if you have an amount of alcohol in the stomach, that's not going to affect you at all until it gets into your blood? Is that correct?
- A. You're not going to have the physiological effects until you start absorbing it into the blood system and it yets delivered into the central nervous system.
- Q. Now, there are two main factors, would you say -- Well, there's a bunch of factors involved, but there are certainly two factors that can affect how long this absorption period will last. First, would be the last drink.
 - A. Agree.
- Q. Because if your last drink was -- Let's say you went out drinking the night before and you woke up in the morning. You're obviously going to be in the

elimination period.

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- A. Hopefully.
- Q. Just depends on how long you slept and how much you drank, but -- At that point, we know it's an elimination period, whereas, right after you have your first drink, you're probably in your absorption period. Is that a fair statement?
 - A. That's fair.
- Q. Okay. So you need to know the time of the last drink.
 - A. You do.
- Q. Okay. And the closer to the time of the last drink, the more likely you are to be in the absorption state. Is that a fair statement?
 - A. From a time point -- Yes. The time of last drink is going to be important because the time it takes to absorb that alcohol can vary. And there is a set of times.
 - So if you want to compare -- For example, it's 10:45 now. If I had my last drink at 10:30, then I'm still absorbing. The further we are -- we go backwards in time, the less likely it is that I'm still absorbing.
 - Q. Okay. And would -- Let's say that if you had drinks on an empty stomach, you're most likely going to

absorb that quicker.

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- A. You are.
 - Q. Probably in 30 minutes to an hour.
 - A. Agree.
- Q. Okay. So from the time of the last drink if you don't have anything to eat, you're looking at, you know, somewhere between 30 in the last -- 30 minutes and an hour; is that correct?
 - A. I would agree.
- Q. Okay. Now, when you put food into that, that changes the whole situation, doesn't it?
- 12 | A. It will.
 - Q. And part of that is if you have enough of the right type of food, it can close off the valve from your stomach to your intestines; is that correct?
- 16 A. It does.
- Q. You know, what that does is it provides a stopper where the alcohol sits in your stomach. Is that a fair statement?
- 20 A. It is.
- Q. Okay. Now, if that valve is open, it goes into your intestines and that absorbs alcohol fairly quickly -- or comparatively quickly.
 - A. Almost immediately.
- Q. So, one of the chief questions as to how long

- l it is is whether or not someone had a meal; is that correct?
- A. For someone in my position wanting to draw conclusions about a particular case, yes, those are some of the questions that I ask.
 - Q. Okay. Now, even though we said that the absorption period, you know, may be 30 minutes to an hour on an empty stomach, that's the best case scenario as far as absorbing alcohol; is that correct?
- A. I'm not sure what you mean by "best case 11 scenario;" but --
- Q. You can't do anything to -- Other than
 injecting the alcohol, you can't do anything to speed up
 the absorption more than not eating.
- 15 A. Oh, I would agree.
- Q. Okay. Now -- But depending on varying degrees, are you familiar that Kurt Dubowski has said that the absorption period can last from 14 minutes to 138 minutes?
 - A. Sure.

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- Q. So there are -- There are certain examples
 where the absorption period can last up to 138 minutes;
 is that correct?
- 24 A. I would agree, yes.
- Q. Okay. So -- Okay. So 138 minutes. That's 2

hours and 18 minutes; is that correct?

A. It is.

- Q. Okay. Which would be longer than the time between the test and the arrest in this particular case?
- A. I haven't actually been furnished that time period, so I don't know.
- Q. As far as the absorption level, let's assume for a minute a .118 breath test 2 hours and 15 minutes away from a point in time. Is there a possible scenario where the defendant has a blood -- a breath alcohol level of lower than .08?
- A. I'm writing numbers to keep up with everything here. So 2 hours and 15 minutes between the two. And when is the time of last drink?
 - Q. Unknown.
- A. Is there a scenario where I can put somebody under .08 at 9:00 o'clock and 2 hours and 15 minutes they could be at, say, a .12? Sure. If you leave that time of last drink open, if you consume a significant amount of alcohol right before 9:00 o'clock, at 9:00 o'clock you're probably going to be under .08 and you would still hit that target value of .12 at 2 hours later.
- Q. Now, would it be a fair statement to say that that scenario is much more likely if the person has

consumed a meal, which would slow down the absorption 1 period, right? 3 Typically what will happen with meals is it lowers the peak alcohol value, but you will obtain that 5 for a longer period of time. 6 So, it will allow you to continue out over that full 2 hours and 15 minutes rather than reaching your peak at comewhere around an hour. Is that a fair 9 statement? It will. 10 Α. 11 So having a meal will increase that chance. that a fair statement? 12 13 Depends on when that meal is consumed, whether Α. it's before, whether it's after the beverages, the size 14 of the meal. You're not giving me much concrete. It's 15 still real --16 17

- Q. Recently consuming alcohol would be another

 18 factor that would increase the chances of it being below

 19 .08. Is that a fair statement?
 - A. Sure.
 - Q. Okay. Now, --

MR. JENKINS: Pass the witness, Your

MR. MR.: Nothing further from the

24 | State, Judge.

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THE COURT: Is this witness excused?

1	MR. From the State, yes.
2	MR. JENKINS: Yes, Your Honor.
3	THE COURT: You may step down, sir. You
4	are excused.
5	(End of excerpt of proceedings)
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:	STATE OF TEXAS
2	COUNTY OF TARRANT)
3	I, Toni Freeman, Official Court Reporter in and for
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12	WITNESS MY OFFICIAL HAND this the 14th day of
13	November, 2007.
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16	
1 7	Joni Framan
18	Toni Freeman, Texas CSR 1823
19	Expiration Date: 12-31-09
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