

1 VALLEY FREEWAY.

2 THE COURT: WE WILL GIVE YOU AT LEAST TWO HOURS.

3 THANK YOU.

4 YOUR NEXT WITNESS, MRS. CHILSTROM.

5 MS. CHILSTROM: RICHARD CATALANI.

6 HE IS BEING BROUGHT IN.

7

8 RICHARD WILLIAM CATALANI, +

9 A PEOPLE'S WITNESS, WAS CALLED, SWORN AND TESTIFIED AS
10 FOLLOWS:

11 THE CLERK: SIR, PLEASE STAND BEHIND THE REPORTER,
12 FACE ME, AND RAISE YOUR RIGHT HAND TO BE SWORN.

13 YOU DO SOLEMNLY SWEAR THAT THE TESTIMONY YOU
14 MAY GIVE IN THE MATTER NOW PENDING BEFORE THIS COURT SHALL
15 BE THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE TRUTH,
16 SO HELP YOU GOD.

17 THE WITNESS: I DO.

18 THE CLERK: THANK YOU. PLEASE BE SEATED IN THE
19 WITNESS STAND.

20 PLEASE STATE AND SPELL YOUR NAME.

21 THE WITNESS: MY NAME IS RICHARD WILLIAM CATALANI,
22 C-A-T-A-L-A-N-I.

23 THE CLERK: THANK YOU.

24 THE COURT: YOU MAY PROCEED, MRS. CHILSTROM.

25 MS. CHILSTROM: THANK YOU VERY MUCH.

26 ///

27 ///

28 ///

1 DIRECT EXAMINATION +

2 BY MS. CHILSTROM:

3 Q MR. CATALANI, WHAT IS YOUR CURRENT OCCUPATION
4 AND ASSIGNMENT?

5 A I AM A CRIMINALIST ASSIGNED TO THE SEROLOGY
6 SECTION OF THE LOS ANGELES COUNTY SHERIFF'S CRIME LAB.

7 THE COURT: LET ME GET YOU A LITTLE CLOSER. MOVE
8 UP JUST A LITTLE BIT CLOSER TO THE MIKE.

9 THERE WE GO. THAT WILL BE FINE.

10 Q BY MS. CHILSTROM: WOULD YOU TELL US HOW LONG
11 YOU HAVE BEEN SO EMPLOYED?

12 A I HAVE BEEN AT THE CRIME LAB APPROXIMATELY
13 FIVE YEARS. AND I HAVE BEEN IN THE SEROLOGY SECTION ABOUT
14 FOUR YEARS.

15 Q WOULD YOU TELL US WHAT TRAINING AND
16 EXPERIENCE YOU HAVE HAD IN THE AREA OF SEROLOGY?

17 A YES.

18 I HAVE A BACHELOR'S DEGREE FROM CALIFORNIA
19 STATE UNIVERSITY NORTHRIDGE. MY MAJOR IS IN BIOLOGY, MY
20 MINOR IS IN CHEMISTRY.

21 FOLLOWING GRADUATION I WAS -- IN A 12-MONTH
22 INTERNSHIP IN TOXICOLOGY AT SMITH KLINE CLINICAL
23 LABORATORIES. AFTER COMPLETING THAT I WAS HIRED BY THE
24 LAB AND WORKED THERE AS A CLINICAL TOXICOLOGIST
25 TECHNOLOGIST UNTIL I WAS HIRED BY THE SHERIFF'S DEPARTMENT
26 IN 1985.

27 BEGAN AT THE SHERIFF'S DEPARTMENT IN THE
28 TOXICOLOGY SECTION, WENT THROUGH THE NARCOTICS SECTION AND

1 WAS TRANSFERRED TO THE SEROLOGY SECTION.

2 THE TRAINING I HAVE HAD IN SEROLOGY IS THE --
3 I HAVE BEEN TO THE SEROLOGICAL RESEARCH INSTITUTE IN
4 EMERYVILLE, CALIFORNIA, FOR SEMEN IDENTIFICATION CLASS,
5 WHICH WAS TWO WEEKS IN LENGTH. AND THE REMAINDER OF THE
6 TRAINING IS MOSTLY ON-THE-JOB TRAINING BY SENIOR MEMBERS
7 OF THE SECTION.

8 Q IN YOUR TRAINING IN THE SECTION WITH
9 SEROLOGICAL STUDIES, INCLUDING TRAINING AND YOUR CURRENT
10 WORK, HOW MANY SEMEN SAMPLES HAVE YOU LOOKED AT, IF YOU
11 CAN EVEN GIVE US A HAPHAZARD GUESS?

12 A I HAVE ANALYZED APPROXIMATELY 200 RAPE CASES,
13 ALL -- MOST OF THOSE INCLUDING MULTIPLE SAMPLES. SO SOME
14 MULTIPLE OF 200.

15 Q NOW, DID YOU -- WERE YOU THE CRIMINALIST
16 ASSIGNED TO A MATTER INVOLVING A VICTIM BY THE NAME OF
17 JULIA DE LEON?

18 A YES, I WAS.

19 Q AND DID YOU HAPPEN TO RECEIVE ITEMS CONTAINED
20 IN LAB RECEIPT NO. H250749, H297 -- EXCUSE ME -- 292744,
21 AND H292742?

22 A YES.

23 Q AND COULD YOU TELL ME THE ITEMS THAT YOU
24 EXAMINED UNDER THOSE NUMBERS?

25 A YES.

26 H250749 WAS ONE SEXUAL ASSAULT EVIDENCE KIT
27 CONTAINING -- WELL, ONE BED SHEET AND ONE BLANKET AND ONE
28 CLOTHING BAG. AS WELL AS THE SEXUAL ASSAULT EVIDENCE KIT.

1 THE H292744 WAS ONE BLOOD AND ONE SALIVA
2 SAMPLE LABELED " [REDACTED] ."

3 H292742 WAS ONE BLOOD AND ONE SALIVA SAMPLE
4 LABELED "MARK BRAVO."

5 Q NOW, WHEN YOU SAY A "SEXUAL ASSAULT KIT,"
6 WHAT IS THAT EXACTLY?

7 A A SEXUAL ASSAULT KIT IS A METHOD OF
8 COLLECTING SEXUAL ASSAULT EVIDENCE. THE CRIME LABORATORY
9 PUTS TOGETHER A SERIES OF ENVELOPES CONTAINING SWABS AND
10 SLIDES AND OTHER SUCH ITEMS AND DISTRIBUTES THEM TO
11 MEDICAL FACILITIES THAT COLLECT SEXUAL ASSAULT EVIDENCE
12 FROM RAPE VICTIMS.

13 Q AND AFTER THE -- DO YOU KNOW HOW THE SEXUAL
14 ASSAULT EVIDENCE IS OBTAINED FROM THE VICTIM?

15 A I KNOW HOW IT IS SUPPOSED TO BE OBTAINED.

16 Q WOULD YOU TELL US HOW IT IS SUPPOSED TO BE
17 OBTAINED?

18 A THE DOCTOR IS INSTRUCTED TO UNDRESS THE
19 VICTIM ON A PIECE OF WHITE PAPER, COLLECTING ANY DEBRIS
20 THAT MAY FALL FROM THE VICTIM INTO THIS WHITE PAPER AND
21 FOLDING THAT INTO A BUNDLE AND COLLECTING THAT IN STEP ONE
22 OF THE EVIDENCE IN THE SEXUAL ASSAULT KIT.

23 FOLLOWING ITEMS OF EVIDENCE ARE COLLECTED AS
24 ARE INDICATED BY THE VICTIM'S STORY AND BY THE
25 INVESTIGATING OFFICERS INDICATIONS AT THE SCENE.

26 IF THERE ARE ORAL SAMPLES TO BE COLLECTED A
27 SWAB IS USED TO SWAB OUT THE INSIDE OF THE MOUTH. THE
28 SAME WITH ANY DRIED SECRETIONS THAT MAY BE SEEN ON THE

1 VICTIM, A SWAB IS USED TO COLLECT THOSE AND THEY ARE
2 SUBSEQUENTLY TRANSFERRED TO MICROSCOPE SLIDES WHICH WE
3 EXAMINE. RECTAL SAMPLES AND VAGINAL SAMPLES ARE COLLECTED
4 IN THE SAME MANNER.

5 AND A VAGINAL LAVAGE IS THE FINAL THING THAT
6 IS DONE TO RINSE OUT THE VAGINA IN CASE ANY OF THE SAMPLE
7 WAS NOT COLLECTED BY THE SWABS.

8 Q NOW, IN THIS MATTER, WHAT DID YOU EXAMINE
9 FROM THE RAPE KIT?

10 A I EXAMINED THE ENTIRE SEXUAL ASSAULT EVIDENCE
11 KIT AS WELL AS SOME CLOTHING.

12 Q WHAT DID YOU -- OKAY.

13 DID YOU EXAMINE -- WHAT CLOTHING DID YOU
14 EXAMINE?

15 A CLOTHING WAS ONE WHITE BRA, ONE PAIR OF WHITE
16 PANTIES, ONE PAIR OF GRAY PANTS, AND ONE RED-AND-WHITE
17 SWEATER.

18 Q DID YOU CONDUCT AN EXAMINATION OF ANY OTHER
19 ITEMS, NONCLOTHING ITEMS?

20 A YES. THERE WAS A BED SHEET AND A YELLOW
21 BLANKET,

22 Q NOW, IN CONDUCTING YOUR EXAMINATION OF THE
23 SEXUAL ASSAULT KIT, WHAT EXACTLY DO YOU DO?

24 A WELL, AS I SAID, THE SAMPLES ARE COLLECTED
25 ONTO COTTON SWABS SIMILAR TO Q-TIPS. THESE SWABS ARE
26 SUPPOSED TO BE SMEARED ONTO GLASS MICROSCOPE SLIDES BY THE
27 DOCTOR WHEN HE COLLECTS THEM. EVERYTHING IS THEN DRIED
28 AND PACKAGED AND SENT TO US.

1 THE FIRST THING I DO WHEN I OBTAIN A SEXUAL
2 ASSAULT EVIDENCE KIT IS TO DOCUMENT IT IS INDEED SEALED,
3 OPEN THE KIT, DOCUMENT THE ITEMS INSIDE. AND THEN I LABEL
4 ALL OF THE SLIDES INSIDE AND STAIN THE SLIDES WITH A STAIN
5 THAT ALLOWS ME TO SEE THE SPERMATOZOA ON THE SLIDE.

6 Q IN THIS MATTER DID YOU SEE ANY SPERMATOZOA ON
7 THE SLIDES?

8 A THERE WAS ONE SAMPLE, THE DRIED SECRETION
9 SAMPLE THAT DID HAVE SPERMATOZOA ON THE SLIDES, YES.

10 Q THAT WAS DRIED SECRETIONS TAKEN FROM THE
11 VICTIM?

12 A YES.

13 Q AFTER YOU LOOKED IN THE MICROSCOPE AND LOOKED
14 FOR SPERMATOZOA, WHAT IS THE NEXT THING THAT YOU DID?

15 A THE PRESENCE OF SPERMATOZOA ON THE
16 MICROSCOPIC SLIDE LEADS ME TO BELIEVE THAT THERE IS
17 SPERMATOZOA ON THE SWAB THAT WAS SMEARED ONTO THE SLIDE.
18 THE REMAINDER OF MY TESTING IS DONE ON THE SWAB THAT
19 ACTUALLY COLLECTED THE SAMPLE.

20 Q AND WHAT DID YOU DO NEXT AFTER THAT?

21 A I TOOK A PORTION OF THE DRIED SECRETION SWAB
22 AND WE EXTRACT IT INTO A SMALL AMOUNT OF WATER. THIS
23 REMOVES THE ENZYMES AND MATERIAL FROM THE SWAB AND PUTS IT
24 INTO A MEDIUM WHERE WE CAN DO OUR TESTING.

25 WE ALSO SUBMIT A PORTION TO ELECTROPHORESIS,
26 WHICH IS A METHOD WE USE TO ATTEMPT TO DIFFERENTIATE
27 SAMPLES BASED ON THEIR DIFFERENT ENZYME TYPES.

28 Q AND IN -- AFTER THAT, WHAT DID YOU DO?

1 OR DID YOU FIND ANY RESULTS BASED ON THAT?

2 A THE RESULTS FROM THE DRIED SECRETION SAMPLE
3 WERE OVERALL INCONCLUSIVE.

4 Q NOW, WHAT DOES THAT MEAN?

5 A THAT MEANS THAT THERE WASN'T ENOUGH -- THERE
6 WASN'T ENOUGH INFORMATION FOR ME TO DRAW A CONCLUSION
7 FROM.

8 Q COULD THAT -- ARE THERE CERTAIN THINGS THAT
9 WOULD CAUSE IT TO BE INCONCLUSIVE? SUCH AS SOMEBODY
10 URINATING OR --

11 A YES. THERE ARE A NUMBER OF REASONS WHY A
12 SAMPLE MAY BE INCONCLUSIVE.

13 Q AND THEY ARE WHAT?

14 MR. NIETO: YOUR HONOR, I THINK THAT IS CALLING FOR
15 SPECULATION. WHY THIS SAMPLE IS INCONCLUSIVE.

16 THE COURT: I THINK THE QUESTION IS RELEVANT AND
17 ALSO WITHIN THE SPHERE OF THIS WITNESS'S EXPERTISE. I
18 WILL ALLOW HIM TO ANSWER.

19 THE OBJECTION IS OVERRULED.

20 THE WITNESS: SOME OF THE REASONS THAT ANY SAMPLE
21 COULD BE INCONCLUSIVE ARE METHOD OF COLLECTION. IF THE
22 DOCTOR OR PERSON COLLECTING THE SAMPLE DID AN INADEQUATE
23 JOB OF COLLECTING THE SAMPLE, I AM NOT GOING TO GET ENOUGH
24 INFORMATION TO BE ABLE TO DRAW A CONCLUSION. THE AGE OF
25 THE SAMPLE. IF THE -- THE OLDER THE SAMPLE IS THE MORE IT
26 DETERIORATES, THE LESS INFORMATION I AM GOING TO GET OUT
27 OF IT.

28 IF A SAMPLE WERE STORED IMPROPERLY, IT WOULD

1 AGAIN CAUSE IT TO AGE MORE RAPIDLY, DECREASING THE
2 INFORMATION I COULD GET FROM IT.

3 IF THERE WERE A SMALL AMOUNT OF SAMPLE THERE
4 TO BEGIN WITH, WE NEED A CERTAIN AMOUNT OF SAMPLE TO BE
5 ABLE TO GET INFORMATION FROM IT. IF THERE WERE NOT ENOUGH
6 THERE TO BEGIN WITH, I COULD AGAIN GET AN INCONCLUSIVE
7 RESULT.

8 Q DID YOU CONDUCT AN EXAMINATION OF ANY OTHER
9 PART OF THE ITEMS THAT YOU RECEIVED SO THE DRIED
10 SECRETIONS WERE INCONCLUSIVE?

11 DID YOU FIND ANY RESULTS FROM ANY OTHER ITEMS
12 YOU TESTED?

13 A YES. I EXAMINED ALL OF THE SLIDES THAT I
14 RECEIVED IN THE SEXUAL ASSAULT EVIDENCE KIT.

15 THE VAGINAL SLIDES WERE NEGATIVE. I DID NOT
16 DETECT ANY SPERMATOZOA IN THERE.

17 Q NOW LET ME ASK YOU SOMETHING.

18 DOES THAT MEAN THAT THERE -- THAT A PENILE
19 PENETRATION DID NOT OCCUR?

20 A NO, NOT AT ALL.

21 Q DOES THAT MEAN THAT THE PERSON DID NOT
22 EJACULATE?

23 A NOT NECESSARILY, NO.

24 Q IS THAT OF ANY SIGNIFICANCE THAT THE VAGINAL
25 SLIDES WERE NEGATIVE?

26 A NO. THERE ARE ANY NUMBER OF REASONS WHY A
27 VAGINAL SAMPLE COULD BE NEGATIVE AND INTERCOURSE COULD
28 STILL HAVE TAKEN PLACE.

1 Q AND THOSE BEING?

2 A THAT THAT INTERCOURSE OCCURRED WITHOUT
3 EJACULATION OCCURRING IN THE VAGINA.

4 INTERCOURSE COULD HAVE OCCURRED WITH
5 EJACULATION IN THE VAGINA AND THE DRAINAGE REMOVED MOST OF
6 THE SAMPLE.

7 IT COULD BE INADEQUATE COLLECTION OF SAMPLE,
8 IMPROPER COLLECTION.

9 Q IF THE VICTIM HAD URINATED, WOULD THAT HAVE
10 AFFECTED THE SAMPLE PRIOR TO COLLECTION?

11 A IT MAY HAVE.

12 Q WHAT DID YOU EXAMINE NEXT?

13 A AFTER THE SEXUAL ASSAULT EVIDENCE KIT, I
14 EXAMINED THE CLOTHING, AND I DETECTED NO SEMEN ON ANY OF
15 THE CLOTHING.

16 Q DID YOU CONDUCT ANY -- WELL, DID YOU -- WHAT
17 ABOUT THE PANTIES?

18 A OH, I'M SORRY.

19 THAT WAS NOT -- THAT WAS INCORRECT, I
20 DETECTED SEMEN ON THE PANTIES. THE REMAINDER OF THE
21 CLOTHING WERE NEGATIVE.

22 Q THE SEMEN, HOW DID YOU EXAMINE THE SEMEN FROM
23 THE PANTIES?

24 A THE -- ONE OF THE FIRST THINGS I DO TO SCREEN
25 FOR THE PRESENCE OF SEMEN ON CLOTHING OR BEDDING IS TO
26 VISUALIZE IT USING A LASER LIGHT. THE WAVE LENGTH OF
27 LASER LIGHT THAT WE USE CAUSES COMPONENTS IN SEMEN TO
28 FLUORESCE.

1 SO IN A DARKENED ROOM WHEN I HIT IT WITH A
2 LASER LIGHT IT FLUORESCES, AND I MARK THAT AREA AND GO
3 BACK AND TEST IT FURTHER WITH CHEMICAL TESTS.

4 Q WHEN YOU CONDUCTED THE CHEMICAL TESTS, WHAT
5 WAS THE PURPOSE OF THIS CHEMICAL TESTING?

6 A CHEMICAL TEST IS TO CONFIRM THAT THE
7 LUMINESCENT SPOT IS INDEED FROM SEMEN AND NOT FROM
8 SOMETHING ELSE THAT MAY LUMINESCE.

9 Q AND THE RESULT WAS SEMEN, CORRECT?

10 A THEY BOTH INDICATED SEMEN, YES.

11 Q THEN WHAT DID YOU DO?

12 A AFTER THAT WE DO A TEST CALLED A P-30 TEST.

13 A P-30 IS A TEST FOR THE PRESENCE OF A
14 PROTEIN IN SEMEN CALLED P-30.

15 Q AND WHAT HAPPENED WITH THAT TEST?

16 A THE RESULTS OF THE P-30 TEST ON THE PANTIES
17 WERE POSITIVE SEMEN.

18 AT THAT POINT I WOULD SAY THAT SEMEN WAS
19 DETECTED ON THE PANTIES.

20 Q DID YOU CONDUCT ANY OTHER SEMEN TESTING OR
21 TESTING FOR THE PRESENCE OF SEMEN ON ANY OTHER ITEMS?

22 A YES. I LOOKED AT BOTH THE BLANKET AND THE
23 BED SHEET.

24 Q AND DID YOU NOTE THE PRESENCE OF SEMEN ON ANY
25 OF THOSE ITEMS?

26 A YES. SEMEN WAS PRESENT ON BOTH THE BED SHEET
27 AND THE BLANKET.

28 Q AFTER YOU HAD THE CONFIRMATION OF PRESENCE OF

1 SEMEN, WHAT DID YOU DO NEXT?

2 A THE CLOTHING IS TREATED THE SAME WAY THAT THE
3 SWABS FROM THE SEXUAL ASSAULT KIT ARE TREATED. A SMALL
4 SAMPLE IS REMOVED AND SOAKED IN WATER. AND TESTS ARE
5 PERFORMED ON THAT PART WHILE ANOTHER PART IS REMOVED AND
6 SUBMITTED TO THE ELECTROPHORESIS TO DETERMINE ENZYME
7 TYPES.

8 Q AND THAT WAS DONE IN THIS CASE; IS THAT
9 CORRECT?

10 A YES, THAT'S CORRECT.

11 Q WHAT WERE THE ENZYME TYPES THAT YOU FOUND IN
12 THE SEMEN THAT YOU TESTED, OR THE AREAS OF CLOTHING YOU
13 TESTED?

14 A THE SEMEN TYPES ON THE PANTIES INDICATED THAT
15 THERE WERE A MIXTURE OF TYPES.

16 Q AND IS THAT UNCOMMON?

17 A NO, THAT'S NOT UNCOMMON ON PANTIES.

18 Q AND WHY IS THAT?

19 A MOST OF THE TIME THE VICTIM WILL EXHIBIT
20 THEIR TYPE, AND ANY TYPE OTHER THAN THE VICTIM IS
21 ATTRIBUTED TO THE SEMEN DONOR.

22 Q ARE WE TALKING BLOOD TYPING AT THIS TIME OR
23 IS THIS A DIFFERENT THING?

24 A PART OF THIS IS BLOOD TYPING.

25 Q AND WHEN WE SAY "TYPE," ARE YOU TALKING ABOUT
26 THE VICTIM'S BLOOD TYPE COMES OUT AS WELL AS SOME OTHER,
27 LIKE THE DONOR'S BLOOD TYPE, IS THAT WHAT WE ARE LOOKING
28 FOR OR AM I JUMPING THE GUN?

1 A THERE ARE TWO THINGS I AM REFERRING TO WHEN I
2 SAY TYPES. ONE IS ABO BLOOD TYPES THAT WE ARE ALL
3 FAMILIAR WITH. THEY ARE A, B, AB AND O TYPES.

4 THERE ARE ALSO TYPING TESTS THAT WE DO ON
5 ENZYMES THAT ARE PRESENT IN SEMEN AND VAGINAL SECRETIONS
6 AS WELL AS IN THE BLOOD.

7 Q SO WE ARE TALKING ABOUT ENZYME TYPING AT THIS
8 POINT, CORRECT?

9 A YES.

10 Q AND THE ENZYME THAT YOU FOUND, THERE WERE
11 TWO -- IS IT FAIR TO SAY TWO DIFFERENT KINDS OF ENZYMES
12 TYPING THAT YOU FOUND?

13 A IT APPEARED THAT THERE WAS A COMBINATION OF
14 TWO DIFFERENT ENZYME TYPES. THE ENZYMES WE ARE REFERRING
15 TO IS PHOSPHOGLUCOMUTASE, ABBREVIATED AS PGM.

16 THIS IS AN ENZYME THAT EVERYBODY HAS. IT IS
17 INHERITED. AND A NORMAL GENETIC MANNER, WHERE YOU GET
18 HALF OF YOUR INFORMATION FROM YOUR MOTHER AND HALF FROM
19 YOUR FATHER. IN THESE SAMPLES -- IN THIS ENZYME, IT IS A
20 COMBINATION OF THESE TWO HALVES.

21 WE TYPE THESE -- WE TYPE THIS ENZYME. AND
22 THERE ARE DIFFERENT FORMS. THESE DIFFERENT FORMS SHOW UP
23 ON OUR ELECTROPHORESIS PLATES. AND WE HAVE FREQUENCIES
24 FOR THESE FORMS.

25 Q SO YOU DISCOVERED SOME -- TWO DIFFERENT, OR A
26 MIXTURE OF PGM TYPES ON THE PANTIES.

27 HOW ABOUT ON THE BED SHEET?

28 A THE PGM ENZYME TYPE ON THE BED SHEET GAVE ME

1 NO INDICATION THAT IT WAS FROM TWO SOURCES.

2 Q OKAY.

3 SO IT WAS ONE SOURCE ON THE BED SHEET,
4 CORRECT?

5 AND THEN --

6 THE COURT: WHAT IS THE ANSWER TO THAT?

7 THE WITNESS: YES.

8 Q BY MS. CHILSTROM: AND WHAT ABOUT THE
9 SHEET -- THE BLANKET -- NO, THE SHEET.

10 DID WE TALK ABOUT THE SHEET?

11 A THAT WAS THE BED SHEET.

12 Q I AM SORRY. I WROTE BLANKET.

13 WHAT ABOUT THE BLANKET?

14 A THE SAME ANSWER FOR THE BLANKET. I HAD NO
15 INDICATION THAT IT WAS FROM TWO SOURCES.

16 Q NOW, DID -- YOU INDICATED THAT YOU GOT SOME
17 BLOOD AND SALIVA FROM THE VICTIM AND THE DEFENDANT.

18 WHAT WAS THE REASON FOR GETTING THAT?

19 A THE REASON FOR GETTING THE BLOOD AND SALIVA
20 FROM THE VICTIM AND THE SUSPECT IS TO DETERMINE THEIR ABO
21 TYPES AND THEIR ENZYME TYPES.

22 ALSO TO DETERMINE -- THE SALIVA IS TO
23 DETERMINE THE SECRETOR STATUS.

24 Q WHAT IS A SECRETOR STATUS?

25 A CERTAIN PEOPLE WILL EXHIBIT THEIR ABO BLOOD
26 TYPE IN BODY FLUIDS OTHER THAN BLOOD, SUCH AS SEMEN,
27 SALIVA, VAGINAL SECRETIONS IF THEY ARE A SECRETOR.
28 NONSECRETOR WILL NOT EXHIBIT THEIR ABO BLOOD TYPING IN

1 THOSE FLUIDS.

2 Q WERE BOTH BLOOD SAMPLES AND SALIVA SAMPLES
3 THAT YOU EXAMINED, WERE THESE PEOPLE SECRETORS?

4 A YES, THEY WERE BOTH SECRETORS.

5 Q WHAT DID YOU DO IN REFERENCE TO DETERMINE --
6 WELL, NEXT, WHEN YOU GOT THE BLOOD AND SALIVA, SO YOU
7 FOUND OUT THEY WERE SECRETORS, CORRECT?

8 A I -- WHAT WE DO IS WE RUN THE BLOODS THROUGH
9 OUR SCREENING SYSTEM AND WE DETERMINE THEIR ABO TYPE,
10 THEIR SECRETOR STATUS, THEIR PGM ENZYME TYPE AND THEIR
11 PEPTIDASE A.C.E. AND CAPITAL LETTER "A" TYPE.

12 Q WHAT IS THAT?

13 A THAT IS ANOTHER ENZYME THAT IS PRESENT IN
14 HIGH CONCENTRATIONS IN SEMEN.

15 Q AND DID -- WHAT WERE YOUR RESULTS FROM THIS
16 TESTING?

17 A I FOUND THAT [REDACTED] IS AN ABO TYPE A
18 SECRETOR. SHE IS A PGM TYPE ONE.

19 HER PGM SUBTYPE IS ONE PLUS ONE MINUS. AND
20 HER PEPTIDASE A TYPE IS ONE.

21 Q DOES THAT HAVE ANY SIGNIFICANCE -- WELL,
22 COULD YOU EXPLAIN.

23 WHAT WAS THE PGM -- WHAT IS A PGM SUBTYPE?

24 A A PGM SUBTYPE IS A FURTHER DIFFERENTIATION OF
25 THE PGM TYPE.

26 THE PGM MOLECULE IS COMPOSED OF TWO PARTS.
27 THE SUBTYPE IS A TYPING TO DETERMINE THOSE TWO COMPONENTS.

28 Q NOW WHAT ABOUT THE SALIVA AND BLOOD SAMPLES

1 FROM THE DEFENDANT?

2 A MARK BRAVO WAS DETERMINED TO BE AN ABO TYPE A
3 SECRETOR, A PGM TYPE TWO-ONE, A PGM SUBTYPE TWO MINUS, ONE
4 PLUS. AND A PEPTIDASE A-1.

5 Q KNOWING THIS, THE INFORMATION THAT YOU
6 RECEIVED FROM THE BLOOD AND SALIVA TYPES, DID THAT CAUSE
7 YOU TO REACH ANY KIND OF CONCLUSION IN REFERENCE TO THE
8 TESTING YOU HAD DONE PREVIOUSLY WITH THE PANTIES AND THE
9 BED SHEET AND THE BLANKET?

10 A YES, IT DID.

11 Q AND WHAT WAS THAT?

12 A THE PANTIES, AS I SAID EARLIER, GAVE ME AN
13 INDICATION THAT THERE WAS MORE THAN ONE SOURCE. THIS IS
14 BECAUSE A PGM SUBTYPE, EACH PGM MOLECULE IS COMPOSED OF
15 TWO PARTS. WHEN WE TEST IT, IT BREAKS DOWN TO THOSE TWO
16 PARTS. IF THOSE TWO PARTS ARE DIFFERENT, THAT MEANS I AM
17 GOING TO SEE TWO DIFFERENT BANDS, SUCH AS THE ONE PLUS
18 BAND AND THE ONE MINUS BAND IN [REDACTED] IF THEY ARE
19 THE SAME, I WILL ONLY SEE ONE BAND, SUCH AS -- WELL, ONE
20 PLUS BAND.

21 IN THIS CASE BOTH THE SUSPECT AND THE VICTIM
22 WERE HETEROZYGOUS, THAT MEANS DIFFERENT TYPES. THEY BOTH
23 HAD -- BOTH OF THEIR PGM MOLECULES ARE COMPOSED OF TWO
24 DIFFERENT TYPES. SHE WAS AN ONE PLUS ONE MINUS, AND HE IS
25 A TWO MINUS ONE PLUS.

26 Q AND DID YOU FIND THAT ON THE PANTIES?

27 A IN THE PANTIES I FOUND THREE BANDS.

28 AGAIN, THREE BANDS INDICATING THAT THERE IS

1 MORE THAN ONE SOURCE, SINCE ONLY TWO CAN COME FROM ANY ONE
2 PERSON AT MOST.

3 Q OKAY.

4 GO AHEAD.

5 A THE PATTERN I SAW IN THE PANTIES IS A TWO
6 MINUS ONE PLUS ONE MINUS PATTERN. THIS INDICATES TO ME
7 THAT IT COULD POSSIBLY HAVE COME FROM A MIXTURE OF BODY
8 FLUIDS FROM DE LEON AND BRAVO.

9 Q THEREFORE IT IS YOUR OPINION THAT MR. BRAVO
10 COULD NOT BE EXCLUDED AS A DONOR IN REFERENCE TO THE
11 PANTIES; IS THAT CORRECT?

12 A THAT'S CORRECT.

13 Q NOW, IN REFERENCE TO THE BED SHEET, WHAT
14 FINDINGS DID YOU MAKE?

15 A AGAIN REMEMBERING THAT MARK BRAVO IS A TWO
16 MINUS ONE PLUS, THE SEMEN STAINS ON BOTH THE BED SHEET AND
17 THE BLANKET ARE TWO MINUS ONE PLUS.

18 Q AND WHAT DOES THAT MEAN TO YOU?

19 A THIS MEANS THAT FROM THOSE RESULTS ALONE HE
20 COULD POSSIBLY BE A DONOR OF THOSE SEMEN STAINS.

21 Q HE CAN?

22 A YES.

23 Q IS THERE ANY KIND OF STATISTICS OR
24 PERCENTAGES AS TO THIS BLOOD TYPE IN, I GUESS THE COUNTY
25 OF LOS ANGELES, OF A PERSON OF MR. BRAVO HAVING THIS BLOOD
26 TYPE IN THE COUNTY OF LOS ANGELES?

27 A YES. THE -- THERE HAS BEEN WORK DONE,
28 STUDIES ON BLOOD TYPES IN LOS ANGELES COUNTY, AND THE

1 FREQUENCY, NUMBER OF OCCASIONS THAT A TWO MINUS ONE PLUS
2 OCCURS IS APPROXIMATELY 7.5 PERCENT.

3 Q AND WHAT DOES THAT MEAN IN REFERENCE TO THE
4 POPULATION?

5 I BELIEVE -- DOES -- DOES THAT INDICATE
6 THAT -- THAT IS FOUND IN APPROXIMATELY 3 PERCENT OF THE
7 POPULATION?

8 A THAT SEVEN AND A HALF PERCENT IN COMBINATION
9 WITH AN ABO TYPE A, I FOUND ABO-TYPE ANTIGENS ON THE BED
10 SHEET, THAT FREQUENCY, COMBINED WITH THE ABO-TYPE
11 FREQUENCY LIMITS THE POPULATION THAT COULD HAVE DONATED
12 THAT SAMPLE TO ABOUT 3 PERCENT OF THE POPULATION.

13 Q AND WOULD IT BE FAIR TO SAY THAT AT LEAST
14 HALF OF THAT 3 PERCENT WOULD BE FEMALES?

15 A YES, THAT'S CORRECT.

16 Q SO IT WOULD BE MORE THAN LIKELY THAT ONE AND
17 A HALF PERCENT OF THE POPULATION OF MALES IN L.A. COUNTY,
18 HE FITS IN THAT GROUP; IS THAT CORRECT?

19 A COULD HAVE DONATED THAT SAMPLE, THAT'S
20 CORRECT.

21 Q IN YOUR EXPERIENCE AS A CRIMINALIST AND IN
22 THE WORK THAT YOU HAVE DONE IN TYPING AND DOING WHAT YOU
23 ARE DOING HERE, IS THAT A PRETTY -- DO WE SEE THAT KIND OF
24 ESTIMATION, LIKE ONE AND A HALF PERCENT, DO YOU SEE THAT A
25 LOT?

26 A NOT VERY OFTEN, NO.

27 Q OKAY.

28 AND WHY IS THAT?

1 A THE MORE COMMON TYPES, BY NATURE, SHOW UP
2 MORE OFTEN. SO THE FREQUENCY OF SEEING SOMETHING THAT IS
3 IN A LARGER PERCENTAGE OF THE POPULATION IS MORE LIKELY.

4 Q NOW, THE SEMEN STAIN ON THE BLANKET YOU
5 CONDUCTED AN EXAMINATION OF; IS THAT CORRECT?

6 A YES, THAT'S CORRECT.

7 Q AND WHAT WERE YOUR RESULTS FROM THAT?

8 A ON THE STAIN FROM THE BLANKET I DETECTED H
9 ANTIGENS, H ABO ANTIGENS, WHICH ARE CONSISTENT WITH AN O
10 SECRETOR AS WELL AS A PGM TYPE TWO-ONE, A PGM SUBTYPE TWO
11 MINUS ONE PLUS, AND A PEPTIDASE A TYPE ONE.

12 Q SO BOTH MISS ██████████ AND MR. BRAVO CAN BE
13 EXCLUDED FROM ANY DONORS WITH THAT SAMPLE; IS THAT
14 CORRECT?

15 A THAT'S CORRECT.

16 MR. BRAVO IS A TYPE A. AND THE H ANTIGENS
17 INDICATE A TYPE O. SO HE COULD NOT HAVE DONATED THAT
18 SAMPLE.

19 Q AND YOU DIDN'T SEE ANY OF THE VICTIM'S
20 ANTIGENS OR ENZYMES ON IT EITHER, DID YOU?

21 A I DIDN'T DETECT ANY.

22 MS. CHILSTROM: NO FURTHER QUESTIONS.

23 THE COURT: ALL RIGHT.

24 THE COURT WILL BE IN RECESS.

25 WE'LL BE IN RECESS UNTIL ELEVEN O'CLOCK
26 TOMORROW MORNING, LADIES AND GENTLEMEN.

27 THANK YOU VERY MUCH.

28 ///