

THE STATE OF SOUTH CAROLINA
IN THE SUPREME COURT

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APPEAL FROM COLLETON COUNTY
Court of General Sessions

S.C. SUPREME COURT

The Honorable Clifton B. Newman, Circuit Judge
The Honorable Jean Hoefer Toal, Chief Justice (Ret.)

Appellate Case No. 2023-000392

THE STATE OF SOUTH CAROLINA,.....RESPONDENT,

V.

RICHARD ALEXANDER MURDAUGH, ... APPELLANT.

RECORD ON APPEAL
VOL. X

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**RECORD ON APPEAL INDEX
VOLUME I**

ORDERS

Order Granting Motion of State to Admit Evidence of Other Crimes, filed February 6, 2023 ...1

ORDERS POST TRIAL

Court of Appeals Order, filed October 17, 2023 7

Supreme Court Order, filed January 3, 2024.....8

Circuit Court Order Denying Motion for New Trial, filed April 4, 2024 10

Supreme Court Order, filed August 13, 2024 35

Supreme Court Order, filed September 13, 2024.....37

JUDGMENTS

Judgment (Sentencing Sheets-4), filed March 3, 2023 39

DECREES

Notice of Alibi Defense, filed November 17, 2022 55

Notice of Direct Appeal, filed March 9, 2023 57

Notice of Jury Tampering Appeal, filed April 11, 2024.....59

INDICTMENTS:

Indictment #2021-GS-15-00592 61

Indictment #2021-GS-15-00593 63

Indictment #2021-GS-15-00594 65

Indictment #2021-GS-15-00595 67

MOTIONS AND MEMORANDUMS FILED WITH THE LOWER COURT

Motion to Exclude False Testimony About Evidence Destroyed by the State with Exhibits, filed November 23, 2022 69

Motion for Bill of Particulars, filed December 7, 2022.....164

State’s Response in Opposition to Defendant’s Motion for a Bill of Particulars; and State’s Motion to Admit Evidence of Motive, filed December 8, 2022 173

Memorandum in Opposition to Motion in Limine re: Evidence of Other Crimes and Bad Acts, filed December 19, 2022 196

Reply to Defendant’s Memorandum in Opposition to State’s Motion in Limine to Admit Evidence of Motive, filed December 28, 2022 215

Motion in Limine to Preclude or Limit Firearm Ballistic Opinion Testimony, or Alternatively, for a *Council* Hearing, filed January 23, 2023 233

State’s Response to Motion to Preclude or Limit Firearms Ballistics Evidence, filed January 24, 2023.....255

MOTIONS AND MEMORANDUMS FILED POST TRIAL

Motion to Suspend Appeal and for Leave to File a Motion for New Trial, filed September 5, 2023.....270

Return to Motion to Suspend Appeal and Leave to File Motion for a New Trial., filed September 15, 2023.....333

Reply to the State’s Return to Appellant’s Motion to Suspend Appeal and for Leave to File Motion for New Trial, filed September 21, 2023 337

Motion for New Trial, filed October 27, 2023.....345

State’s Response to Defendant’s Motion for a New Trial; and State’s Motions to Strike, filed November 6, 2023.....418

Defendant’s Pre-Hearing Brief RE: Motion for a New Trial, filed January 3, 2024.....466

VOLUME II

MOTIONS AND MEMORANUMS FILED POST TRIAL, CONTINUED

Defendant’s Pre-Hearing Brief RE: Motion for a New Trial, filed January 3, 2024, Cont. 483

State’s Pre-Hearing Brief in Opposition to Defense Motion for a New Trial, filed January 3, 2024.....490

Defendant’s Supplemental Pre-Hearing Brief, filed January 10, 2024 497

State’s Revised Pre-Hearing Brief in Opposition to Defense Motion for a New Trial, filed January 10, 2024 529

Defendant’s Second Supplemental Pre-Hearing Brief, filed January 12, 2024.....560

Defendant’s Reply to the State’s Pre-Hearing Brief, filed January 15, 2024 592

Motion to Certify to the Supreme Court with exhibits, filed July 10, 2024 611

VOLUME III

MOTIONS AND MEMORANDUMS FILED POST TRIAL, CONTINUED

Motion to Certify to the Supreme Court with exhibits, filed July 10, 2024, Continued	967

TRANSCRIPTS

Trial Transcript (January 23-March 3, 2023), Pages 1-5894 ¹	
Jury Voir Dire – Panel One.....	1286
Jury Voir Dire – Panel Two	1333
Jury Voir Dire – Panel Three	1387
Jury Voir Dire _ Panel Four.....	1426

VOLUME IV

TRANSCRIPTS, CONTINUED

Jury Voir Dire _ Panel Four, Continued	1449
Pre-Trial Hearing – Witness Paul Greer	
Voir Dire Examination by Mr. Fernandez	1546
Direct Examination by Mr. Fernandez	1563
Cross-examination by Mr. Griffin.....	1576
Jury Selection.....	1631
Opening Statement by Mr. Waters.....	1652
Opening Statement by Mr. Harpootlian.....	1670

State’s Case In Chief

Daniel Greene

Direct Examination by Mr. Waters	1692
Cross-examination by Mr. Harpootlian.....	1735
Redirect Examination by Mr. Waters.....	1762
Recross-examination by Mr. Harpootlian	1767

Chad McDowell

Direct Examination by Mr. Waters	1769
Cross-examination by Mr. Harpootlian.....	1785
Redirect Examination by Mr. Waters.....	1797

Tinish Bryson-Smith

Direct Examination by Ms. Goude.....	1801
Cross-examination by Mr. Harpootlian.....	1805

Amanda Stallings

Direct Examination by Ms. Goude.....	1806

Barry McRoy

Direct Examination by Ms. Goude.....	1811
Cross-examination by Mr. Harpootlian.....	1818

¹ At present, the following portions of the trial transcript appear to remain under seal: (1) 5526:24 – 5544:12; 5550: 23 – 5563:1; and 5669:4 – 5737:13.

Jason Chapman	Direct Examination by Mr. Fernandez	1825
	Cross-examination by Mr. Harpootlian.....	1878
	Redirect Examination by Mr. Fernandez	1906
Laura Rutland	Direct Examination by Mr. Meadors.....	1913

VOLUME V

TRANSCRIPTS, CONTINUED

Laura Rutland, Continued	Direct Examination by Mr. Meadors, Continued	1932
	Cross-examination by Mr. Griffin.....	1946
	Redirect Examination by Mr. Meadors	1970
	Recross-examination by Mr. Griffin	1976
Delila Ciricinone	Direct Examination by Ms. Goude.....	1977
	Cross-examination by Mr. Harpootlian.....	1984
Melinda Worley	Voir Dire Examination by Ms. Goude	1989
	Direct Examination by Ms. Goude.....	1992
	Cross-examination by Mr. Harpootlian.....	2074
	Redirect Examination by Ms. Goude	2132
	Recross-examination by Mr. Harpootlian	2138
Jeff Croft	Direct Examination by Mr. Waters	2143
	Cross-examination by Mr. Griffin.....	2235
	Redirect Examination by Mr. Waters.....	2281
	Recross-examination by Mr. Griffin	2298
Anthony Kniche	Direct Examination by Mr. Conrad.....	2301
	Cross-examination by Mr. Harpootlian.....	2329
	Redirect Examination by Mr. Conrad	2338
	Recross-examination by Mr. Harpootlian	2339
Paul McManigal	Direct Examination by Mr. Conrad.....	2342
	Cross-examination by Mr. Barber.....	2348
Jonathan VanHouten	Direct Examination by Mr. Conrad.....	2349
John Bedingfield	Direct Examination by Mr. Waters	2368
	Cross-examination by Mr. Griffin.....	2388
	Redirect Examination by Mr. Waters.....	2396
David Britton Dove	Voir Dire Examination by Mr. Conrad	2399

Direct Examination by Mr. Conrad.....	2405

VOLUME VI

TRANSCRIPTS, CONTINUED

David Britton Dove, Continued

Direct Examination by Mr. Conrad, Continued	2415
Cross-examination by Mr. Barber	2554
Redirect Examination by Mr. Conrad	2600
Recross-examination by Mr. Barber	2612

Dathan Varnadoe

Direct Examination by Mr. Meadors.....	2615
Cross-examination by Mr. Griffin.....	2632
Redirect Examination by Mr. Meadors	2637

Rogan Gibson

Direct Examination by Mr. Waters	2638
Cross-examination by Mr. Griffin.....	2676
Redirect Examination by Mr. Waters.....	2696

Will Loving

Direct Examination by Mr. Waters	2703
Cross-examination by Mr. Griffin.....	2727
Redirect Examination by Mr. Waters.....	2741

Heidi Galore

Direct Examination by Mr. Conrad.....	2758
Cross-examination by Mr. Barber	2765

Jeannie Seckinger (*In-Camera* Hearing)

Direct Examination by Mr. Waters	2769
Cross-examination by Mr. Griffin.....	2837
Redirect Examination by Mr. Waters.....	2856

VOLUME VII

TRANSCRIPTS, CONTINUED

Dylan Hightower

Direct Examination by Mr. Conrad.....	2873
Cross-examination by Mr. Harpootlian.....	2908
Redirect Examination by Mr. Conrad	2925

Katie McCallister

Direct Examination by Ms. Goude.....	2928
Cross-examination by Mr. Harpootlian.....	2935

Michael Gunn (*In-Camera* Hearing)

Direct Examination by Mr. Waters	2940
Cross-examination by Mr. Griffin.....	2956

James C. Wilson (*In-Camera* Hearing)

Direct Examination by Mr. Waters	2957

Jan Malinowski (*In-Camera* Hearing)

Direct Examination by Mr. Waters	3010

	Cross-examination by Mr. Griffin.....	3038
	Redirect Examination by Mr. Waters.....	3045
	Re-cross examination by Mr. Griffin	3049
Michael Tony Satterfield (<i>In-Camera Hearing</i>)		
	Direct Examination by Mr. Waters	3051
	Cross-examination by Mr. Griffin.....	3062
Carson Burney (<i>In-Camera Hearing</i>)		
	Direct Examination by Mr. James.....	3063
Tom Darnell		
	Voir Dire Examination by Ms. Goude	3082
	Direct Examination by Ms. Goude.....	3084
	Cross-examination by Mr. Harpootlian.....	3194
	Redirect Examination by Ms. Goude	3105
Blake Johnson		
	Direct Examination by Ms. Goude.....	3107
Lawrence Wiggins		
	Direct Examination by Ms. Goude.....	3109
Chandler Horney		
	Direct Examination by Ms. Goude.....	3111
Jomar Albayalde		
	Direct Examination by Ms. Goude.....	3113
Paul Greer		
	Voir Dire Examination by Mr. Fernandez	3117
	Direct Examination by Mr. Fernandez.....	3124
	Cross-examination by Mr. Griffin.....	3184
	Redirect Examination by Mr. Fernandez	3222
Mark Tinsley (<i>In-Camera Hearing</i>)		
	Direct Examination by Mr. Waters	3235
	Cross-examination by Mr. Griffin.....	3254
	Redirect Examination by Mr. Waters.....	3287
Ronnie Crosby (<i>In-Camera Hearing</i>)		
	Direct Examination by Mr. Waters	3294
	Cross-examination by Mr. Griffin.....	3298
Mushelle Shelley Smith		
	Direct Examination by Mr. Meadors.....	3313

VOLUME VIII

TRANSCRIPTS, CONTINUED

Mushelle Shelley Smith, Continued		
	Cross-examination by Mr. Griffin.....	3355
	Redirect Examination by Mr. Meadors	3368
	Recross-examination by Mr. Griffin	3384
Kristin Moore		
	Direct Examination by Ms. Goude.....	3388
	Cross-examination by Mr. Griffin.....	3395

	Redirect Examination by Ms. Goude	3400
William McElveen	Direct Examination by Mr. Fernandez	3402
	Cross-examination by Mr. Griffin.....	3413
Natasha Moodie	Direct Examination by Mr. James.....	3425
Jamie Hall	Direct Examination by Mr. Meadors.....	3429
	Cross-examination by Mr. Griffin.....	3454
Jeannie Seckinger	Direct Examination by Mr. Waters	3475
	Cross-examination by Mr. Griffin.....	3489
	Redirect Examination by Mr. Waters.....	3610
	Recross-examination by Mr. Griffin	3614
Ronnie Crosby	Direct Examination by Mr. Waters	3617
	Cross-examination by Mr. Griffin.....	3651
	Redirect Examination by Mr. Waters.....	3666
Megan Fletcher	Voir Dire Examination by Mr. Meadors	3668
	Direct Examination by Mr. Meadors.....	3674
	Cross-examination by Mr. Griffin.....	3714
	Redirect Examination by Mr. Meadors	3730
	Recross-examination by Mr. Griffin	3734
Annette Griswald	Direct Examination by Mr. Waters	3735
	Cross-examination by Mr. Griffin.....	3784
	Redirect Examination by Mr. Waters.....	3796
Michael Gunn	Direct Examination by Mr. James.....	3798
	Cross-examination by Mr. Griffin.....	3816
Brian Hudak	Direct Examination by Mr. Conrad.....	3821
Dwight Falkofske	Voir Dire Examination by Mr. Conrad	3829

VOLUME IX

TRANSCRIPTS, CONTINUED

Dwight Falkofske, Continued	Direct Examination by Mr. Conrad.....	3833
	Cross-examination by Mr. Barber	3877
	Cross-examination by Mr. Barber Resumed	3883
James C. Wilson	Direct Examination by Mr. Waters	3889

	Proffered Examination by Mr. Waters	3964
	Direct Examination by Mr. Waters Resumed	3967
	Cross-examination by Mr. Griffin.....	3979
	Redirect Examination by Mr. Waters.....	4026
Michael Tony Satterfield		
	Direct Examination by Mr. Waters	4045
	Cross-examination by Mr. Harpootlian.....	4067
	Redirect Examination by Mr. Waters.....	4072
Jan Malinowski		
	Direct Examination by Mr. Waters	4074
	Cross-examination by Mr. Griffin.....	4114
	Redirect Examination by Mr. Waters.....	4126
	Recross-examination by Mr. Griffin	4128
Mark Tinsley		
	Direct Examination by Mr. Waters	4128
	Direct Examination by Mr. Waters Resumed	4171
	Cross-examination by Mr. Barber	4183
	Redirect Examination by Mr. Waters.....	4185
Blanca Turrubiate-Simpson		
	Direct Examination by Mr. Meadors.....	4189
	Proffered Examination by Mr. Meadors	4293
	Direct Examination by Mr. Meadors Resumed.....	4296
	Cross-examination by Mr. Harpootlian.....	4301
	Proffered Examination by Mr. Harpootlian	4314

VOLUME X

TRANSCRIPTS, CONTINUED

Blanca Turrubiate-Simpson, Continued		
	Proffered Examination by Mr. Harpootlian, Continued.....	4315
	Cross-examination by Mr. Harpootlian Resumed.....	4322
	Redirect Examination by Mr. Meadors	4336
	Recross-examination by Mr. Harpootlian	4340
Belinda Rast		
	Direct Examination by Mr. Fernandez.....	4344
	Cross-examination by Mr. Harpootlian.....	4353
Matthew Wild		
	Voir Dire Examination by Mr. Conrad	4356
	Direct Examination by Mr. Conrad.....	4361
	Cross-examination by Mr. Barber	4413
	Redirect Examination by Mr. Conrad	4419
Nathan Tuten		
	Direct Examination by Mr. Fernandez.....	4421
	Cross-examination by Mr. Griffin.....	4444
	Redirect Examination by Mr. Fernandez	4452

Ryan Kelly	Direct Examination by Ms. Goude.....	4472
Rachel Nguyen	Voir Dire Examination by Ms. Goude	4476
	Direct Examination by Ms. Goude.....	4480
	Cross-examination Mr. Barber	4504
Sara Zapata	Voir Dire Examination by Ms. Goude	4516
	Direct Examination by Ms. Goude.....	4520
	Cross-examination by Mr. Barber	4571
	Redirect Examination by Ms. Goude	4604
	Recross-examination by Mr. Barber	4606
Ellen Riemer	Voir Dire Examination by Mr. Waters	4608
	Direct Examination by Mr. Waters	4612
	Cross-examination by Mr. Harpootlian.....	4671
	Redirect Examination by Mr. Waters.....	4726
	Recross-examination by Mr. Harpootlian	4733
Devon P. Newell	Direct Examination by Mr. Conrad.....	4737
	Cross-examination by Mr. Barber	4743
Roger Dale Davis	Direct Examination by Mr. Fernandez	4745
	Cross-examination by Mr. Griffin.....	4768
	Redirect examination by Mr. Fernandez	4779
Carson Burney	Voir Dire Examination by Mr. James	4782

VOLUME XI

TRANSCRIPTS, CONTINUED

Carson Burney, Continued	Direct Examination by Mr. James.....	4785
	Cross-examination by Mr. Griffin.....	4897
	Redirect Examination by Mr. James	4802
Marian Proctor	Direct Examination by Mr. Waters	4805
	Cross-examination by Mr. Griffin.....	4822
	Redirect Examination by Mr. Waters.....	4836
	Redirect Examination by Mr. Waters Resumed.....	4853
Barton Proctor	Direct Examination by Mr. Waters	4857
	Cross-examination by Mr. Griffin.....	4858
David Owen	Direct Examination by Mr. Meadors.....	4885
	Cross-examination by Mr. Griffin.....	4966

	Redirect Examination by Mr. Meadors	4994
	Recross-examination by Mr. Griffin	5012
David Grubbs		
	Voir Dire Examination by Mr. Conrad	5015
	Direct Examination by Mr. Conrad.....	5018
Kenneth L. Kinsey		
	Voir Dire Examination by Mr. Waters	5052
	Direct Examination by Mr. Waters	5061
	Cross-examination by Mr. Harpootlian.....	5117
	Redirect Examination by Mr. Waters.....	5156
	Recross-examination by Mr. Harpootlian	5159
Ryan Kelly		
	Direct Examination by Mr. Waters	5162
	Cross-examination by Mr. Harpootlian.....	5190
	Redirect Examination by Mr. Waters.....	5207
	Recross-examination by Mr. Harpootlian	5214
Peter Rudofski		
	Direct Examination by Mr. Waters	5223

VOLUME XII

TRANSCRIPTS, CONTINUED

Peter Rudofski, Continued

Direct Examination by Mr. Waters, Continued.....	5268
Cross-examination by Mr. Barber	5333
Redirect Examination by Mr. Waters.....	5378
Recross-examination by Mr. Barber	5381

The Defense Case

Richard Harvey

Direct Examination by Mr. Harpootlian	5392
Cross-examination by Mr. Zelenka.....	5400
Redirect Examination by Mr. Harpootlian.....	5403

Shalene Tindal

Direct Examination by Mr. Harpootlian	5405
Cross-examination by Mr. Meadors.....	5413
Redirect Examination by Mr. Harpootlian.....	5414

Richard A. Murdaugh, Jr.

Direct Examination by Mr. Griffin	5423
Cross-examination by Mr. Meadors.....	5488
Redirect Examination by Mr. Griffin.....	5499

Michael Sutton

Voir Dire Examination by Mr. Harpootlian	5500
Direct Examination by Mr. Harpootlian	5509
Cross-examination by Mr. Fernandez	5596

	Redirect Examination by Mr. Harpootlian	5664
	Recross-examination by Mr. Fernandez.....	5678
Mark Ball		
	Direct Examination by Mr. Griffin	5687
	Cross-examination by Mr. Waters	5720

VOLUME XIII

TRANSCRIPTS, CONTINUED

Mark Ball, Continued		
	Cross-examination by Mr. Waters, Continued.....	5751
	Redirect Examination by Mr. Griffin	5764
	Recross-examination by Mr. Waters	5775
Morris D. Cooke, Jr.		
	Direct Examination by Ms. Fox	5778
	Cross-examination by Mr. Waters	5789
	Redirect Examination by Ms. Fox.....	5795
	Recross-examination by Mr. Waters	5796
Kenneth Zercie		
	Voir Dire Examination by Mr. Harpootlian	5797
	Direct Examination by Mr. Harpootlian	5804
	Cross-examination by Mr. Meadors	5845
	Redirect Examination by Mr. Harpootlian	5874
	Recross-examination by Mr. Meadors	5878
Barbara Mixon		
	Direct Examination by Mr. Griffin	5880
	Cross-examination by Mr. Meadors.....	5888
Micah Sturgis		
	Voir Dire Examination by Mr. Barber	5890
	Direct Examination Mr. Barber.....	5895
	Cross-examination by Mr. Conrad	5917
	Redirect Examination by Mr. Barber	5932
	Recross-examination by Mr. Conrad	5936
Nolen Tuten		
	Direct Examination by Ms. Fox	5950
	Cross-examination by Mr. Fernandez	5957
	Redirect Examination by Ms. Fox.....	5977
Richard A. Murdaugh		
	Direct Examination by Mr. Griffin	5979
	Cross-examination by Mr. Waters	6086
	Cross-examination by Mr. Waters Resumed.....	6178

VOLUME XIV

TRANSCRIPTS, CONTINUED

Richard A. Murdaugh, Continued

Cross-examination by Mr. Waters Resumed, Continued	6234
Redirect Examination by Mr. Griffin	6350
Re-cross examination by Mr. Waters	6365

Jonathon Eisenstat

Voir Dire Examination by Mr. Harpootlian	6379
Direct Examination by Mr. Harpootlian	6391
Cross-examination by Ms. Goude	6444

Timonthy Palmbach

Voir Dire Examination by Mr. Griffin	6452
Direct Examination by Mr. Griffin	6458
Cross-examination by Ms. Goude	6505

John Marvin Murdaugh

Direct Examination by Mr. Griffin	6512
Proffered Examination by Mr. Griffin	6568
Direct Examination by Mr. Griffin, Continued	6570
Cross-examination by Mr. Conrad	6572

The State's Rebuttal Case

Ronnie Crosby

Direct Examination by Mr. Waters	6597
Cross-examination by Mr. Harpootlian	6608
Redirect Examination by Mr. Waters	6610
Recross-examination by Mr. Harpootlian	6622

Ellen Riemer

Direct Examination by Mr. Waters	6623
Cross-examination by Mr. Harpootlian	6636
Redirect Examination by Mr. Waters	6672

Thomas C. Smalls

Direct Examination by Mr. Waters	6674
Cross-examination by Mr. Griffin	6676
Redirect examination by Mr. Waters	6679

Paul McManigal

Voir Dire Examination by Mr. Conrad	6680
Direct Examination by Mr. Conrad	6682
Cross-examination by Mr. Barber	6687
Redirect Examination by Mr. Conrad	6697
Recross-examination by Mr. Barber	6699

Mark Ball

Direct Examination by Mr. Waters	6701
Cross-examination by Mr. Griffin	6706
Redirect Examination by Mr. Waters	6716

VOLUME XV

TRANSCRIPTS, CONTINUED

Mark Ball, Continued	
Recross-examination by Mr. Griffin	6717
Kenneth L. Kinsey	
Direct Examination by Mr. Wilson	6724
Cross-examination by Mr. Griffin	6767
Redirect Examination by Mr. Wilson	6807
In-camera Hearing	6811
In-camera Hearing	6835
Closing Argument by Mr. Waters	6871
In-camera Hearing	6954
Closing Argument by Mr. Griffin	7030
Final Closing Argument by Mr. Meadors	7102
Jury Charge	7137
Verdict	7155
Jury Polling	7157
Sentence of the Court	7177
Certificate Page	7180
Post-Trial Hearing Transcript (January 16, 2024)	7181

VOLUME XVI

TRANSCRIPTS, CONTINUED

Post-Trial Hearing Transcript (January 16, 2024), Continued	7200
Evidentiary Hearing Transcript (January 26 and January 29, 2024)	7261
Juror X	
Examination by the Court	7279
Examination by the Court Resumes	7283
Juror Z	
Examination by the Court	7304
Examination by the Court Resumes	7311
Juror C	
Examination by the Court	7323
Juror F	
Examination by the Court	7325
Examination by the Court Resumes	7329
Juror L	
Examination by the Court	7330
Juror E	
Examination by the Court	7333
Juror P	
Examination by the Court	7335
Juror O	
Examination by the Court	7339
Juror Y	
Examination by the Court	7342
Juror W	
Examination by the Court	7345
Juror Q	
Examination by the Court	7348
Juror K	
Examination by the Court	7351

Rebecca Hill	
Direct Examination by Mr. Waters	7365
Cross-examination by Mr. Harpootlian.....	7374
Redirect Examination by Mr. Waters.....	7402
Examination by the Court	7406
Further Direct Examination by Mr. Waters	7416
Further Cross-examination by Mr. Harpootlian.....	7420
Rhonda McElveen	
Direct Examination by Mr. Harpootlian	7434
Cross-examination by Mr. Waters	7450
Redirect Examination by Mr. Harpootlian.....	7458
Alternate Juror	
Direct Examination by Mr. Harpootlian	7461
Cross-examination by Mr. Meadors.....	7466
Redirect Examination by Mr. Harpootlian.....	7485
Closing Argument by Mr. Waters.....	7590
Closing Argument by Mr. Griffin.....	7500
Ruling of the Court	7508
Certificate Page.....	7516

EXHIBITS

State Exhibits (Trial)

#1 – Recording (Placeholder) – UNDER SEAL.....	7517
#6 – Recording (Placeholder) – UNDER SEAL.....	7518
#9 – 911 Call recording (Placeholder)	7519
#11 – 911 Call recordings (Placeholder)	7520
#22 – Photograph of scene.....	7521
#27 – Photograph of feed room	7523
#77 – Crime scene diagram.....	7325
#88 – PSA 300 Blackout Rifle (Placeholder)	7527
#89 – Mossberg Shotgun w/ 1 shotshell - buck mark (Placeholder)	7528
#90 – Browning Auto-5 Shotgun (Placeholder)	7529
#91 – Benelli Super Black Eagle 2 Shotgun w/ 2 shotshells (Placeholder).....	7530
#93 – Photograph of Chevrolet Suburban.....	7531
#117 – Photograph of gun room – rack & ammo	7533
#118 – Photograph of gun rack.....	7535
#153 – Interview recording.....	7537
#163 – Photograph of Croft BWC .300 Blackout on pool table.....	7538
#224 – Photograph of tarp in bin	7540
#225 – Photograph of raincoat.....	7542
#227 – Map	7544
#228 – Photograph of Maggie’s phone in woods	7546
#239 – Photograph of house (drone).....	7548
#243 – Interview recording (Placeholder)	7550
#297 – Kennel recording (Placeholder)	7551
#306 – Snapchat recording (Placeholder).....	7552

#312 – Check with documents	7553
#313 – Faris check	7575
#314 – Spreadsheet	7578
#315 – Disbursement documents	7581
#316 – Disbursement documents	7586
#317 – Disbursement documents	7592
#318 – Disbursement documents	7600
#319 – Disbursement documents	7606
#320 – Disbursement documents	7612
#321 – Disbursement documents	7621
#322 – Disbursement documents	7636
#323 – Disbursement documents	7654
#324 – Disbursement documents	7662

VOLUME XVII

EXHIBITS, CONTINUED

State Exhibits (Trial), Continued

#325 – Disbursement documents	7672
#326 – Disbursement documents	7684
#327 – Disbursement documents	7689
#328 – Disbursement documents	7696
#329 – Spreadsheet	7701
#330 – Disbursement documents	7703
#331 – Disbursement documents	7732
#332 – Disbursement documents	7736
#333 – Disbursement documents	7739
#334 – Disbursement documents	7763
#335 – Bank of American banking statement	7795
#347 – Checks	7802
#349 – Message	7807
#350 – Promissory Note	7809
#352 – Confession of Judgment	7811
#356 – Account Statement	7819
#358 – Wire Request	7821
#360 – Check	7824
#365 – Bank Memo	7826
#366 – Bank summary	7828
#367 – Bank statement	7830
#368 – Bank statement	7833
#370 – Bank statement	7836
#371 – Bank statement	7839
#400 – SLED Firearms report	7844
#407 – Email	7855
#410 – Photograph	7857
#411 – Photograph of raincoat in closet	7859

#414 – Photograph of Almeda closet.....	7861
#415 – Bank records	7863
#416 – Bank records	7864
#417 – Bank records	7865
#428 – Checks.....	7866
#429 – Disbursement documents	7870
#430 – Photograph of raincoat.....	7880
#442 – Log file excerpts	7882
#453 – Text messages	7887
#454 – Phone records.....	7889
#515 – Disc of GM search warrant return (Placeholder).....	7891
#516 – Photograph	7892
#517 – Interview recording (Placeholder)	7894
#519 – Timeline report.....	7895
#520 – Timeline report.....	7939
#521 – Spreadsheets.....	8028
#523 – Text message.....	8030
#524 – Vehicle report.....	8032
#543 – 911 call recordings.....	8092
#545 – Recording.....	8093
#547 – Sketch.....	8094
#552 – Interview recording	8096
#553 – Extraction document	8097
#556 – Text messages	8099
#569 – Photograph of Alex at hospital with badge.....	8101

Defense Exhibits (Trial)

#4 – Crime scene sketch	8103
#61 – Birthday Party recording (Placeholder)	8104
#86 – Blue tarp (Placeholder)	8105
#87 – Photograph of blue tarp/rain jacket.....	8106
#95 – Memo	8108
#122 – Photograph of Murdaugh Family.....	8133
#123 – Photograph of Murdaugh Family.....	8135
#130 – Photograph of Almeda back door	8137
#131 – Photograph of Almeda backyard	8139
#132 – Photograph of Almeda backyard	8141
#133 – Photograph of Almeda back door	8143
#134 – Photograph of Almeda back door	8145
#135 – Photograph of cars parked at Almeda.....	8147
#136 – Photograph of Almeda back door	8149

VOLUME XVIII

EXHIBITS

Defense Exhibits (Trial), Continued

#140 – PowerPoint.....	8151

#156 – Steps	8263
#158 – PowerPoint.....	8265
 <u>Court Exhibit (Trial)</u>	
#1 – SLED Firearms report.....	8297
 <u>Court Exhibits (Post-Trial)</u>	
#1 – Message.....	8307
#3 – Affidavit.....	8308
#4 – Note.....	8310
#5 – Affidavit.....	8311
 <u>Defense Exhibits (Post-Trial):</u>	
#1 – Proffer and Affidavit.....	8313
#2 – Emails	8316
 <u>OTHER</u>	
January 24, 2024, Law Clerk Email Concerning Questions for Jurors and January 25, 2024,	
Responsive Email from Creighton Waters	8320
Letter from Richard A. Harpootlian to Ret. Chief Justice Toal (with attachment), dated January 25, 2024.....	
	8323
Affidavit of Juror Z, January 29, 2024	8330
State’s Closing Argument PowerPoints from Trial	8331

1 THE COURT: The objection is overruled.

2 Q Go ahead.

3 A This is the first time that I have ever been in a
4 situation where somebody was murdered.

5 Q Right.

6 A I didn't know -- as far as what you're asking me, if
7 there was anything bloody in there, no, it did not appear
8 to be anything bloody in there.

9 Q Did you clean the shower that day?

10 A Yes, sir, I rinsed it off.

11 Q You rinsed it off. Nobody told you not to rinse off
12 the shower?

13 A No, sir.

14 Q And, again, nobody from SLED, as that group went
15 through, asked you, you know did you see bloody footprints?
16 Did you see any evidence that there was blood in that
17 bathroom? Did anybody ask you that?

18 A No, sir.

19 Q And your testimony is those khaki pants were there
20 after SLED left?

21 A Yes, sir.

22 Q And maybe even a shirt? You can't remember.

23 A Yes, sir. Possibly a t-shirt but I did not see it. I
24 don't remember.

25 Q Okay. You don't remember what kind of shirt, if there

1 was a shirt?

2 MR. MEADORS: Your Honor, objection.

3 THE COURT: The objection is overruled.

4 MR. HARPOOTLIAN: Thank you.

5 Q Do you remember -- and I'm doing like Mr. Meadors now.
6 I forgot the question, but let me see if I can get this
7 back on track. These interruptions are getting me a little
8 askew. So, -- well, I think you've already asked and
9 answered that.

10 Now, let's talk a little bit about -- let me talk a
11 little bit about the cell phone service in Moselle. You
12 had a cell phone?

13 A Yes, sir.

14 Q And the servicer was who? Was it Verizon?

15 A The cell phone carrier was Verizon, yes, sir.

16 Q Okay, and so did you ever have any trouble getting a
17 signal anywhere on the Moselle property up at the house,
18 down at the dog kennels? Was it sporadic?

19 A Yes, sir, it was.

20 Q Okay, and sometimes you would be talking to somebody
21 and they would drop off, or you -- the call would end not
22 because you ended it but because the service was bad?

23 A Yes, sir. If you were moving around in the house, in
24 certain areas you could not get a signal.

25 Q What about down from the kennels?

1 A It was touch and go at the kennels. You really --
2 once you got a signal, you better stay where you were at
3 because if you moved, you were going to lose your signal.

4 Q Okay. So, it was not unusual at the kennels if you
5 did move that if you were having a conversation, or getting
6 texts, or trying to answer a text, you wouldn't be able to
7 do so?

8 A Like I said, it depends on where -- you kind of knew
9 the areas. At least for me, I already knew that if I had
10 to make a call or send a text, I would walk out the kitchen
11 door straight to the edge of the corner right there on the
12 porch and make my call and not move. If not, I would lose
13 a call, or I would not be able to make my call.

14 Q What about at the kennels?

15 A At the kennels, like I said, it depends on the area
16 where you were at. And once -- basically everybody, we all
17 kind of knew that if you moved out of a certain area and
18 went to another, you were going to lose signal.

19 Q Okay. Now, if the kennels -- do you know what area
20 you could get a -- keep that -- I mean, was there -- you
21 just talked up at the house was a sweet spot, if you'll
22 pardon my --

23 A Yes, sir.

24 Q Was there a sweet spot down in the kennel, or do you
25 know?

1 A I'm not sure at the kennels, but I do remember Mr.
2 C.B. saying that the signal out there was horrible for
3 making calls or getting calls.

4 Q For sending texts or getting texts?

5 A Exactly, yes, sir.

6 Q Now, let me talk to you a little bit about this
7 conversation in August of '21 after the murders.

8 A Yes, sir.

9 Q Mr. -- Alex came over and was inquiring of you what
10 shirt he had on that day, correct?

11 A It didn't feel like he was inquiring. It felt more
12 like he was trying to convince me of the shirt that he was
13 wearing.

14 Q Did he tell you that he'd just finished --

15 MR. MEADORS: Objection.

16 Q I'm sorry, I'm just asking if he told you something.

17 MR. MEADORS: Objection.

18 THE COURT: It's cross-examination.

19 MR. MEADORS: Your Honor, I'm objecting to hearsay for
20 the record.

21 THE COURT: I need to hear the question, number one,
22 and two, it's cross-examination.

23 Go ahead.

24 Q Did he tell you that he just finished --

25 MR. MEADORS: Objection.

1 Q -- meeting --

2 MR. HARPOOTLIAN: Do you want me to pose the question,
3 Your Honor, or not?

4 THE COURT: No. I'm going to send the jury to the
5 jury room. Please do not discuss the case.

6 (The jury left the courtroom.)

7 THE COURT: Everyone will be seated.

8 Okay, what's the question?

9 MR. WATERS: One second, Your Honor, while I get back
10 on track.

11 PROFFERED EXAMINATION

12 BY MR. WATERS:

13 Q When you were talking with him in the little house in
14 August, as we were talking about a moment ago, and he was
15 talking about the shirt, did he tell you that he had just
16 been interviewed by SLED, who'd shown him the Snapchat
17 photo, and he was attempting to figure out what he was
18 wearing that day? I mean, it's in a photo. Did he tell
19 you that?

20 THE COURT: Tell you -- what is the specific question?

21 Q Did he in the -- when he asked you the question about
22 the shirt, did he tell you he'd just come from being
23 interviewed by SLED?

24 A No, sir, he didn't tell me that.

25 THE COURT: Just a moment.

1 And what is the objection?

2 MR. GRIFFIN: Your Honor, respectfully, it's hearsay.
3 The statement, it's hearsay that -- if he wants to do that,
4 he can take the stand and do it, but he's trying to offer
5 the defendant's statement without him taking the stand.
6 It's offered for the truth of matter asserted. That's my
7 objection.

8 THE COURT: All right, and your response?

9 MR. MEADORS: My response is if you can't ask
10 witnesses about what the defendant said to them, they're
11 going to have a rough, rough, rough row to hoe going
12 forward because it's a statement by the party. It's a
13 party opponent, if you will. I think they argued earlier
14 on when we objected to one. It is not hearsay. There's an
15 exception to hearsay by a statement by one of the parties.
16 It's Alex.

17 THE COURT: A statement by the party opponent being
18 the statement by the party opponent, the defendant?

19 MR. HARPOOTLIAN: It would be Mr. Murdaugh's statement
20 to this woman.

21 THE COURT: Yes, sir, Mr. Meadors?

22 MR. HARPOOTLIAN: Your Honor, not that this matters.
23 I've been doing this thirty-five years. He's on trial.

24 THE COURT: Well, we know that.

25 MR. MEADORS: But I'm just saying it's not a party

1 opponent. He's trying to get in a statement from the
2 defendant, statements against interest that the State --
3 there is a difference between the State asking what the
4 defendant said and the defense. And if they hadn't
5 objected to some they thought, that's their prerogative.
6 But they're trying to offer the defendant's statement in
7 evidence without him taking the stand, and I respectfully
8 think that's objectable. It's hearsay.

9 He's the defendant on trial. They're offering it
10 for -- it's self-serving hearsay. They're offering it for
11 the truth of the matter asserted, and I respectfully think
12 he's got to stand -- take the stand to get that information
13 in.

14 MR. HARPOOTLIAN: Your Honor, maybe I can make sense
15 of it here?

16 Q What would your answer to that question be, ma'am?
17 Did he tell you about talking to SLED that day?

18 A No, sir, he did not.

19 Q Okay.

20 END OF PROFFER

21 MR. MEADORS: And, Your Honor, 801(d)(2) allows us to
22 ask the question and not the defense.

23 MR. HARPOOTLIAN: I don't understand what the self-
24 serving issue is. She just said he didn't say anything
25 about SLED.

1 MR. MEADORS: Your Honor, he can get his whole case
2 through witnesses and he wouldn't have to take the stand,
3 and --

4 MR. HARPOOTLIAN: Absolutely.

5 MR. MEADORS: -- and that's not appropriate.

6 MR. HARPOOTLIAN: He's got a Fifth Amendment right to
7 not take the stand.

8 MR. MEADORS: That's right but you can't --

9 THE COURT: All right. We'll take a break and let you
10 all debate the issue between the two of you --

11 MR. HARPOOTLIAN: I apologize.

12 THE COURT: -- and I'll rule when I get back.

13 (A break was taken.)

14 THE COURT: The objection is sustained. It's hearsay.
15 If you would bring the jury.

16 (The jury returned to the courtroom.)

17 THE BAILIFF: The jury is present, sir.

18 THE COURT: All right. Thank you. The objection is
19 sustained.

20 Next question.

21 MR. HARPOOTLIAN: Please the Court, Your Honor?

22 THE COURT: Yes, sir.

23 CONTINUED CROSS-EXAMINATION

24 BY MR. HARPOOTLIAN:

25 Q So this conversation occurred, I think, did you say

1 prior to them going on a golf tournament, going to a golf
2 tournament?

3 A Yes, sir. He said Randy had just dropped him off so
4 that he could get him clothes because they were -- him and
5 Buster and Randy were going golfing.

6 Q Him and Buster and who?

7 A Randy.

8 Q Randy, okay, were going to a golf tournament that
9 weekend?

10 A I don't know if it was a golf tournament or what, but
11 I know he said they were going away. They were going
12 golfing.

13 Q Okay, and speaking of Buster, can you point Buster out
14 in the audience for me, please?

15 MR. HARPOOTLIAN: Buster, are you back there? Yeah,
16 I'm sorry. Stand up, please.

17 A Right there, yes, sir.

18 Q Is that Buster?

19 A Yes, sir, that is Buster.

20 Q Y'all have always had a great relationship, right?

21 A Yes, sir. He's a good kid.

22 Q I'm sorry?

23 A He's a good kid.

24 Q He's a good kid. Okay. So, one of the other
25 questions I have is did you ever see Paul with any guns?

1 A Yes, sir.

2 Q No?

3 A Yes, sir.

4 Q I'm sorry, and did he have guns around all the time?

5 A Yes, he did.

6 Q Matter of fact, there were guns all over that place,
7 right?

8 A In the vehicles, on the go-carts, sometimes in the
9 hangar.

10 Q So, did Paul ever leave guns just where -- if he was,
11 for instance, down at the hangar, would he ever leave guns
12 down there?

13 A I have found one occasionally out there.

14 Q A pistol or rifle?

15 A A rifle.

16 Q Do you know what kind it was?

17 A No, sir.

18 Q And do you know if he ever left any down in the feed
19 room?

20 A Not in the feed room. I'm not sure about the feed
21 room.

22 Q You never saw anything in the feed room?

23 A No, sir.

24 Q I believe in one of your statements I read that
25 sometimes he would leave them somewhere, and actually there

1 would be rust on the rifle or the shotgun or whatever.

2 A If he left it on the golf cart outside. He would
3 sometimes leave it laying across, and I would get it in the
4 morning and already the dew would -- it would rust off.

5 Q And that would be a golf cart he would drive down to
6 the kennels, for instance?

7 A Yes, sir, whichever one he was in. He preferred the
8 gas -- the gas one is usually where I used to find them.

9 Q The gas golf cart?

10 A Golf cart, yes, sir.

11 Q And so that would be a way he would get down to the
12 kennels sometimes?

13 A Sometimes. A majority of the time he was either in
14 Dolly or in his own truck.

15 Q In what?

16 A Dolly.

17 Q What is Dolly?

18 A The F-250.

19 Q I forgot y'all name all of the trucks, or they named
20 all of their trucks, right?

21 A Yes, sir.

22 Q Okay. So, most of the time he would be in a truck,
23 but sometimes he would take the golf cart, if you will,
24 down there?

25 A Yes, sir.

1 Q And apparently sometimes he had guns in the golf cart.

2 A Yes, sir.

3 Q Okay. Now, let me touch a couple of other things.

4 Did -- that day you saw the SLED folks in there, did you
5 see them taking any pictures, or do you remember?

6 A I believe some of them were taking pictures, but I'm
7 not positive.

8 Q Okay. You were shown a picture of a rain jacket?

9 A Yes, sir, I was.

10 Q Okay, and have you ever seen that rain jacket at the
11 house?

12 A Not at Moselle, no, sir.

13 Q Okay. Have you ever -- and what size clothes did Alex
14 wear?

15 A 2XL.

16 Q 2XL, not just a large. Would anything -- a large fit
17 him?

18 A I don't think he had -- he might have had one or two
19 items that were that size, but most of the clothing was
20 2XL.

21 Q 2XL.

22 MR. HARPOOTLIAN: How about would you put Exhibit
23 number --

24 SPEAKER: 87?

25 MR. HARPOOTLIAN: Yes, please. And blow it up for me,

1 please. Okay. How about making that bigger for me,

2 please. No, not the rain jacket, I'm sorry, the Snapchat

3 picture. Wait one second.

4 Q Do you see that rain jacket on there?

5 A Yes, sir.

6 Q You've never seen that -- according to your statement,

7 you had never seen that at Moselle.

8 A I have never seen that jacket.

9 Q Okay, and you knew pretty much everything -- every

10 piece of clothing that was there, right?

11 A For the most part, yes.

12 Q Yes. Okay, and how many rain jackets did Alex have?

13 Do you remember?

14 A Too many to count.

15 Q Too many to count. Okay, but none of them looked like

16 that?

17 A No, sir.

18 Q Okay.

19 MR. HARPOOTLIAN: How about blow that up for me,

20 please? Can you make it any better? Closer? Yeah, that's

21 good right there.

22 Q And that shirt is -- is that the one he was wearing

23 that morning when he left?

24 A No, sir, it was not.

25 Q It's not?

1 A No, sir. That was not the shirt he was wearing.

2 Q And this is at 7 -- you understand this is at 7:40
3 p.m. that evening when he was out with Paul?

4 A I wasn't there then.

5 Q Okay, but that's not the shirt he was wearing when he
6 left that morning.

7 A That's correct. That was not the shirt.

8 Q Okay.

9 MR. HARPOOTLIAN: Beg the Court's indulgence one
10 moment.

11 (Break in proceedings.)

12 Q You were aware he had clothes at his office, kept
13 clothes at his office?

14 A Yes, sir, among other places.

15 Q Where else would he leave -- have the --

16 A Car.

17 Q He would have them in the car?

18 A Yes, sir.

19 Q Where else?

20 A In Edisto.

21 Q I'm sorry?

22 A In Edisto.

23 Q In Edisto? Okay, but if he was in the Moselle area,
24 if he was going to change his shirt from in the morning,
25 would he have changed at the office or get something out of

1 his car?

2 A I --

3 Q You don't know?

4 A I don't know.

5 Q Okay. Now, let me show you Defendant's Exhibit 107.

6 MR. MEADORS: No objection to 107.

7 Q Can you tell the jury what that is, please?

8 A The text messages from me and Maggie.

9 Q Okay, and this is on June 7, 2021, right?

10 A That's correct.

11 Q And the first one -- I'm just going to try and hurry
12 this up a little bit. She asked you --

13 THE COURT: Pull the mic down. Be sure to speak into
14 the mic.

15 THE WITNESS: Yes, sir.

16 Q She says: Will you stop by --

17 This is at 7:05 a.m.

18 Stop by the store and get Alex Capri Suns? He
19 likes orange and pineapple flavor, plus Mountain
20 Cooler. Thank you. I'll pay you back.

21 You say: I will.

22 She says: Thank you. Get two boxes.

23 Now after that conversation, there's a text at
24 3:28 p.m. Blanca: Dinner is on the stove, just left. So,
25 you left there at about 3:30, correct?

1 A Yes. I sent the text before I actually walked out of
2 the house. I had a habit of sending her the text, make
3 sure of everything, and then locked up before I left.

4 Q Okay.

5 A But at that time, I had gone upstairs to drop off some
6 clothes, and I noticed that Paul's truck, or a white truck,
7 was sitting at the kennels, so I left the front door
8 unlocked at that time instead of locking it.

9 Q But you didn't see Alex anywhere there?

10 A No, sir.

11 Q Okay. You didn't see his vehicle?

12 A No, sir.

13 Q Okay, and she says at 3:40: Thank you. Right?

14 A Yes, sir.

15 Q Okay. Then at 3:54 you said:

16 You're welcome. I just made your deposit.

17 Maggie then says -- I guess this is one exchange:

18 Thank you. I'm waiting at the doctor. Alex
19 wants me to come home. I had to leave the door
20 open at Edisto but trust the Mexicans to shut and
21 lock it for me.

22 A Yes, sir.

23 Q And then she says:

24 Alex's dad back at the hospital. The last
25 doctor claims not cancer, pneumonia. Alex is

1 about to die. Hope he doesn't go down there to
2 sleep.

3 Do you know what she meant by that?

4 A What she meant, when she used to -- Maggie used to get
5 frustrated. She said that every time something happened at
6 Almeda with his dad or his mom, that Alex would get called
7 and nobody else, that they always called Alex to go to the
8 house. And she did get upset over that, that the family
9 was basically putting all of that on Alex and he wasn't
10 getting enough rest.

11 Q So when she said he's going to die, she's worried
12 about his health?

13 A She was worried about his health, yes.

14 Q Okay, and she says: Alex needs to take care of himself
15 as well. And that's consistent with what you just said,
16 correct? She was worried about his health.

17 A Yes.

18 Q And you said:

19 Yes, he does. He told me he was tired when he
20 left. I hope they can treat Mr. Randolph.
21 Maggie says: I'm scared for him and Alex and all
22 of us.

23 What do you mean by that?

24 A Alex hadn't had much sleep. They -- that was her main
25 concern was the fact that -- her main frustration was the

1 fact in the middle of the night or whenever, you know, if
2 Mr. Randolph or Ms. Libby were uncomfortable, that they
3 would always -- she seemed to think that they always called
4 Alex and there goes Alex, you know, to take care of it, and
5 she felt that it wasn't fair that he was the only one
6 having to take them.

7 Q And your response to that is:

8 I know. Just pray about it and hope he gets a
9 little better.

10 Is that what you said?

11 A Yes, sir.

12 Q Okay, and you say:

13 Alex and you really need to relax. Always being
14 on the go with little or no sleep is not healthy.
15 Remember I have a doctor's appointment in the
16 morning in Beaufort. If I get done early, I'll
17 go to Moselle. I'll let you know."

18 And she says: No worries. Right?

19 A Yes, sir.

20 Q Now -- oh, you've got the exhibit. I'll take that
21 from you and hand it to -- so, she preferred to be in
22 Edisto, correct?

23 A That's correct.

24 Q But she was going on that day, based on your -- all of
25 your texts, she was going because Mr. Randolph had been put

1 back in the hospital and she was worried about Alex, right?
2 I mean, she was heading to Moselle. She preferred to be in
3 Edisto, but she was heading to Moselle because Mr. Randolph
4 had been put back in the hospital and she was concerned
5 about Alex. Isn't that what this says?

6 MR. MEADORS: Objection.

7 THE COURT: The objection is sustained.

8 Q Okay. She indicated to you that Paul was coming in
9 your telephone conversations, correct?

10 A That is correct.

11 Q And did she indicate in your telephone conversations
12 that she needed dinner for her, Paul, and Alex, right?

13 A Yes, she did.

14 Q And did she indicate in any way that she did not want
15 to go to Moselle to have dinner with Alex and Paul that
16 night?

17 A Her conversation with me was that Alex wanted her to
18 go to Moselle that day, and she was concerned about the
19 workers that she had in Edisto, and she would have
20 preferred to be in Edisto taking care of the final details.

21 Q But for Mr. Randolph's condition.

22 A She was concerned about the work being done and
23 leaving the house open in Edisto.

24 Q She wasn't concerned about Mr. Randolph?

25 A I mean, she was, but her concern -- more concern was

1 that her house was open.

2 Q Okay. Now, I mean, she preferred to be at Edisto in
3 the summertime as opposed to Moselle at all, correct?

4 A That is correct.

5 Q Now, let me ask you. Did SLED ask you about the -- at
6 any point about the clothes that Alex was wearing on the
7 7th? At some point, did they ask you that?

8 A Not until recently.

9 Q Recently, right?

10 A Yes, sir.

11 Q And is it clear to you -- I mean, you've been asked
12 recently to recollect something that happened in June of
13 '21, which is almost two years ago. Did they ask you other
14 questions about what happened on June 7th when they asked
15 you about the clothes?

16 A They asked me where I was. They asked me what I was
17 doing. They asked me when I saw Alex leaving that day, my
18 discussions with Maggie. They requested to see my phone,
19 which I gave them, so they could see the text messages and
20 phone calls that we had had.

21 Q Okay. You and Maggie were very close.

22 A We were.

23 Q You and Alex were close, also, were you not?

24 A Yes, sir.

25 Q And do you feel like a member of the family?

1 A Yes, sir.

2 Q Had you ever heard from anybody about anything --
3 well, strike that. Did you indicate that Maggie -- one of
4 the things Maggie told you was she was not -- after the
5 boat case, she was not being treated very well by people in
6 Hampton, correct?

7 A That is correct.

8 Q They shunned her, they were rude to her, those kinds
9 of things.

10 A That is correct.

11 Q Did she also indicate to you that she was concerned
12 about Paul because he'd received a bunch of threats?

13 MR. MEADORS: Objection.

14 THE COURT: The objection is overruled.

15 Q Did she ever indicate to you she was concerned about
16 Paul because Paul had received threats?

17 A Yes.

18 Q Okay.

19 MR. HARPOOTLIAN: Beg the Court's indulgence.

20 (Break in proceedings.)

21 MR. HARPOOTLIAN: Your Honor, I apologize. I move 107
22 into evidence.

23 MR. MEADORS: Is it up there?

24 MR. HARPOOTLIAN: I gave it to the clerk.

25 THE COURT: Any objection?

1 MR. MEADORS: Oh, I think I've already said no
2 objection. I apologize.

3 THE COURT: Admitted without objection.

4 (PHOTOGRAPH OF TEXT MESSAGE MARKED AS STATE'S EXHIBIT
5 NUMBER 107 WAS RECEIVED INTO EVIDENCE. LATER WITHDRAWN.)

6 (Break in proceedings.)

7 Q That same morning of the 8th, did you clean the gun
8 room?

9 A I didn't go in the gun room. I went -- I went in
10 there but I didn't do anything in the gun room.

11 Q Didn't pick anything up?

12 A No, sir.

13 Q Okay, and when you went into the kitchen that morning,
14 was there anything that would indicate to you that other
15 people had been there the night before, like glasses or
16 bottles of water or anything?

17 A No, sir.

18 Q Okay.

19 MR. HARPOOTLIAN: Thank you.

20 THE COURT: Any redirect?

21 MR. MEADORS: May it please the court?

22 REDIRECT EXAMINATION

23 BY MR. MEADORS:

24 Q Ms. Blanca, Mr. Harpootlian -- I've just got a couple
25 of questions. Mr. Harpootlian asked you about the clothes

1 in the closet on June 8, 2021. Do you remember?

2 A Yes, sir.

3 Q And he asked you if there could have been another
4 shirt in the room.

5 A Yes, sir.

6 Q Okay, and was your response maybe a t-shirt?

7 A Yes, sir.

8 Q Okay. Did you see another dress shirt there?

9 A No, sir.

10 Q Okay, and while we're getting to that, did you work at
11 Alameda?

12 A No, sir.

13 Q Did you ever go there?

14 A No. I had been there on one occasion previously, and
15 I don't remember what I had to drop off.

16 Q Okay. Well, that blue poncho rain jacket Mr.
17 Harpootlian showed you, that was at Alameda, wasn't it? Or
18 do you know?

19 A I don't know where that came from.

20 Q But you never saw that at Moselle, correct?

21 A That's correct.

22 Q Okay, and State's 7 -- well, first of all, this is
23 State's 306. Have you ever seen that shirt again since you
24 went back the 8th, the 9th until today? Have you ever seen
25 that shirt again?

1 A No, sir. As I moved all -- a lot of the belongings to
2 the little house, he had packed some of clothes up over the
3 weekends and stuff when they were going from place to
4 place. I noticed that he was purchasing different clothing
5 items: shorts, shirts. So, there was a couple of new ones
6 in there, which still was not that shirt. It was a lot
7 of -- some of the newer ones.

8 Q Who was purchasing a lot of shorts and shirts?

9 A Alex.

10 Q After this event? After the murders?

11 A Yes, sir. On the weekends when they were gone with
12 the family and he was going different places, he would come
13 back, like, that Monday or Tuesday, and it was, like, new
14 items within the clothes.

15 Q New shirts?

16 A New shirts.

17 Q New shorts?

18 A Yes.

19 Q Okay. Do you know what kind?

20 A Vinny Vines.

21 Q After the murders?

22 A Yes, sir. They were, like, polo type Vineyard Vines.

23 Q And what shirt had he suggested to you he was wearing
24 in August on this day? What shirt had he suggested to you
25 he was wearing?

1 A Vineyard Vines. Vinny Vines is what he called them.

2 Q And State's 7, you said you recognize these shorts and
3 shirt?

4 A Yes, sir.

5 Q Where was this shirt kept on State's 107 in Moselle?

6 A In the closet if there was no room in that drawer.

7 Q On the shelves?

8 A Yes, sir, on the shelf.

9 Q And looking at 306, is that outfit different from this
10 outfit?

11 A Yes, sir, it is.

12 Q And I think Mr. Harpootlian showed you 107. Whose
13 idea was it for Maggie Murdaugh to come to Moselle on the
14 evening of June 7th?

15 MR. HARPOOTLIAN: Objection, Your Honor.

16 THE COURT: You can testify if you know.

17 MR. HARPOOTLIAN: Your Honor, hearsay.

18 THE COURT: You can testify if you know.

19 A Maggie texted me that Alex wanted her to come to
20 Moselle.

21 Q And is that on 107 that Mr. Harpootlian just put in?

22 A Yes, sir, it is.

23 MR. MEADORS: That's all. Thank you.

24 THE COURT: Anything further?

25 MR. HARPOOTLIAN: Just a couple of questions.

1 THE COURT: Yes, sir.

2 RECROSS-EXAMINATION

3 BY MR. HARPOOTLIAN:

4 Q So, just a couple of questions. After Maggie's death
5 and Paul's death, did you notice he was losing weight?

6 A Yes, sir, he was.

7 Q Dramatic loss of weight, right?

8 A Yes, sir.

9 Q So, the clothes he -- I mean, we can see him in that
10 picture. He's a -- fat is the wrong word, but overweight
11 kind of guy. Big guy, fleshy looking guy right there,
12 okay? Now, the -- so, he needed to buy new clothes because
13 the other clothes are falling off of him, right?

14 A I assume so, yes, sir.

15 Q Yes. So, it wouldn't be unusual for him to need to
16 buy new clothes because he was losing weight.

17 A I guess.

18 Q Okay. Now, this is 306. This is a picture, and you
19 say this is a shirt like a Columbia shirt, right?

20 A Yes, sir.

21 Q Now, a Columbia shirt, don't they a logo that says
22 Columbia?

23 A Yes, sir, near the sleeve or --

24 Q Do you see one on here?

25 A I don't see anything on the shirt. The style of shirt

1 is the Columbia style shirt.

2 Q But that's not a -- you're not saying it was a brand
3 name Columbia shirt. You're saying it was a Columbia style
4 shirt?

5 A Yes, sir.

6 Q Okay, and your testimony, again, is this is not the
7 shirt he walked out with that morning?

8 A He did not walk out with that shirt that morning.

9 Q But those could be the khakis he walked out with that
10 morning?

11 A Possibly, yes.

12 Q And when you say you never saw that shirt again, you
13 did see those khakis again, did you not?

14 A Yes, sir. I washed those khakis. They were in the
15 bathroom. I'm assuming it was the same pair because he
16 only had a few that he wore.

17 Q All right. Okay, and in addition, your testimony
18 would be that the only -- well, I guess you're saying that
19 morning he didn't have that shirt on but he had those pants
20 on.

21 A Could possibly have those pants. He had several.

22 Q Okay.

23 MR. HARPOOTLIAN: Would you scroll down to the
24 footwear, please?

25 Q Okay. Those are loafers, right?

1 A Yes, sir.

2 Q And what do they seem to be made out of?

3 A Like soft leather.

4 Q So, your testimony is that he -- those were shoes he
5 only wore around the house. He had, like, house slippers?

6 A Usually when Alex would go outside, he had them
7 Georgia boots that he would wear or the duck boots, and
8 those would be left by the front door when I would walk in
9 the door the next morning.

10 Q In June it was pretty hot down there in Moselle?

11 A Yes, sir, but those were his go-to shoes when he would
12 go outside or mess around, like he said, with Paul that
13 day.

14 Q What kind of shoes was he wearing when he went to work
15 that day?

16 A The dress shoes, a pair of brown leather.

17 Q Okay. Now, when were you first asked about what he
18 was wearing that day?

19 A A couple of -- maybe a couple of days, when they
20 interviewed me.

21 Q When they interviewed you the first time --

22 A Yes, sir.

23 Q -- they asked you what had he on?

24 A Yes, sir.

25 Q Okay.

1 MR. HARPOOTLIAN: Thank you.

2 THE COURT: You may step down.

3 (The witness exited the stand.)

4 THE COURT: Ladies and gentlemen, we'll break for
5 lunch and resume at 2:15. Please do not discuss the case.

6 (The jury left the courtroom.)

7 (A lunch break was taken.)

8 THE COURT: Are y'all ready for the jury?

9 MR. WATERS: The State is ready, Your Honor.

10 MR. HARPOOTLIAN: Yes, Your Honor. I'm sorry.

11 THE COURT: Bring the jury.

12 (The jury returned to the courtroom.)

13 THE BAILIFF: The jury is present, sir.

14 THE COURT: Very good. Welcome back.

15 Your next witness.

16 MR. FERNANDEZ: Thank you, Your Honor. May it please
17 the Court? The State calls Belinda Rast.

18 The witness, BELINDA RAST, was first duly sworn and
19 testified as follows:

20 THE CLERK: Take a seat in the witness stand. Now,
21 can you please repeat your name again for the record, and
22 spell your last name.

23 THE WITNESS: Belinda Rast.

24 THE COURT: Spelled?

25 THE WITNESS: R-a-s-t.

1 DIRECT EXAMINATION

2 BY MR. FERNANDEZ:

3 Q Belinda, good afternoon. Good afternoon. Before we
4 begin, Belinda, are you hard of hearing?

5 A I am.

6 Q So, is it important for you that you can read what I'm
7 saying in order to better understand the question?

8 A Correct.

9 Q If at any time I say something and I have turned my
10 attention away just, please, let us know and I'll re-ask
11 the question. Okay?

12 A Okay.

13 Q All right. Belinda, tell the jury a little bit about
14 yourself. Where did you grow up, where did you go to
15 school, and what was your professional training?

16 A I grew up in Varnville. I went to school right there
17 in Varnville, Hampton, Wade Hampton High School, and I'm a
18 CNA. I've worked in the hospital and home health.

19 Q All right. CNA is a certified nursing assistant?

20 A That's correct.

21 Q So, did you work in nursing before moving into private
22 home health?

23 A I did.

24 Q Okay, and do you now -- are you now employed as a
25 private home care provider?

1 A Private home caregiver.

2 Q Okay. Belinda, I'm going to ask you to put that
3 microphone as close to you as you can; you might have to
4 move if a little bit. Thank you.

5 A Okay.

6 Q Okay. Great. Well, tell us a little bit about what
7 private home health -- private home care would be.

8 A When you work with one individual or two in a home,
9 that's not, you know, like in a hospital or the nursing
10 home, and you take care of that one individual or two at
11 the most. And you do their care, whatever it might be.

12 Like when I started at the Murdaughs', Ms. Libby was
13 up and about. We just had to watch her and make sure she
14 didn't wander away. It was -- she could go to the
15 bathroom, she knew when she had to go, but you had to make
16 sure she cleaned herself, and just make sure she would eat
17 and stuff. And then with her, it just -- her health
18 deteriorated and her illness got worse, and so she went
19 from that to now she's bedridden and we have to feed her,
20 turn her, change her, whatever is needed. She doesn't know
21 when she's going to the bathroom or whatever, so we have to
22 monitor her real close.

23 Q And I know we skipped ahead, but you currently -- who
24 do you currently provide home healthcare to?

25 A Ms. Libby Murdaugh.

1 Q And how long have you been providing that?

2 A A little over four years.

3 Q And I think you just said it, but it began as kind of
4 one job, and has it evolved in over time to being a more
5 significant job?

6 A That's correct.

7 Q Belinda, are you nervous being here today?

8 A I am.

9 Q Okay. Would you -- would you say that you've become
10 fairly close to Ms. Libby over these years?

11 A I have. She is -- to me she's family. She's like my
12 family away from home.

13 Q Do you care about her?

14 A I do.

15 Q All right. Well, Ms. Rast, tell me about what your
16 typical hourly shift is.

17 A From 8:00 p.m. to 8:00 a.m.

18 Q All right, and do you occasionally work weekends?

19 A I work every other weekend.

20 Q And what would your hours be on the weekends?

21 A From 7:00 p. to 7:00 -- until 8:00 a.m. in the
22 morning, or 9:00. 9:00 on Saturday and Sunday.

23 Q So, for weekdays it's typically 8:00 p.m. to 8:00 a.m.
24 Is that correct?

25 A Correct.

1 Q And how long have you been working there, again, at
2 Alameda?

3 A Well, I've already been there four. This year will be
4 my fifth year.

5 Q Were you employed during the year 2021, June of 2021?

6 A I was.

7 Q All right. Do you remember the day June 7th of 2021?

8 A June 7th?

9 Q June 7th.

10 A That's the -- that date, yeah. That was the day I was
11 called and told to come to the house, that they wanted to
12 tell me something.

13 Q Were you supposed to work that day? Were you
14 scheduled to work that day?

15 A I was.

16 Q All right, and what happened? Why were you not on
17 duty that day?

18 A Well, one of other employees wanted to be off, and I
19 switched with her, Ms. Shelley. She had wanted -- had some
20 plans with her friend and she wanted to be off, and she
21 asked me would I trade with her and I told her yeah, I
22 would do that.

23 Q And of all of the nurses that work with Ms. Libby, is
24 that fairly common if someone has a conflict, you can call
25 them to try to arrange some sort of changing schedule?

1 A Yeah.

2 Q All right. So, you were off on June 7th, but you
3 would have been working what hours?

4 A If I had been there, I would have been working -- at
5 that time we were working from -- that was on a Saturday, I
6 think, or Sunday. We were working from 3:00 p. until --
7 you know, 3:00 in the afternoon until 9:00 the next
8 morning.

9 Q Did you know Maggie Murdaugh?

10 A Briefly. I met her. I've seen her several times at
11 the Murdaugh house, but personally know her, no.

12 Q Did you get to know Paul Murdaugh?

13 A Yes, I did.

14 Q Okay, and how did you get to know him?

15 A Well, he came to see his grandparents, Mr. Randolph
16 and Ms. Libby.

17 Q Did he come more often than perhaps others?

18 A Yes, he did.

19 Q All right. Well, tell us a little bit about him.

20 A Well, he was always very polite. He always offered to
21 help do things for Randolph and Ms. Libby. He would, like,
22 you know -- Ms. Libby liked ice cream, so he would always
23 say Ms. M, Grandma M, because that's what they called her,
24 would you like me to get you some ice cream? And she would
25 usually say yeah because that was her thing, and he would

1 say -- get it and go around and he would tease her about
2 it, but he would always give to her.

3 Q So, he came around a little more than perhaps any of
4 the other --

5 A Grandchildren, yes.

6 Q -- grandchildren? Did you get to know Mr. Alex
7 Murdaugh?

8 A I do.

9 Q Is he here today? Is he here today?

10 A Yes, he is, right there.

11 Q In the blue jacket?

12 A In the blue jacket and blue shirt.

13 Q Thank you. On your shift, from the normal shift,
14 8:00 p.m. to 8:00 a.m., how often would you say Mr. Alex
15 stopped by in those years that you've been there?

16 A Not very often, not during that time period. Six or
17 seven times maybe.

18 Q In that -- in the five years you've been there the six
19 or seven times?

20 A Yes, sir.

21 Q And you mentioned Mr. Randolph. Who was he again?

22 A He was Ms. Libby's husband.

23 Q Did you take care of him? Was he a client of yours?

24 A Well, he was not my patient, but I helped him. I
25 assisted him when he needed help.

1 Q Was there a point in time when his health became
2 fairly poor and that you decided he needed some help?

3 A Yes, there was.

4 Q And if you were there, would you provide that
5 assistance to him, whatever he needed?

6 A I did.

7 Q All right. Was there ever a time when Ms. Randolph --
8 and Mr. Randolph, do you know when he passed away?

9 A Yeah, on June the 10th.

10 Q So, it was shortly after the murders of Maggie and
11 Paul?

12 A Correct.

13 Q Before he passed, was there ever a time when the
14 defendant came over later at night?

15 A When he was called -- well, not late at night -- well,
16 yes, it was, it was, on the 6th, I think it was, the night
17 before Maggie and Paul. I was there that night, and he and
18 Ms. Maggie came; they brought donuts.

19 Q Okay. Why would they bring donuts?

20 A Because Mr. Randolph had asked for some donuts, and --

21 Q Did he like donuts?

22 A Well, they were Krispy Kreme, and you couldn't get
23 them at the time in our area.

24 Q So, Mr. Randolph liked Krispy Kreme donuts.

25 A Yes, he did.

1 Q All right. Was Mr. Randolph, was he awake, though,
2 when they came?

3 A No, he was not.

4 Q And did he ever actually see Alex and Maggie?

5 A Not to my knowledge. Alex did go to the room and look
6 in at him, but he was asleep and they chose not to wake
7 him. I told them they could but they said no, let him
8 sleep if he can.

9 Q And how -- what did -- how did he react when he got up
10 and you told them that they visited?

11 A He was -- he said they came tonight? And I said yes,
12 sir. And he said, well, that's strange. And I said, well,
13 you asked for these donuts and Ms. Maggie brought these
14 donuts to you. And he says, well, is there a raspberry
15 one? And I said yeah and I got it for him. He eat a
16 little bit of it and he said I just can't eat the rest.

17 Q So, he was thought it was strange that they came that
18 time of night?

19 A Yeah, he was surprised.

20 Q Was there anything about -- I know Mr. Randolph was
21 very sick, but was there anything that was going on with
22 his mental faculties?

23 A No. He was -- he knew what was going on right up to
24 the last time I spoke to him, which was the day before he
25 died.

1 Q And tell us a little bit me your experience with
2 treating Alzheimer's patients, people with declining
3 dementia.

4 A They --

5 Q Tell us a little bit about your experiences with them
6 and how they -- maybe at night how they rest and what
7 the -- what your, you know, treat -- treating them
8 involves.

9 A Well, any time they -- I mean, sometimes they're fine
10 with whatever goes on around them or they don't know it, or
11 they can speak out in the beginning and say what they want
12 to say. Sometimes it makes sense; sometimes it don't. As
13 it progress, they get more like a baby. You know, if you
14 wake them, sometimes they'll go back to sleep. Sometimes
15 they cry. It takes time to calm them and, you know, just
16 guess because you really don't know. They're like a baby.
17 You don't know what's wrong. They might be hungry; they
18 might want something to drink. They might just want to be
19 turned. Whatever the situation is, you just have to guess
20 and keep trying until you get it right.

21 Q And what time do you put Ms. Libby to bed?

22 A Generally at 8:00. But now she don't get out of bed.
23 She's is a total care and she stays in bed. We give her
24 night medication at 8:00, which helps her to rest, along
25 with the other medication she has to have.

1 Q If Ms. Libby does go to sleep, what would you prefer
2 as her provider, healthcare provider?

3 A To let her sleep. But if the family comes by and they
4 say they want to wake her, I don't object. I let them wake
5 her.

6 MR. FERNANDEZ: Beg the Court's indulgence.

7 (Break in proceedings.)

8 MR. FERNANDEZ: No further questions from the State.

9 Thank you, Belinda.

10 MR. HARPOOTLIAN: Please the Court, Your Honor?

11 THE COURT: Yes, sir.

12 CROSS-EXAMINATION

13 BY MR. HARPOOTLIAN:

14 Q Ms. Rast, my name is Dick Harpootlian. Can you read
15 my lips? Dick Harpootlian.

16 A Yeah, I think so.

17 Q Okay, and I represent Alex. Okay?

18 A Okay.

19 Q Now, let me just focus in on, I guess, the reason
20 you're being called here today. You were asked by the
21 State was it strange for them to show up that Sunday night
22 late.

23 A It was unusual.

24 Q That was the word you used, not strange, and that's
25 the word you used in your statement you gave about ten days

1 after the murders to SLED, isn't that right, unusual?

2 A That's correct.

3 Q Did you know they'd been to a ballgame in Columbia
4 before they stopped by? Did they -- did Mr. Murdaugh tell
5 you that?

6 A No, sir, I did not know that.

7 Q And if Mr. Murdaugh, Alex, had stopped by normally
8 during the daytime, you wouldn't have been there, correct?

9 A That's correct.

10 Q Okay, and Alex and Maggie that Sunday night stayed
11 about 30 minutes?

12 A Approximately 30 minutes, yes.

13 Q It was late?

14 A It was late, and --

15 Q How late do you think it was, like 11:00?

16 A I think it was closer to 9:00.

17 Q Okay. 9:00. And --

18 A Because it hadn't been long I put Ms. Libby to bed and
19 she was starting to doze, and Mr. Randolph was already
20 asleep.

21 Q And this will be, let's say, two or three years ago in
22 2021. What was her state? She has dementia. Is that
23 correct?

24 A She does have dementia. Well, Alzheimer's, dementia,
25 it is basically the same thing. It affects the body in the

1 same way. At that time she could not walk, but we could
2 pick her up and put her in a wheelchair, pivot her and take
3 her and put her in the bed, and she could feed herself.
4 But now she's deteriorated and she can't feed herself. She
5 can't even give her self a drink of water.

6 Q Mentally did she recognize her sons when they came to
7 see her?

8 A Sometimes, sometimes not.

9 Q Has that gotten progressively worse?

10 A That is how it works.

11 Q Was she aware of the fact that her husband of, I
12 think, forty years had died, Mr. Randolph?

13 A We told her. We took her to the funeral, but within a
14 couple of weeks she doesn't, you know -- it -- didn't seem
15 to recognize the fact. For about I would say a month she
16 would call for him from time to time and then -- now she
17 doesn't.

18 Q When -- while you were there when Paul or some other
19 family member would come over, would that calm her down?

20 A Sometimes. Paul had a way of having a calming affect
21 on her. He would always remind her of the past, you know,
22 like, Grandma, you remember that whipping you gave me with
23 that fly swat? Things like that.

24 Q Did she watch television a good bit?

25 A She still does, but she does -- used to would play

1 along with games, but by '21 she wasn't doing that. She
2 was just watching.

3 Q Okay.

4 MR. HARPOOTLIAN: Beg the Court's indulgence one
5 moment.

6 (Break in proceedings.)

7 MR. HARPOOTLIAN: Thank you. No further questions.

8 THE COURT: Anything further?

9 MR. FERNANDEZ: No, Your Honor. Thank you.

10 THE COURT: Thank you, ma'am. You may step down.

11 (The witness exited the stand.)

12 THE COURT: Next witness.

13 MR. CONRAD: State calls Supervisory Special Agent
14 Matthew Wild.

15 The witness, MATTHEW WILD, was first duly sworn and
16 testified as follows:

17 THE CLERK: Take a seat in the witness stand. State
18 your name again for the record. Spell your last name,
19 please.

20 THE WITNESS: My name is Matthew. Last name Wild,
21 W-i-l-d.

22 VOIR DIRE EXAMINATION

23 BY MR. CONRAD:

24 Q All right. Good afternoon, Agent Wild.

25 A Good afternoon.

1 Q Where are you employed, sir?

2 A I'm a special -- I'm a supervisory special agent with
3 the FBI. I'm assigned to FBI headquarters, but I sit in
4 Rock Hill, South Carolina.

5 Q All right, and specifically what were your job duties
6 in Rock Hill, South Carolina?

7 A Right now I supervise five full-time agents and about
8 seventeen part-time folks in my unit, the Cellular Analysis
9 Survey Team.

10 Q Okay, and explain to the jury what the Cellular
11 Analysis Survey Team is.

12 A So the Cellular Analysis Survey Time, or CAST, is
13 group of about eighty special agents and task force
14 officers. We're all across the country, and what we
15 specialize in is analyzing historical phone records,
16 specifically the location data associated with those.

17 Q All right, and is that something that you do
18 personally in your job?

19 A It is.

20 Q Okay, and explain just a little more. I know we'll
21 get into more when we get into your report, but what do you
22 mean when you analyze cell phone location data? What are
23 you doing when you do that?

24 A So, what I'm doing is I'm looking at the call detail
25 records. These records are very much like the old paper

1 phone bill like we all got in the mail maybe ten or fifteen
2 years ago. They had the date. They had the time that the
3 calls occurred. They tell me who called who. So, if I
4 made a phone call or someone called me, those numbers are
5 listed on it. They have the duration of the call. The
6 major difference between the old paper phone bill we all
7 got in the mail and the records I look at is the records I
8 look at have a cell tower, so they tell me which cell phone
9 tower was used to handle my call, and then they tell me
10 which side of that tower was used to handle that call.

11 So, what I do is I take that cell tower information, I
12 can compare it to a list of all the cell phone towers for
13 that carrier, whether it be Verizon, T-Mobile, or AT&T, and
14 then I can take that date, time, and general location from
15 the cell phone records and I can compare it to a known
16 date, time, and location. So, most of the time when law
17 enforcement is investigating a crime, they generally know
18 what date, time, and location that incident occurred.

19 Q Okay, and as part of your cell phone analysis, do you
20 also take location data from -- directly from phones if
21 available and plot that as well?

22 A I can do that, yes, yes, sir. So, when law
23 enforcement downloads a phone, it comes in a big report and
24 there's a location data section on there, and I can also --
25 I analyze and map that data as well.

1 Q Okay, and how long have you been doing this cell phone
2 analysis?

3 A Part-time since 2012, full-time since about late 2016.

4 Q All right, and have you undergone any training to help
5 learn cell phone location analysis?

6 A I have. I have over 400 hours of training. In 2012 I
7 went to a course called Basic Project Pinpoint, where it
8 was three days. We learned how to read the records,
9 compare the records to a tower list, and generate a very
10 basic map. I used that technique in every one of my cases
11 from 2012 to 2016. In 2016 I attended Advance Project
12 Pinpoint, which was a week long course. And during that
13 course we took a deeper dive into the different types of
14 records we can get from the carriers and how to use them.
15 At the conclusion of that course, I was selected to go to
16 the CAST certification course. At that time it was four
17 weeks, the first week being training on radio frequency
18 theory, so learning how radio waves travel between the
19 phone and the tower, and then back through the network.

20 The second week we have trainings from -- we had
21 presentations from each of the carriers. So, Verizon came
22 into our training. We learned from the network engineers;
23 those are the people who designed and maintained the
24 network. And we also learned from the records custodians.
25 Those are the people who provide the record skills.

1 The third week we did drive testing. So, I have a
2 piece of equipment I can put in my car and drive around a
3 specific cell phone tower to figure out generally how far
4 that tower reaches.

5 And then the fourth week was a moot court exercise
6 where we had a real case. We had to read the records,
7 generate a map, go and do the drive test, and then testify
8 to it, and at the conclusion of that I was certified.

9 Now every year since then, I have attended the CAST
10 recertification course, which is usually four days, where
11 we go and meet -- go back and meet with all the carriers.
12 We get technology updates. And then because we're located
13 around the country, and sometimes in different parts of the
14 world, we do case presentations to each other in what we're
15 seeing in our respective areas.

16 Q Okay, and in your role as a cast supervisor and prior,
17 have you ever been qualified as an expert in court before?

18 A Yes.

19 Q How many times?

20 A Over 130 times.

21 Q So, you've done this a time or two before.

22 A Yes, sir.

23 Q At this -- and when you've been qualified before,
24 specifically what have you been qualified as?

25 A I've been qualified as an expert in historical call

1 detail record analysis and cellular technology.

2 Q All right.

3 MR. CONRAD: And, Your Honor, at this time the State
4 would move to -- as Mr. Wild, excuse me, Agent Wild, as an
5 expert in cell -- historical cell phone location analysis.

6 If I said that correctly, sir?

7 MR. BARBER: No objection, Your Honor.

8 THE COURT: He's so qualified.

9 DIRECT EXAMINATION

10 BY MR. CONRAD:

11 Q All right, and in your role as a CAST supervisor, you
12 became involved in this case. Is that correct?

13 A Yes, sir.

14 Q And do you recall approximately when you became
15 involved and how?

16 A I believe -- so, I wasn't a supervisor at the time. I
17 was just a -- I was a regular agent, but I was asked in
18 either late -- it happened in July of 2021, to provide some
19 assistance in this case.

20 Q Okay, and asked by who?

21 A I believe it was Dylan Hightower.

22 Q Okay. All right, and specifically, at least in July
23 of 2021, what did he ask your assistance for?

24 A Well, he had obtained a few sets of call detail
25 records on some of the phones in this case. And there's a

1 question as to whether or not -- where there was a 911 call
2 that was made, and the tower that was using that 911 -- the
3 tower that was used to handle that 911 call, there was a
4 question as to whether or not that tower could provide
5 coverage up to Moselle.

6 Q Okay, and so there was a question about why the 911
7 call first bounced off a tower in Hampton?

8 A That's correct.

9 Q County, correct?

10 A Yes, sir.

11 Q And Moselle, to your knowledge, is in what county?

12 A I think it's Dorchester, Chester.

13 Q Or could it be in Colleton County?

14 A Colleton. I'm sorry, Colleton County, yes, sir.

15 Q And you were asked -- your assistance was asked to
16 help figure out if that was possible, if someone could be
17 at Moselle and a call could bounce off a tower in Hampton,
18 correct?

19 A Yes, sir.

20 Q And the Cast Team, does it have tools that can assist
21 in figuring that out?

22 A Yeah. We have something called the Gladiator
23 Autonomous Receiver, and it's basically a box that we can
24 put in our cars. It's a computer and it has a couple of
25 receivers in it, and as we drive around that, box maps out

1 the latitude and longitude, so like where we are with the
2 box. And then it measures all the signals from the cell
3 towers that the box can see in its area. It's very much
4 like the old Verizon can you hear me now commercial. It's
5 just hearing that hundreds of times a minute. It's just
6 constantly doing that as we're driving around.

7 Q And just to simplify that a little bit, would it be
8 fair to say that what you -- what this tool can do is help
9 you map specifically where cell coverage exists and where
10 it doesn't. Is that correct?

11 A That's correct.

12 Q All right, and as you move forward, did you go ahead
13 and conduct that test?

14 A I did. Myself as well Dylan Hightower and another
15 agent with the FBI, we grabbed three of those pieces of
16 equipment, three GARS, and we put them in three cars, and
17 over two days in the beginning of August we basically drove
18 everywhere all around Moselle, all the way down to Hampton,
19 all of the way up to -- I believe it's Ehrhardt and over to
20 95.

21 Q Did you also go on the property at Moselle to take
22 these measurements?

23 A I personally did, yes, sir.

24 Q Okay. All right, and afterwards were you asked to
25 prepare a report and to take the cell -- all of these cell

1 records in and prepare a report and provide this report to
2 show the locations of various phones involved in this case?

3 A Yes, I was.

4 Q Okay. I'm going to show you what's been marked as
5 State's Exhibit 458, and I'll have you take a look at it
6 and see if you recognize it.

7 A Yeah. This is the report that I generated for this
8 case.

9 Q All right, and when you say generated, what kind of
10 information did you take in to help you generate that
11 report?

12 A Well, so I had to take in the cell phone records. So,
13 the records that we received from Verizon, I take those in.
14 I also take in the Cellebrite downloads that came from one
15 of the phones. And then I also had a -- after we did the
16 drive test create some maps to kind of show and display
17 that data.

18 Q Okay, and from this report specifically, there's a
19 couple of numbers that we don't want read, but whose
20 records did you look at, and for Maggie, Paul, and Alex,
21 you can read their numbers. But whose Verizon records did
22 you look at?

23 A I'm sorry, I couldn't hear the end of your question.

24 Q I'm sorry. Whose Verizon records did you look at?

25 A I looked at Alex's, Paul's, Maggie's, and then there's

1 Marty Cook and C.B. Rowe.

2 Q Okay, and did you prepare a report showing locations
3 off of towers where those various phones were on the days
4 of and surrounding the murder?

5 A Yeah. I showed the general area where the phones were
6 on the days surrounding the murder.

7 Q And you mentioned you got the Cellebrite data on a
8 phone, correct?

9 A Yes.

10 Q Do you remember who you got that location information
11 from?

12 A I got that from Britt Dove at SLED.

13 Q And specifically whose phone did he -- whose location
14 data did he provide you?

15 A That was Paul's location data.

16 Q All right, and did you plot those locations provided
17 on your report?

18 A I did.

19 Q All right, and those would include times as well,
20 correct?

21 A Yes.

22 MR. CONRAD: At this time, the State would move to
23 enter Exhibit 458 into evidence.

24 MR. BARBER: No objection, Your Honor.

25 THE COURT: It's admitted.

1 (CELL PHONE DATA MARKED AS STATE'S EXHIBIT NUMBER 458
2 WAS RECEIVED INTO EVIDENCE.)

3 MR. CONRAD: All right, and, Your Honor, the State
4 would to enter this under seal because there's some phone
5 numbers included. I do have a redacted copy that we're
6 going to publish for the jury -- for now for the jury and
7 the audience.

8 THE COURT: Okay.

9 MR. BARBER: No objection, Your Honor.

10 Q All right, Agent Wild, I'm going ask you to step down
11 with the Court's permission, and we're going to pull this
12 report up. And this is going to be a little tricky. We've
13 got some tight areas to work in, but can you stand on -- in
14 that area there? And I will -- okay. So, Agent Wild, I'm
15 going to hand you this, and I'm going to essentially ask
16 you to start going through this report with the jury to
17 explain to them. I'm going -- I'm going to probably
18 interrupt if I feel like something needs to be clarified.

19 A Okay.

20 Q You just tell me when you need to click to a next
21 slide, but at this point I'm going to let you take it away,
22 sir.

23 A All right, sure. All right. So, the first slide
24 here, this is just who I am, my case number, and then the
25 telephone numbers involved. The second slide, it just

1 gives a background. So, I was asked by SLED to conduct an
2 analysis in this case, the first paragraph. Methodology is
3 the second paragraph.

4 So, again, I take the call detail records. These are
5 kept by the carriers for billing purposes, for some other
6 technical purposes, but I take these call detail records.
7 I compare the cell tower data on those call detail records
8 to a list of towers, and they tell me whether that phone is
9 in Hampton, whether that phone is in Charleston, whether
10 that phone is in Spartanburg or Greenville, and it gives me
11 a general idea of where the phone is.

12 And then -- so the cell site locations. So, the
13 towers split. The towers can change over time. Okay, just
14 in the last couple of years, we've gone from using a 3G to
15 LTE, and now we all have the 5G bar on our phone, right?
16 So the tower list change -- the towers change, and we get
17 updated tower lists on a regular basis from the carriers.
18 So, I use the tower list that was in effect around the time
19 of the incident, so around the time of June of 2021.

20 The survey analysis section. So, again we took three
21 pieces of equipment and we basically drove everywhere all
22 the way around the -- around this area, or around the area,
23 trying to record all the signals from the different cell
24 towers. What this gives us is a general area of -- it
25 actually maps out the area of where there's coverage from

1 those cell towers and cell sectors. And then my
2 conclusion. So, this slide just shows different types of
3 cell phone towers, okay?

4 I draw your attention to the one on the top left. We
5 have these speaker looking devices hanging on this tower.
6 Those are the antennas that transmit and receive a signal
7 to and from a phone. Okay, a phone a very much like a car
8 radio. As I drove here today, I tune into my favorite
9 radio station, or my favorite frequency, and somewhere
10 along my route, there's a radio tower. It admits a signal
11 at that frequency. My car radio can receive that signal; I
12 can listen to my favorite station.

13 The major difference between a car radio and a cell
14 phone is that with a cell phone, that information has to go
15 into two directions. It has to be able to receive from the
16 tower, but you'll also need to be able to send that
17 information back to the tower. So, those are the antennas
18 that send and receive those signals.

19 The second thing about this is you'll know that
20 those -- you'll realize those antennas, they're on a
21 triangular shaped structure. Most of the towers are
22 designed to cover a full circle, or 360 degrees, and the
23 way that the carriers accomplish this is by breaking that
24 circle into three sides, or three sectors. So, later on in
25 my report you're going to see these wedge shapes, and I

1 like to just think of the center of this wedge shape as
2 nothing more than the center of one side of this triangle.

3 Going on. In a lot of other places, urban, more
4 suburban areas, there's not really room to build, like,
5 these big towers like on this one on the top left, so they
6 start putting them on the sides of buildings. The smaller
7 ones will be on top of light poles in the cities. So, just
8 because they're not -- just because you don't see it or you
9 don't realize it's there, it's still there.

10 Another example of that, of course, is my favorite,
11 the pine tree. These are all over the place and they
12 usually sit about 150 feet taller than of the other trees
13 around them, but at the top there's these spray painted
14 antennas, and they provide the same service as the regular
15 towers that you can see.

16 All right. So, again, the tower separated in to
17 three -- most towers are separated into three sides, or
18 three sectors. When I look at the call detail records,
19 they tell me the tower number. Say it's 23. They tell me
20 the sectors. Say it's 1. What I have to do is I have to
21 go into the tower list and I have to look up tower number
22 23, and then I have to look up Sector 1, and that tower
23 list is going to tell me which way that sector faces.

24 What I'm looking for there is something called the
25 azimuth, or the orientation. Azimuth and orientation are

1 just two big scary words for direction. Okay? So, if the
2 azimuth is zero, all that means is that side of the tower
3 faces north. Okay? If the azimuth is 180, all that means
4 is the tower faces south. So, what I have to do is I will
5 to draw a line at zero if it faces north, and then I'll go
6 60 degrees in one direction, 60 degrees in the other
7 direction, that gives me one-third of that tower, or
8 one-third of that circle, which is the sector in which the
9 energy is being admitted.

10 So, I display that information using this wedge shape.
11 So, you can see it's a 120 degree wedge; there's just
12 shaded area in the middle. Okay. Just because that shaded
13 area is there doesn't mean the phone has to be within that
14 shaded area. Radio frequency is like -- it's like light.
15 It's like if I shut all the lights off in this room and I
16 shined a flashlight to the back of the room, it's just
17 going to be emitted in that direction. That's all I'm
18 saying by showing the shaded area. The energy from that
19 tower is being emitted in that direction.

20 And then this is how I map -- this is how I map the
21 sectors on the map. I use that wedge. Each one of 16
22 these green dots on this map happens to be a cell tower.
23 And so generally the phone is going to be somewhere within
24 that wedge, within the arms of this wedge, but somewhere
25 between the tower that's being used and the next one in

1 that direction are closer to the one that's being used.

2 All right, another set of records that we can get,
3 something called RTT, or timing events. This is a Verizon
4 case, so the records we have are called RTT records. What
5 RTT records are is it's an estimation of the distance
6 between the phone and the tower at the time that that
7 transaction occurred. All right. So, what we get is a
8 regular wedge, like we know which tower, we know which side
9 of the tower is being used, and then the Verizon tells us
10 approximately how far the phone is from that tower at the
11 time that it's used. Okay? This is based on, like, a
12 basic time over distance theory. We know how fast the
13 signals travel -- they travel at the speed of light -- and
14 then all we have to do is time them from the time it takes
15 to go from the tower to the phone and back to the tower and
16 then estimate the distance.

17 So, the phone -- when these types of things occur, we
18 have these records, and what we're going to have is this
19 high ball or this wedge, this shaded wedge here, this
20 shaded band here, and that phone is going to be somewhere
21 inside that band, or just slightly inward from the band.

22 Q And would another -- could you use another word for
23 that shade of band? Could you call it an arc?

24 A An arc, yes.

25 Q Would that be accurate?

1 A Yes, sir.

2 Q Okay.

3 A All right. So, now this slide, this is going into the
4 actual case here. So, this is showing the legends, and
5 this is where all the locations in this state are located.
6 Starting with the top left one, the, the top one, the red
7 pin here in the center of the page, that's the address of
8 the crime scene on Moselle Road in Islandton. Next is the
9 green pin, which is Almeda. And then next is the orange
10 pen. That is 10 -- 1104 Luray Highway in Hampton, South
11 Carolina. The purple pin is 123 Russell Road in Brunson,
12 South Carolina.

13 Q And I'm going to stop you there, and let's go on to
14 the next slide.

15 A Okay.

16 Q And one of the things I'm going to ask you to do,
17 Agent Wild, as you go through some of these, the colors
18 kind of bleed sometimes on these monitors, so the jury may
19 not be able to read some of the place names and where
20 they're at. So, each time we go to a different map, if you
21 would just kind of provide a general orientation of where
22 the cities are and some of the roads are just so the jury
23 can see it with us, please?

24 A Okay. That works. All right. So, this map --

25 Q All right. So, that's cut off at the very bottom

1 there.

2 A Yeah.

3 Q Okay. We can go through the exhibit.

4 A Okay.

5 (Break in proceedings.)

6 Q So, this is --

7 A Thank you so much.

8 Q All right. So, what's the timeframe on this one?

9 A So, the timeframe on this one is June 7th, 4:53 p.m.
10 to 6:09 p.m., and this is the activity for Paul Murdaugh's
11 phone ending in 7845. So, the blue pin is the address in
12 Okatie, South Carolina.

13 Q Okay, and what times do you show Paul's phone in that
14 general area near Okatie, South Carolina?

15 A So between 5:40 and 6:03, generally in that area.

16 Q On the afternoon of what day?

17 A On the afternoon of June 7th.

18 Q Okay. All right, and there's several hits off several
19 towers, isn't there?

20 A Yeah, there's some down -- there's some at the bottom.
21 So, 4:53, 5:11, it's in the tower just south of there, and
22 then 5:21 on through 6:09 the phone is using the tower
23 north.

24 Q And just so the jury understands, you know, this is
25 that sector you were talking about a few minutes ago,

1 right?

2 A Yes.

3 Q So, when the tower pinged off of this at -- in this
4 sector at this time, in theory that phone could be anywhere
5 within this sector, correct?

6 A That's correct. That phone could be anywhere within
7 that sector. It could also those slightly outside of that
8 sectors because those lines, I can't go out to this tower
9 and look up and see those three lines coming off. It's
10 kind of like a fuzzy -- like a fuzzy area between the
11 sectors.

12 Q So, the sectors aren't hard and fast every time.

13 A Correct.

14 Q But, you know, it's just as -- in your general
15 experience, you know, within what range will you usually
16 see a phone ping off a tower? What's the general max
17 range? And I know it can vary.

18 A Well, it can vary because it depends on where the
19 phone is. You know, in a rural area the phone can be 6 to
20 8 to 10 miles from the tower, and it can use that tower.

21 Q All right.

22 A It just kind of depends on where it is.

23 Q Because towers are usually far apart out in rural
24 areas.

25 A In rural areas -- I mean, they're set up for

1 population density. So, in rural areas not a lot of
2 population, a lot of farmland, they're going to be further
3 apart, whereas if you get closer in the city or suburban
4 areas, they're going to be closer and closer together.

5 Q And is -- just as a general rule, do cell phones try
6 to connect to the nearest tower, or they have the best
7 signal, correct?

8 A Well, the cell phone tries to connect to the tower and
9 sector it sees as the best signal. That's not always the
10 nearest tower, but most of time it is.

11 Q Okay. All right, and so Paul's phone is in the area
12 of Okatie starting 5:30 p.m. to about 6:09 p.m. on the
13 afternoon of June 7th, correct?

14 A That's correct.

15 Q All right, and just so it's clear for this jury, when
16 we say Paul's phone, you can't testify as to who was
17 holding that phone. Is that correct?

18 A That's correct. I have no idea whose hand that phone
19 was in all during each one of these calls. All we know is
20 that was the phone that we believe he was using.

21 Q But Paul's phone is in these areas during this time.

22 A It is.

23 Q Okay. All right. Okay. We'll continue with Paul --
24 Paul's phone. Continue.

25 A So, this next slide is 6:17 p.m. through 7:30 p.m.

1 And basically at 6:17 the phone is way south down here in
2 the bottom of the page.

3 Q And let's do some general orientation here. What's
4 this town right here? Can you read that?

5 A Yemassee.

6 Q Okay, and this is -- and this is where?

7 A That's Varnville.

8 Q Okay, and that green was again what?

9 A Almeda.

10 Q Okay, and red -- and this red up here is?

11 A That's the Moselle property.

12 Q Okay. All right. So, what do you see this phone
13 doing during this timeframe starting at 6:24 p.m.?

14 A Yeah. So, between 6:17 and 6:53, it's traveling north
15 from the bottom of the page up to the side, and then kind
16 of to the top, and then finally where it gets to Sector 1
17 here at 7:05 and 7:30, it's consistent with being in the
18 area of Moselle.

19 Q Okay, and this is just a pinging in this area at 6:24,
20 correct?

21 A Yeah. These are just the phone calls -- these are the
22 phone calls that are coming on the phone, and those are the
23 towers that the phone is selecting as the best tower at
24 that time.

25 Q And this general direction seems to be traveling up

1 north, and Okatie would be somewhere down in this area off
2 the map, correct?

3 A Yes, sir.

4 Q And that's off to the -- for the record, off to the
5 right and below where this slide is. And then you see the
6 general progression north towards Moselle, correct?

7 A Yes.

8 Q All right, and we see Sector 3 here. And what time
9 does it ping in Sector 3 just due south of Moselle?

10 A It's 6:53 p.m.

11 Q And then we see it switch over to Sector 1, which is
12 the north facing sector, correct?

13 A Yes, sir.

14 Q And what time is Sector 1?

15 A 7:05.

16 Q Okay.

17 A And then at 7:30 it uses that same Sector 1 at a
18 distance of 2.91 miles, which is in the area of Moselle.

19 Q So, at 7:30 it's somewhere in this arc like we talked
20 about before, correct?

21 A Yes.

22 Q The arc, the number provided is not necessarily
23 100 percent accurate, right?

24 A It's not because depending on where the phone is. If
25 the phone is out in the middle of field 1 mile from the

1 tower, it should register at a mile. But if the phone is
2 in a house, or let's say the phone is in this courtroom,
3 those signals have to go through the exterior walls of the
4 courtroom, hit my phone, and go back out through the
5 exterior walls, and it might slow the signal down, which
6 will make the distance just slightly further.

7 Q Okay. So, it's generally reliable but not necessarily
8 exactly accurate when you see that arc in the distance,
9 correct?

10 A It's not -- it's not exactly accurate.

11 Q Okay. All right, but regardless, at 6:53 it's pinging
12 to the south of Moselle in Sector 3, and at 7:05 it's
13 pinging in the -- the same sector where Moselle is to the
14 north, correct?

15 A Yes.

16 Q All right, and what does that -- what inference can
17 you draw, in your opinion, of what the cell phone did
18 between those two times?

19 A Well, in between 6:53 to 7:05?

20 Q Uh-huh.

21 A I mean, it could have been moved from Sector 3 to
22 Sector 1, or it could have been on the line between Sector
23 3 and Sector 1 at that time and just bounced back and
24 forth.

25 Q But you would agree that generally this direction is

1 towards where?

2 A Towards Moselle, yes, sir.

3 Q Okay. We're on the next slide, and tell us what we
4 see. And this is still Paul Murdaugh's phone, correct?

5 A It is. This is 7:30 p.m. to 8:40 p.m.

6 Q Okay.

7 A So here on the right side of the page starting at
8 7:30, there's those activate RTT hits. At --

9 Q And that was the same from the last one.

10 A That's the same from the last one.

11 Q Okay.

12 A Right, and then 7:33 there's another RTT hit and a
13 call. I'm sorry, another RTT hit on this tower to the
14 bottom left.

15 Q All right.

16 A And then where those arcs overlap, when they're in
17 close timing to each other, that's generally where the
18 phone is going to be. And so you can see that is arcs
19 overlap in the area of Moselle.

20 Q So, by -- about that time, 7:30 to 7:33, would your
21 opinion about be that cell phone is that area of Moselle?

22 A It has to be somewhere in the area of Moselle, yes,
23 sir. And then we have other calls at 8:40 -- 8:32 and
24 8:41.

25 Q Okay. At 8:40, and it pings off of this sector at

1 8:40 --

2 A Yes, sir.

3 Q -- is that correct? And that's sector which of this
4 tower?

5 A That's Sector 1 off of that tower.

6 Q Okay, and, again, same direction as Moselle.

7 A Yes.

8 Q Okay, and what do we see on this slide?

9 A This is 9:03 p.m. on June 7th. So, here there's a
10 call, and then there's an RTT distance of 3.11 miles.

11 Q Okay, and let's just do some general orientation
12 again. The red is what? This red marker is what?

13 A That's Moselle.

14 Q Okay, and the green is what?

15 A It's Almeda.

16 Q Okay, and then what's this town right here?

17 A That's Varnville.

18 Q Okay. All right, and we have a hit at 9:03:22?

19 A Yep.

20 Q All right, and what -- and it's off sector what?

21 A It is off Sector 3, but again there's -- there could
22 be a little overlap there between Sector 3 and Sector 1.

23 Q Okay.

24 A And there's a chance -- I mean, the phone is likely
25 still in the area of Moselle. It's just using a different

1 sector.

2 Q Okay. Your opinion is it is likely in the area of
3 Moselle.

4 A Yes. There is -- I know for a fact that there's,
5 there's signals on this sector in the area of Moselle.

6 Q And you have a slide to show that.

7 A I do, yes.

8 Q Okay. All right, and then here we have at 10:34 p.m.
9 another hit.

10 A Yes, sir.

11 Q And again this is the same map as last time, correct?

12 A It is. 10:34 p.m. It's usually in the same -- it's
13 the map, just the sector has changed back to Sector 1.

14 Q All right, and in your opinion, that phone is still
15 pinging.

16 A It's consistent with being in the area of Moselle.

17 Q Okay, and now we're transitioning to something else
18 with Paul, correct?

19 A Yes, sir. This --

20 Q And what is this?

21 A These are the -- this is the iPhone location data that
22 was taken from his -- from the download of his iPhone.

23 Q Okay, and we have some times here, and can I go ahead
24 one slide --

25 A Sure.

1 Q -- because it has more information. It shows a
2 overhead map of the area, correct?

3 A Yes, sir.

4 Q And let's talk about this. You've been out to this
5 property, correct?

6 A Yes, I have.

7 Q And this is where? What is this called?

8 A That's Moselle.

9 Q And what am I pointing at right here in the bottom
10 middle part of the screen?

11 A That's the main house there.

12 Q And then this -- this area up here in the -- basically
13 due north of the residence, what is this area?

14 A That's the dog kennel or the -- or the hangar.

15 Q All right. There's a big hangar building --

16 A Yes, sir.

17 Q -- and then there's a smaller series of dog kennels
18 right next to the hangar, correct?

19 A Yes.

20 Q Okay. All right, and we have some location data from
21 Paul's phone here, correct?

22 A Yes, we do. So, between 7:45 and 7:56, all of these
23 circles in and around the road and close to the kennels,
24 that's where the phone is being used. And then at 8:00
25 there's two hits down south of there at 37 and 100 meters.

1 Q And we see these red circles. What is that red circle
2 and what does it represent?

3 A So, the red circle is the -- it's a -- it's the area
4 that the phone could potentially be within. The phone
5 shouldn't be any further than -- the phone should be where
6 the pin is but it shouldn't be any further than the
7 exterior of that circle.

8 Q So, sometimes the GPS information provided by a phone
9 isn't exactly 100 percent accurate, correct?

10 A Correct.

11 Q But it does -- the phone information provides
12 information that allows you to determine how accurate the
13 location information is, correct?

14 A It's basically a level of accuracy. So, if the level
15 of accuracy is, like, 3 or 4 meters, I mean, the phone is
16 going to be within this general area around me. But if the
17 level accuracy is, let's say, 5,000 meters, that just tells
18 me it's here in town somewhere.

19 Q Okay. All right, and we see some of those distances
20 listed in your data here, correct?

21 A Yes, sir.

22 Q So, at the 7:45:31 hit received -- and what is this
23 number?

24 A That's the latitude, longitude, so that's like the
25 specific point of where phone returned where it's located.

1 Q And then I see a number next to that. What is that?

2 A That's the radius, so the red circle in meters.

3 Q And talking about this again, data point, what does
4 that number say?

5 A 48.

6 Q 48 what?

7 A 48 meters.

8 Q Okay. So, from the information -- excuse me -- so, if
9 I understand what you're telling us is at 7:45:31 p.m., the
10 phone is at this -- within about 48 meters of this lat and
11 long, correct?

12 A Yes, sir.

13 Q And then, you know, we see some different uncertainty
14 in the area, so at 7:46:09 p.m. there's about 165 meter
15 circle. So, that's a much bigger circle here.

16 A Yes, sir, it is.

17 Q All right, and then we see 52 meters at 7:56:06 p.m.,
18 correct?

19 A Yes, sir.

20 Q And then we -- you talk about these hits and -- down
21 here at 8:00.

22 A Yes.

23 Q And we're going to advance one more slide to show the
24 digital map. The previously slide had the exact same data,
25 correct?

1 A Yes.

2 Q All right. So, we're still looking at an overhead --
3 ariel view of Moselle, correct?

4 A Yes. This is 8:04 to 8:05 p.m.

5 Q Okay, and so now we're seeing some hits across this
6 Moselle Road, correct?

7 A That's correct.

8 Q And, again, we see the location area of value, and
9 it's somewhere within these circles --

10 A It is.

11 Q -- at those times, correct?

12 A Yes.

13 Q Okay. Now we're at 8:06:20 p.m., correct?

14 A Yes, sir.

15 Q And at 8:06:20, where do we see the phone?

16 A So at 8:06:20, it is here near Moselle Road just north
17 of the driveway.

18 Q Okay.

19 A And from there it moves towards the dog kennels, or
20 the hangar -- it moves towards the dog kennel at the
21 hangar, then kind of up the driveway, and then finally
22 winding up back up at the house at about 8:14.

23 Q So, we see a series of location hits, correct?

24 A Yes, sir.

25 Q And looking at the timing, it would appear that the

1 phone moves back toward -- through the kennels, correct?

2 A Yes.

3 Q And then moves up this road towards the house at the
4 main residence, correct?

5 A Yes.

6 Q And we see some circles associated with this data, but
7 the -- several of these circles start to get pretty small,
8 correct?

9 A Yes, they are pretty small.

10 Q And what are those size of the circles?

11 A 20 meters are the final ones that are in and around
12 the house.

13 Q And just so I clarify it, we see the blue pin, right?

14 A Yes.

15 Q Ad that represents the actual lat and long that was
16 reported by the phone, correct?

17 A Yes, it does.

18 Q The air -- the 20 meters means it's almost certainly
19 within that circle --

20 A Yes.

21 Q -- within that particular pin, correct?

22 A Yes.

23 Q All right, and when you see a series of kind of rapid
24 pings like this within a short period of time, generally
25 what does that tell you is going on with that cell phone at

1 that time?

2 A Well, the phone is using some kind of application or
3 some kind of map or something that's using its location
4 hit.

5 Q All right, and then regardless, by 8:08:45 p.m., where
6 is Paul's phone?

7 A It's, it's back at the house.

8 Q Okay, and that's got a load area of how big? I'm
9 sorry?

10 A An accuracy of 20 meters.

11 Q An accuracy of 20 meters. Okay, and that makes a
12 pretty small circle around the size of that house, correct?

13 A It does.

14 Q And there's another hit at 8:14 p.m. at the same
15 place, it appears.

16 A Yes.

17 Q Okay. Now we moved on. We're still looking at this
18 overhead map of Moselle, and we have some more hits
19 starting at 8:14 and going through to 8:35:07 p.m.,
20 correct?

21 A That's correct.

22 Q And all these seem to be centered around the
23 residence.

24 A They are, yes, sir.

25 Q Now, there's some varying degrees of accuracy,

1 correct?

2 A Yeah. There's one that goes up to 165, 165 meters,
3 but most of them are 20 -- between 20 and 79.

4 Q 8:35: p.m., that phone, Paul's phone, is within 20
5 meters of the Moselle residence, correct?

6 A That's correct.

7 Q Okay. All right, and we're going to skip one more
8 slide and just keep with the digital map.

9 A Yeah.

10 Q And just so it's clear to the jury, this slide
11 contains the exact same information, correct?

12 A Yes, it does. And then I just switched the map over
13 from the regular street map to the Google Earth Map.

14 Q All right. So, now we see another series of phone
15 locations for Paul's phone. This is, again, the night of
16 June 7th of 2021, correct?

17 A Yes.

18 Q 8:38:07, where do we see that phone start ping?

19 A Again, it's a 56 meter -- there's a 56 meter hit at
20 right around the dog kennels.

21 Q Okay. So, by 8:38:07 p.m., that phone is within 56
22 meters of the dog kennels, correct?

23 A That's correct.

24 Q All right, and then we see some more hits. There's a
25 little bit larger of an area starting at 8:58:44.

1 A Yes.

2 Q But then we see a hit at 8:44:55 p.m., and it says
3 media location. What does that mean, sir.

4 A So in the Cellebrite report itself for that record, it
5 came from a movie file. That's where that location was
6 generated from.

7 Q Okay, and have you reviewed or seen that video that
8 the location data came from?

9 A Yes, I have.

10 Q And just generally speaking what is that a video of?

11 A That's a video inside the kennel when Paul is playing
12 with the dog.

13 Q Okay, and that video was recorded at -- the time stamp
14 recorded on the video is 8:44:55, correct?

15 A Yes.

16 Q And that matched exactly with the dog kennel, correct?

17 A Yes, it does.

18 Q And I don't see a number next to that data point. Why
19 don't I see an accuracy number?

20 A Not 100 percent sure why there's no accuracy number,
21 but we know the video was taken inside the dog kennel
22 because we can see the video. And then the next one right
23 after that -- I mean, basically there's records just before
24 8:44 and 53 seconds and 8:44 and 56 seconds, and both of
25 those put it in the area of the dog kennel.

1 Q Okay, and I'll skip one more slide here. And we're
2 still looking at this overhead map of Moselle, correct?

3 A Yes, sir.

4 Q And we have it looks like a hit location data of
5 10:18 p.m.?

6 A Yes.

7 Q And 10:18:03 p.m., correct?

8 A Yes.

9 Q And both of those are centered on where again?

10 A They're again just right there in the vicinity of the
11 dog kennels.

12 Q Okay. Now, did you plot every single location data
13 plot that you received from Lieutenant Dove?

14 A No, I did not. So between 8:44 and 10:18, there was a
15 series of location data points, but most of them were
16 between like 4 and 6 or 7,000 meters, so they wouldn't --
17 in my opinion, they weren't super helpful to figuring out
18 exactly where that phone was at that time.

19 Q When you see an accuracy of that big or uncertainty of
20 that big, in your opinion is that location something that
21 can be -- is that reliable information?

22 A I mean, not 100 percent reliable because it's such a
23 huge area it could be.

24 Q And, you know, going back to the last couple of slides
25 between then and now, between 8:44 p.m. and this

1 10:18 p.m., did you see any information off of Paul's phone
2 that suggests it went anywhere but staying at those
3 kennels?

4 A No.

5 Q All right. Now we're going to move on to Maggie's
6 phone, correct?

7 A Yes, sir.

8 Q So, we're going to rewind back to earlier in the day,
9 and let's look at this map. First of all, what's this map
10 generally of?

11 A This is, like, the West Ashley area, so just south of
12 Charleston.

13 Q Okay, and we see some tower hits and this starting
14 at --

15 A At 4:25 p.m., and then ending at about 7:05 p.m., the
16 phone is generally in this West Ashley area.

17 Q So, Maggie's phone in that general area until about
18 7:05 p.m.

19 A Yes, sir.

20 Q All right, and then here -- okay. This is a bigger
21 map, so let's get oriented. What is this area right here?

22 A Yeah. So, that's North Charleston that you're
23 circling here.

24 Q And Charleston down here?

25 A And Charleston just to the south of that.

1 Q And then out here, what is that red marker again?

2 A The red marker is Moselle, and the green marker is
3 Almeda.

4 Q All right, and then we see a series of hits with
5 Maggie's phone. You've label them, what, one, two, three,
6 four, and five, correct?

7 A Yes, sir.

8 Q And these start at what time?

9 A They start at 7:07 and end at 7:50.

10 Q Okay, and so generally speaking what does this
11 indicate Maggie's phone is doing to you --

12 A It's traveling from the Charleston area west towards
13 Moselle or Almeda.

14 Q Okay. All right, and here we have a hit at
15 7:50 p.m. -- 7:50:20 p.m., correct?

16 A Yes, sir.

17 Q And where is this?

18 A That's right in Walterboro, actually right here.

19 Q Right here in Walterboro, correct?

20 A Yes, sir.

21 Q And, you know, did you take a look at what appeared to
22 be Maggie's general route from Charleston out towards
23 Moselle during that time?

24 A Yes.

25 Q And what road would she most likely have been on to

1 travel that way?

2 A Route 17.

3 Q And so that route would have taken her right through
4 the center of Walterboro?

5 A It would have, yes.

6 Q I think right out here, correct?

7 A Yes, sir.

8 Q And so she's somewhere in this sector at 7:50 p.m.,
9 probably right in the middle of Walterboro, correct?

10 A Yes.

11 Q All right, and just in your analysis, did you just --
12 looking -- just looking for a rough number here, did you
13 calculate a rough or drive time from here, the center of
14 Walterboro, out to Moselle?

15 A Yeah, it was under 30 minutes.

16 Q Okay. Roughly 30 minutes give or take?

17 A Roughly, yes.

18 Q Okay, and this ping is 7:50:20 p.m., correct?

19 A Yes.

20 Q All right. Now, were there any other -- did you get
21 any more tower information off Maggie's phone for the rest
22 of the evening?

23 A No. That 7:50 p.m. was the last tower hit I received
24 that was on the records from Maggie's phone.

25 Q Okay. Now, there were some phone calls to Maggie

1 after 7:50 p.m., correct?

2 A Yes.

3 Q But were any of those answered?

4 A No.

5 Q Okay, and so you don't have any good tower information
6 for her phone after 7:50 p.m.

7 A That's correct.

8 Q All right. Now we've moved on and we're looking whose
9 phone?

10 A We're looking at Alex's phone.

11 Q Okay, and what timeframe are we talking about here?

12 A This is 4:10 p.m. to 6:25 p.m.

13 Q Okay. Let's get oriented here. This is -- the red
14 marker is what?

15 A Moselle.

16 Q And the green marker is what?

17 A Alameda.

18 Q Okay, and then the town of -- what's this town right
19 here?

20 A Hampton.

21 Q Okay.

22 A And Varnville is just south of there.

23 Q And we see some hits off these two towers between
24 4:10 and 6:25 p.m., correct?

25 A Yes.

1 Q And are you familiar with the location of the law firm
2 formerly known as PMPED?

3 A Yes.

4 Q And is that in the vicinity of Hampton?

5 A It is.

6 Q And would that be within these areas that Alex's
7 phone was to be in?

8 A Yeah. That would be consistent with the activity on
9 the phone records.

10 Q Okay, and that's up until when?

11 A 6:25 p.m.

12 Q All right, and here we are the next slide, and again,
13 orientation, green is what?

14 A Alameda.

15 Q Red is what?

16 A Moselle.

17 Q Okay, and what information do we see here?

18 A Here we have a number of calls between 6:40 and
19 9:10 p.m., and they're all using tower 159263.

20 Q And that's which tower?

21 A That's the one that's shown, which faces north and is
22 consistent with being in the area of the Moselle property.

23 Q So, starting at 6:40 p.m. you see him north in this
24 sector, which is the sector where Moselle is, correct?

25 A Yes, sir.

1 Q Okay. All right. So, here we are -- well, let me go
2 back. And the rest of these phone calls being in the same
3 sector up until 9:10:47, correct?

4 A Yes.

5 Q Okay. All right, and now what timeframe are we
6 talking about with this slide?

7 A Now we're looking at 9:12 to 9:18.

8 Q And in the 9:12 phone record, where does Alex's cell
9 phone ping? What sector?

10 A It uses Sector 3 on tower 159263, which is the one
11 closest to Moselle.

12 Q So, somewhere south or close to the border of this
13 tower, correct?

14 A Yes.

15 Q And then at 9:18 p.m. we see a ping off of this tower,
16 correct?

17 A Yes, off of 159217, which is closer to Varnville.

18 Q And it would be in the north -- most likely in the
19 north side of that tower --

20 A Yes.

21 Q -- correct? All right, and now this is the same two
22 calls, correct?

23 A It is.

24 Q All right, but now I see some -- it looks like some
25 shaded overlay over this. I'm going to give this back to

1 you.

2 A Okay.

3 Q What is that shaded overlay, and what does that mean?

4 A So, the shaded overlay is the coverage area that we're
5 able to determine from doing that drive test with our
6 equipment. And so basically we had to drive everything all
7 around these addresses and then go back and look at the
8 data, and then it creates these bubbles that show us where
9 the coverage -- where the equipment saw that tower and that
10 sector. And so here you can see that at 9:18 -- I'm sorry,
11 9:12 she's in the sector that's kind of highlighted in
12 green. And then at 9:18 it uses this one on the bottom,
13 159217 that's in pink.

14 Q Okay, and so what your drive test found is, you know,
15 you kind -- you've described it as neat sectors at the
16 beginning but in reality they're kind of more messy,
17 correct?

18 A They are a lot more messy.

19 Q And from what you found from the actual field testing
20 is you could get coverage off this tower and it looks like
21 it's just south of Varnville anywhere in this pink area,
22 correct?

23 A Yes, sir.

24 Q And that's in that particular sector. What sector is
25 that again?

1 A That's Sector 1.

2 Q All right, and then this green area, you could be
3 anywhere in this green area and potentially be getting
4 coverage from this tower up north towards Moselle, correct?

5 A Yes.

6 Q And now there's some overlap, though --

7 A There is.

8 Q -- correct? So, there's some areas where a phone
9 could potentially connect to either tower, correct?

10 A That's correct.

11 Q And --

12 A But in 2 minutes -- I mean, the -- I'm sorry, the
13 calls are 6 minutes apart --

14 Q Right.

15 A -- so, I mean, within 6 minutes the phone used both of
16 these sectors at the same time.

17 Q Okay, and just as a final point, the sectors aren't
18 exactly black and white neatly drawn, correct?

19 A Correct.

20 Q And so in reality, like this little green corner above
21 this tower, that phone could be in that area and still be
22 pinging off this sector of the tower, correct?

23 A Yes. Absolutely, yes, sir.

24 Q And this coverage is something that -- you told this
25 jury about the driving test, correct?

1 A Correct.

2 Q And that's when you guys went out with actual
3 equipment to measure the coverage in all of these areas,
4 correct?

5 A Yes, sir. We drove all these roads, and again that
6 equipment every few seconds it's recording the GPS point,
7 and then it is measuring the signal level from all of the
8 towers and sectors in that area. And then what I do is I
9 go in and I can read the tower and sector that was used by
10 looking at the call detail records, and I can go in and
11 select the covering area, or this blob, for that tower and
12 sector.

13 Q So, let's go on to the next slide. And we see now we
14 have some information starting at what, 9:20:34, correct?

15 A Yes, sir. So, at 9:20 -- from 9:20 to 9:46 there's a
16 handful of calls all using tower 159217, but using Sector 2
17 that kind faces towards the Alameda address.

18 Q Okay.

19 A And then there's one RTT hit at 2 -- at 9:34 at about
20 2.09 miles, which is consistent with being in the area of
21 the Alameda residence.

22 Q Okay, and that starts at -- he's -- that phone is
23 within the sector starting at what time?

24 A 9:20.

25 Q And it -- the last phone call in that sector is what

1 time?

2 A 9:46.

3 Q And Almeda is in that sector, correct?

4 A It is.

5 Q But if a car were driving up this road towards
6 Varnville, and I believe that's Highway 378 -- or 278,
7 excuse me, that's still on that same sector, correct?

8 A It is.

9 Q Okay. So, if someone is in that vehicle on that 278
10 right there in that sector, you would get the same
11 information.

12 A Yes.

13 Q So, at 9:46 if a car has already left Almeda and were
14 on 278, it would still ping at that same --

15 A It should, yeah.

16 Q All right. We'll go on to the next slide. This is
17 still Alex's phone, correct?

18 A It's just a zoom-in version of the last slide.

19 Q Okay. So, it's the same information but looking
20 closer, and I probably should have made some of those
21 points on this one, but we see that road 278 here, correct?

22 A Yes, sir.

23 Q Within that sector, and there's Almeda. It's also in
24 the same sector, correct?

25 A It is.

1 Q All right, and so in theory unless it -- for the RTT
2 hit at 9:34, the phone could be anywhere in this arc,
3 correct?

4 A It could be anywhere in that arc.

5 Q And for the rest of these hits, it could be anywhere
6 within this whole sector?

7 A It could be anywhere between this tower and sector and
8 then the next one in that direction.

9 Q Okay. All right. We'll go back. This is the next
10 slide, and this again is Alex Murdaugh's phone, correct?

11 A Yes, it is.

12 Q All right, and we see some hits starting at
13 9:52:59 p.m., correct?

14 A Yes, sir. So, 9:52:59 the phone was using the sector
15 with the 240 in it, so it's not using the one that faces
16 towards Almeda yet -- I'm sorry, towards Moselle yet.

17 Q And the red -- what's the red?

18 A It's Moselle.

19 Q And the green?

20 A Is Almeda.

21 Q Okay. So, just in the previous slide we saw the phone
22 down here in the area of Almeda, correct?

23 A Yeah. It was using that tower near Almeda but facing
24 Almeda.

25 Q And by 9:52 p.m. -- 59 p.m., Alex's phone is ping

1 off of the -- this tower right by Varnville, correct?

2 A I'm sorry, can you repeat the question?

3 Q Which tower is --

4 A At 9:52 and 9:53 the phone is using the tower closer
5 to Moselle, but on the sector facing towards Varnville.

6 Q Okay, and then we have a 10:06 hit, 31, correct?

7 A Yes, sir.

8 Q And do you recall what particular phone call was
9 placed from Alex's phone on 10:06 and 31?

10 A That was the 911 call.

11 Q All right, and it hits off of which tower?

12 A It hits off the tower closer to Varnville.

13 Q Okay, but then at 10:17 there's another hit with
14 Alex's phone, and which sector is it pinging off of at
15 10:17?

16 A That's using the zero azimuths, or the Sector 1 that
17 faces towards Moselle.

18 Q So, that initial 911 call hit off this tower down --
19 way down here by Varnville, correct?

20 A It did.

21 Q All right, and that was one of the reasons you were
22 called in to help figure out why that happened, correct?

23 A I was, and I figured out why it happened. It's
24 because somebody -- so in radio frequency, the higher the
25 frequency the shorter distance that it can travel. The

1 lower the frequency the longer it does travel. So, on this
2 tower there's two different sets of sectors, and one is at
3 a higher frequency and one is at a lower frequency. So,
4 this call here happened on the lower frequency and,
5 therefore, the signal can travel slightly further.

6 Q So, it's -- in your opinion, it's consistent the phone
7 could have been up here at Moselle at the time of that
8 10:06 911 call.

9 A It could have been, yes.

10 Q Okay. Next slide. And we're going to come up on it
11 in a little bit, but do you have some more detailed map
12 showing the actual call direction?

13 A Yes. I think.

14 Q This is it?

15 A Yes, sir.

16 Q All right. So, what information do we see on this
17 slide?

18 A So, this is the tower and sector being used on 9:52
19 and 9:53, and again this blob shape here, that's the
20 coverage area for that tower. As you can see, it's a big -
21 - mostly in the center here, but there are some dots out
22 mostly that kind of faces towards Varnville.

23 Q Okay, and the calls at 9:52, 9:53 occurred somewhere
24 within this sector, correct?

25 A Yes, it did.

1 Q And that line with this slightly shaded area
2 represents the actual real coverage that you went up and
3 measured where that phone could have been during that time.

4 A That's correct.

5 MR. CONRAD: Next slide.

6 Q All right, and we zoomed in here, correct?

7 A Yeah. So, we zoomed in again. Now we're zoomed in
8 kind of on the Moselle property just showing that there's a
9 couple little specks of coverage there from this tower and
10 sector on that property.

11 Q And again, which tower is this? This is the tower
12 that's closest to Moselle, correct?

13 A It is, yes.

14 Q But it -- you do actually see some actual coverage
15 area right there on the farm, correct?

16 A Yes.

17 Q Okay, and the red is right there, correct?

18 A Yes, the red is Moselle.

19 Q Okay.

20 MR. CONRAD: Next slide.

21 Q And here we are, we're zoomed back out. Again, red is
22 Moselle. And this is that tower just down south of
23 Varnville, correct?

24 A It is. So, that's the tower south of Varnville, or
25 near Varnville facing north, and this is for the 911 call,

1 again on that lower frequency, so the signal goes a lot
2 further. Actually there's little specs all the way up here
3 to Yemassee.

4 Q Okay. So, this is Varnville, this is Moselle, and
5 this is the coverage that you actually went up -- excuse
6 me -- and measured in real -- with real equipment --

7 A Yes, sir.

8 Q -- and you determined all of these shaded pink areas,
9 if a phone could be covered in this tower sector in these
10 pink areas?

11 A Yes.

12 Q And we see some of that pink area up right by Moselle,
13 correct?

14 A We did, yes.

15 MR. CONRAD: Next slide.

16 Q All right. This is a 10:17 ping, correct?

17 A Yes.

18 Q And it's in that sector, now we're back to the tower
19 that's closest to Moselle, correct?

20 A It is.

21 Q And that's that north facing sector.

22 A Yes, it is.

23 Q All right.

24 MR. CONRAD: Next slide.

25 Q All right, and here we see again that 911 call at

1 10:06:31 p.m., correct?

2 A Yes, sir.

3 Q That originally pinged off of this Varnville tower,
4 correct?

5 A Yes.

6 Q But we see this is the two coverages overlay between
7 these two towers that both have coverage at Moselle,
8 correct?

9 A Yes, it is.

10 Q And you see some of that pink from that Varnville
11 tower up right on the Moselle property, correct?

12 A Yes.

13 Q Okay, but you see more from the green -- from this
14 tower sector that covers that same property, correct?

15 A That's correct.

16 MR. CONRAD: Next slide.

17 Q And here we're zoomed in, correct?

18 A Yeah. We're zoomed in now and then we have both of
19 the coverages showing. So, we're showing the pink, which
20 is from that tower down by Varnville facing north, and then
21 the green, which is from the tower right here close to
22 Moselle also facing north. And you can see there's
23 coverage from both of those towers actually in the area of
24 the kennels.

25 Q Okay, and in your opinion, that phone could have been

1 right in that area for both of these phone calls at 10:06
2 and 10:17 p.m.

3 A Yes.

4 Q And that's Alex's phone, correct?

5 A Yes.

6 Q And it does appear there's more coverage from the
7 green sector off of this closer tower. Isn't that correct?

8 A There is.

9 Q All right.

10 MR. CONRAD: Next slide.

11 Q Okay, and this is just the remainder of the night for
12 Alex's phone, correct?

13 A It is. Again, 10:19 to 11:18 p.m., and the phone
14 mostly uses that tower closest to Moselle. There is
15 another hit at 10:21 on the tower near Varnville.

16 Q Okay. Next slide. All right, and then continuing,
17 what's the date on -- this is the next day at 6/8, correct?

18 A Yes. So, this is June 8th starting at 6:31 a.m.,
19 ending at 8:54 a.m., and the phone is using the tower
20 sector consistent with being in the area of Alameda.

21 Q Okay. So, this is the morning after the murders,
22 correct?

23 A It is.

24 Q All right.

25 MR. CONRAD: Next slide.

1 Q And this is continuing the same -- this is the next
2 day, June 9th of 2021, correct?

3 A It is. Same tower, same sector, time period is
4 7:52 a.m. to 8:36 a.m.

5 Q All right.

6 MR. CONRAD: Next slide.

7 Q All right, and here we see some information from
8 June 10th of 2021, correct?

9 A Yes, sir. From 3:32 a.m. to 8:49 a.m., basically
10 using the same tower and sector here just to the left of
11 Almeda, except for this RTT hit at 3:32 in the morning
12 where that band overlays on top of the Almeda address.

13 Q Okay.

14 MR. CONRAD: Next slide.

15 Q And now we're on June 11th for Alex's phone, correct?

16 A Yes. Again, in the morning, 3:52 a.m. to 8:15 a.m.,
17 and it's using the tower and sector consistent with being
18 near Almeda.

19 Q Okay.

20 MR. CONRAD: Next slide.

21 Q And this is June 12th of 2021?

22 A Yep. 1:41 a.m. to 8:14 a.m., again using that same
23 tower and sector near Almeda.

24 MR. CONRAD: Next slide, please.

25 Q June 13th of 2021 for Alex's phone, correct?

1 A First call in the morning is at 9:09 a.m., and again
2 using the same tower and sector consistent with Alameda.

3 Q Okay.

4 MR. CONRAD: Next slide.

5 Q Now we're on June 14th, correct?

6 A Yes, sir.

7 Q And what are the times do we see in these pings?

8 A 12:04 a.m., and then 9:53 and 9:55 a.m., again using
9 that same tower and sector consistent with Alameda.

10 Q Did you see any phone calls from Alex's phone between
11 12:00 a.m. and 9:53 that you were able to get tower
12 information --

13 A No.

14 Q -- on that day?

15 A No, sir.

16 Q Okay.

17 MR. CONRAD: Next slide.

18 Q This is June 14th later in the day, correct?

19 A It is. 10:27 to 12:29 p.m. 10:27 a.m. to 12:29 p.m.,
20 and that was using the tower facing north out of Varnville,
21 but also using the tower facing out into Hampton.

22 Q Okay.

23 MR. CONRAD: Next slide.

24 Q All right, and this is June 14th continued. And does
25 that phone remain in the area of Alameda the rest of

1 June 14th at least until 4:26 p.m.?

2 A Yes.

3 Q Okay.

4 MR. CONRAD: Next slide.

5 Q All right, and then here we're on June 14th?

6 A Yeah.

7 Q And starting at 4:33 p.m. up to 6:08 p.m., where do we
8 see Alex's phone move generally?

9 A It moves generally from there just south of Alameda
10 over towards Charleston.

11 Q Okay, and that's this area up here. And it
12 specifically -- I don't know if you can read it, but
13 what is that area? Can you read that place name where that
14 last tower is on the map?

15 A Is it Summerville?

16 Q Does that say Summerville?

17 A I think so.

18 Q All right.

19 MR. CONRAD: Next slide.

20 Q Okay. June 14th continued?

21 A Yes.

22 Q And this is up in the area that -- the same.
23 Summerville, correct?

24 A Yes. This is in the area of Summerville. So, between
25 6:08 p.m. on the 14th and 8:00 p.m. on the 15th, all of the

1 calls hit that tower and sector in Summerville.

2 Q Okay.

3 MR. CONRAD: Next slide.

4 Q All right, and then on June -- later that June 15th,
5 what do we see the phone do on June 15th?

6 A It travels from Summerville back to Hampton between
7 8:10 a.m. and 11:40 a.m.

8 Q Okay.

9 MR. CONRAD: Next slide.

10 Q All right, and then now we're on June 15 for Alex's
11 phone, and what two towers is his phone pinging off of for
12 most of the day?

13 A Again, the one in Varnville facing north, and the one
14 in Hampton facing toward Varnville.

15 Q Okay.

16 MR. CONRAD: Next slide.

17 Q And then finally June 15th, and his phone is
18 consistent with remaining in the area of Almeda during
19 those times, correct?

20 A Yes.

21 Q And those are 12:35 p.m. to 2:33 p.m., correct?

22 A Yes.

23 MR. CONRAD: Next slide.

24 Q Okay, and just real quickly for these last three
25 slides, you also received the records of C.B. Rowe and

1 Marty Cook, correct?

2 A Yes.

3 Q And you reviewed them for the night of the murders,
4 correct?

5 A I did.

6 Q And in your opinion from the information you could see
7 from their call records and their tower information, were
8 any of those phones in the vicinity of the murder location
9 between 8:50 p.m. and 9:00 p.m.?

10 A No.

11 MR. CONRAD: All right. Nothing further from the
12 State.

13 THE COURT: Let's all stand for a moment.

14 (Break in proceedings.)

15 THE COURT: Ladies and gentlemen of the jury, if
16 you'll go to the jury room for a break.

17 (The jury left the courtroom.)

18 THE COURT: We'll be in recess for about 10 minutes.

19 (A break was taken.)

20 THE COURT: You may bring the jury.

21 (The jury returned to the courtroom.)

22 THE BAILIFF: The jury is present, sir.

23 THE COURT: All right. Thank you.

24 Mr. Barber?

25 MR. BARBER: Thank you, Your Honor.

1 CROSS-EXAMINATION

2 BY MR. BARBER:

3 Q Good afternoon, Agent Wild.

4 A Good afternoon, sir.

5 Q I don't think I'll have many questions; this won't
6 take long at all. We were looking at a lot of maps and
7 they had a lot of time stamps, and I think they were
8 referred to as pings sometimes.

9 A They're not pings. They are --

10 Q Okay. What are they?

11 A They're activations on the record. So, whether they
12 be incoming or outgoing phone calls, or there's RTT
13 activations, which are slightly different, or the other
14 things with Paul's phone. Those are like the iPhone
15 location data records.

16 Q But we're looking at calls, text messages. Will the
17 text message always make one of those time stamps?

18 A No. So on Verizon, which all of the phones in this
19 case were, with Verizon we're not going to get call detail
20 records. We're not going to get location data with the
21 text messages. It's just the way they're designed.

22 Q Okay. I just wanted to be clear when we said that
23 there weren't any more calls coming into Maggie Murdaugh
24 after 7:00 that there were some text messages, but if there
25 were, they wouldn't show up.

1 A Correct. They wouldn't show up in her call details
2 records with cell tower information.

3 Q Right. What would it like look on these maps if a
4 call -- well, let me ask this. Do calls hand off between
5 towers while they're still going on?

6 A They do.

7 Q And what would that look like on these maps?

8 A So, it would -- it look the same way it looks like
9 now. So, again, when -- before the call is even set up --
10 so, if my phone was on in this room right now, my phone is
11 constantly scanning the environment. It's trying the tower
12 and sector with the strongest signal. Okay? It's very
13 much like sitting in the airport trying to find the best
14 Wi-Fi to connect to while you're waiting on your flight.
15 So, what happens with a call hands off between towers
16 during a call is the records like look they look. It's
17 still going to show the initial tower and sector that the
18 phone saw as the best tower and sector at the time the call
19 occurred, and then after that -- let's say the call is an
20 hour long and I drive from here to Columbia. You know, I'm
21 going to hand off tower to tower to tower, but on Verizon
22 I'm not going to see that hand off in the records.

23 Q Right, and that, I guess, was my question is you're
24 just going to see that first tower. So, if you're handed
25 off, like, Tower 1 to 2 to 3, you're not going to see on

1 the same calls hits on Towers 2 and 3 on this map.

2 A Correct. You're only going to see the initial.

3 Q And do the coverage areas intentionally overlap to
4 some degree to allow for hand offs?

5 A Yes.

6 Q And we saw GPS data for Paul Murdaugh's phone.

7 A Yes.

8 Q Did you have any GPS data for Maggie Murdaugh's phone?

9 A I did not. There was nothing in the location database
10 for the time period that was questioned.

11 Q Do you know why that was?

12 A It's either something Paul was running on his phone
13 that generated it, or a lack of something that Maggie
14 wasn't running on her phone that did not generate it. I
15 really don't know the answer to that.

16 Q I mean, so the answer would be that you don't know.

17 A I don't know, yes, sir.

18 Q What about Alex Murdaugh's phone?

19 A There was nothing during the time period.

20 Q So, you mentioned that you've testified as an expert,
21 I think, in over 100 cases?

22 A Yes, sir.

23 Q And in some of those other cases, were you able to
24 show phones moving together?

25 A Sometimes we are, yes.

1 Q Were you able to do that in this case?

2 A I did not do that in this case.

3 Q When you're doing the drive-around to create that sort
4 of coverage map, did you go onto the Moselle property?

5 A I did.

6 Q Was that with the consent of Alex Murdaugh?

7 A Yes, I believe so.

8 MR. BARBER: Could we pull up Slide 35?

9 Q Can you see the screen?

10 A I can.

11 Q And I think the previous testimony was that this
12 10:06:31 call was the 911 call?

13 A Yes.

14 Q I just want to ask about that time stamp because we
15 heard from someone from the FBI yesterday the 911 call was
16 actually placed at 10:06 and 18 seconds, so what would
17 account for the 13 seconds difference between the two?

18 A I guess it depends on the records you're looking at.
19 It would be -- there might be a slight offset between the
20 records the other person was looking at and the records I
21 was looking at.

22 Q And the 911 call center, of course, would have a time
23 stamp on the incoming calls --

24 A Correct.

25 Q -- correct? Have you ever seen cases where there's a

1 few seconds difference in between those time stamps and
2 this kind records and what the 911 center might have?

3 A Yes, sir. I mean, there's a -- there's a difference
4 between when you press the green button and it usually
5 takes a couple of seconds to connect on the other side.

6 MR. BARBER: And could we on the ELMO go to slide 56?

7 Q And the reason I would like to do this on the ELMO is
8 I think that the presentation was cutting off the bottom of
9 the screen.

10 A It was.

11 Q And this -- we see the top so we can kind of get
12 context for what this is.

13 MR. BARBER: Just, yeah, slide it down so that the top
14 is visible.

15 Q So, this was Alex Murdaugh information, and this was
16 on June 15, 2021, correct?

17 A Yes, sir.

18 Q And do you know that was a Tuesday?

19 A I don't.

20 MR. BARBER: Can we scroll so we can see the bottom?

21 Q It says that activity after 2:33 p.m. indicates travel
22 to Summerville. Is that correct?

23 A Yes, sir.

24 Q Okay. Do you have any data after that? Is that the
25 end of the data that you have regarding Alex Murdaugh?

1 A Is that the last slide?

2 Q Do you have -- so this is slide 56 that we're looking
3 at.

4 A Yeah, there was other data after that.

5 Q And do you have location data for Alex Murdaugh after
6 June 15th?

7 A I think so. I think --

8 Q In this report?

9 A Not in this report, no.

10 Q So, in this report -- I'm sorry because that's what
11 we're looking at here --

12 A Yes, sir.

13 Q -- because I understand, of course, you have cell
14 phone records. He kept using his cell phone obviously
15 after the 15th.

16 A Yes, he did.

17 Q But for what's being presented for the jury, the last
18 entry is, I'll represent to you, Tuesday, June 15 is the
19 end of what you have.

20 A Yes, it is.

21 Q And he's going to Summerville.

22 A Yes, sir.

23 Q And finally the last two or three slides, we don't
24 need to show them. There was some information for some
25 other people, a C.B. Rowe and a Marty Cook.

1 A Yes, sir.

2 Q Why did you have -- why were you looking at
3 information for them?

4 A I was requested to look at the information for them
5 for the night of that incident.

6 Q Were you requested to ever look at information for an
7 Eddie Smith or Spencer Roberts?

8 A Eddie Smith sounds familiar, but I'm not sure about
9 Spencer Roberts.

10 Q Did you look at information regarding Eddie Smith?

11 A Yes.

12 Q Do you have that information with you?

13 A I do not.

14 Q You do not have the information?

15 A I don't have it with me, no.

16 MR. BARBER: Beg the Court's indulgence.

17 (Break in proceedings.)

18 MR. BARBER: No further questions, Your Honor.

19 THE COURT: By the State?

20 MR. CONRAD: Just briefly.

21 REDIRECT EXAMINATION

22 BY MR. CONRAD:

23 Q Agent Wild, you were asked by Mr. Barber whether
24 you've been able to pinpoint two phones together in other
25 cases, correct?

1 A Yes.

2 Q Generally speaking, what kind of data are you using
3 when you try to -- have been able to pinpoint two phones
4 together at the same time?

5 A I mean, first of all, the two phones have to have
6 activity around the same time, so you would have to have
7 calls at 9:00 on one phone and calls at 8:58 or 9:00 on the
8 next phone. That's first thing you would have to do. The
9 second thing is it would have to be indication the phones
10 were traveling together or stationary at the same place at
11 the same time.

12 Q Okay, and after 7:50 p.m., was there any Verizon
13 location tower information provided by Verizon?

14 A There was not on Maggie Murdaugh's phone. There was
15 not.

16 Q So, you wouldn't be able to provide any opinion as to
17 whether her phone was near any other phone in the world
18 after 7:50 p.m., correct?

19 A That's correct, because there's no data to compare it
20 against --

21 Q Okay. All right.

22 MR. CONRAD: Nothing further from the State.

23 MR. BARBER: I beg the Court's indulgence one moment.

24 (Break in proceedings.)

25 MR. BARBER: No further questions, Your Honor.

1 THE COURT: Thank you, sir.

2 THE WITNESS: Thank you.

3 (The witness exited the stand.)

4 THE COURT: Your next witness?

5 MR. FERNANDEZ: State calls Nathan Tuten.

6 The witness, NATHAN TUTEN, was first duly sworn and
7 testified as follows:

8 THE CLERK: Take a seat in the witness stand. Pull
9 the mic down to you. State your name again for the record.
10 Spell your last name.

11 THE WITNESS: Nathan Tuten, T-u-t-e-n.

12 DIRECT EXAMINATION

13 BY MR. FERNANDEZ:

14 Q Nathan, good afternoon. How are you doing?

15 A Good, how about you?

16 Q Doing well. Why don't you tell this jury a little bit
17 about yourself, where you grew up, where you went to
18 school, start there.

19 A I'm from Hampton, South Carolina. I graduated from
20 Wade Hampton High School in 2018. I have a degree in
21 criminal justice from the University of South Carolina.
22 Graduated in '21.

23 Q And, Nathan, it's hard to pick up you on the mic, so
24 if you would, I know it's -- pull it as close as you can
25 and just try to speak into it so we can all hear you.

1 Okay. So, I think you said you graduated high school in
2 2018, and you got a degree from where?

3 A The University of South Carolina.

4 Q And what field was it in?

5 A Criminal justice.

6 Q And what year did you graduate USC?

7 A '21.

8 Q And what do you currently do for a living?

9 A I'm a law enforcement officer.

10 Q Okay. With what organization?

11 A Waltherboro Police Department.

12 Q All right, and describe your job responsibilities.

13 What you do as a Waltherboro police officer?

14 A I enforce the laws of the state and serve and protect.

15 Q Do you work in road patrol right now?

16 A Yes, sir.

17 Q All right. Nathan, growing up in this area, were you
18 childhood friends with Paul Murdaugh?

19 A That's correct.

20 Q When is the first time you met Paul?

21 A Lifelong friends, very young age.

22 Q Growing up in Hampton, knew him as a kid?

23 A That's correct.

24 Q Well, tell us a little bit about Paul. What do you
25 remember about him. Tell us the kind of guy he was.

1 A Paul was the definition of a good person and a good
2 friend. He was very loyal, salt of the earth kind of guy.
3 He would do anything for you at any given moment no matter
4 the time.

5 Q And what kind of things that Paul -- you all liked to
6 do together?

7 A We liked to hunt, fish, and just hang out with
8 friends.

9 Q Okay. Was Paul the kind of guy, the kind of friend
10 that you would kind of call a reliable friend?

11 A Absolutely.

12 Q All right. Was he the kind of kid that would be there
13 for you if you needed help with anything?

14 A Absolutely.

15 Q How close -- did you spend a lot of time together with
16 Paul through the years?

17 A I did, yes, sir.

18 Q Did Paul have a cell phone?

19 A Yes, sir.

20 Q Did he like to use his cell phone?

21 A Yes, sir.

22 Q How would you describe it?

23 A He was on his phone all the time.

24 Q Okay. In addition to being on his phone all the time,
25 was he the kind of guy that if you needed something or

1 reached out to him, he was going to respond back to you?

2 A That's correct.

3 Q Was he going to call you back if you called him if he
4 missed a phone call?

5 A Yes.

6 Q Would you expect him to pick up if you called him?

7 A Yes.

8 Q All right. Did you get to know Maggie also?

9 A I did.

10 Q All right. Tell us a little bit about her.

11 A Maggie was probably one of the sweetest ladies I've
12 ever met in my life. She always looked out for Paul's
13 friends and was a second mom to me.

14 Q And having spent a lot of time with Paul, did you also
15 spend a lot of time with Maggie?

16 A That's correct.

17 Q And then did you also get to know Alex?

18 A I did.

19 Q His dad -- is Alex here today?

20 A Yes, he is.

21 Q Can you tell me where he is?

22 A He's sitting at that table wearing a blue jacket.

23 Q And did you get to know him very well --

24 A I did.

25 Q -- through the years? Did you know the family before

1 they moved their primary residence out to the -- what we
2 call Moselle? Did you know them before then?

3 A I did.

4 Q Okay. Were you there when they moved or obtained
5 Moselle and started using that as a residence?

6 A I was.

7 Q All right. When Moselle was first constructed, how
8 many entrances and exits were there?

9 A Just one.

10 Q And which one was that?

11 A That was the one by the cabin, or the one that leads
12 to the sheds.

13 Q Okay, and the sheds meaning -- is that the dog kennels
14 and the hangar area?

15 A That's correct.

16 Q And the cabin I think you referred to, is there a
17 cabin on the -- at the front of that entrance?

18 A That's correct.

19 Q Okay, and who put the mailbox in there?

20 A I believe it was Maggie.

21 Q And tell us about that cabin. Tell us where it's
22 situated and why you know so much about it.

23 A My freshman year of college, Paul and I actually lived
24 together at the cabin.

25 Q So, it's like a small house basically?

1 A That's correct.

2 Q And, and where is it situated in regards to the hangar
3 area?

4 A A little bit closer to the highway.

5 Q How many feet, or how many -- how far away?

6 A 100 yards maybe.

7 Q And so you lived there, I think you said, for the
8 summer?

9 A Just a semester.

10 Q Semester?

11 A Uh-huh.

12 Q All right. What was -- how would you describe yours
13 and Paul's friendship? How would you -- how often would
14 you guys communicate a day?

15 A Just about every day, every day or every other day.

16 Q Phone calls?

17 A That's correct.

18 Q Text?

19 A Primarily phone calls.

20 Q And later in life, did Paul go to school?

21 A He did.

22 Q Where did he go?

23 A USC.

24 Q And that's located where?

25 A Columbia.

1 Q And did you see him whenever he would come back into
2 town?

3 A I would.

4 Q Would he come back frequently?

5 A No, sir.

6 Q At the college level, at the college years?

7 A No, sir.

8 Q When would you see him? Would you see him in the
9 summers when school was out?

10 A A good bit.

11 Q All right, and I think you mentioned before y'all did
12 a lot of fishing and a lot of hunting. Are you familiar
13 with firearms in general?

14 A I would say so.

15 Q Did you -- did Paul have any guns that he favored,
16 ones that he kept on him and kept with him most of the
17 time?

18 A He did.

19 Q All right. Well, tell us a little bit about -- you
20 know, however you want to describe those two guns.

21 A The two guns that were with us most of the time was a
22 Black 300 Blackout and a camouflage 12 gauge Super Black
23 Eagle 3.

24 Q And the black 300 Blackout, what was that firearm used
25 for primarily?

1 A Anything.

2 Q Did you use it for hunting?

3 A I did.

4 Q Now, what would you hunt with that gun?

5 A Anything.

6 Q Did it have the scope? I think you say there's a
7 scope on the top, or some sort of sight. How would you
8 describe that?

9 A Thermal scope.

10 Q Meaning you could see heat?

11 A That's correct.

12 Q Okay, and describe the Benelli shotgun that you just
13 mentioned, also. What did it look like and how did you
14 know it was Paul's?

15 A It had a very distinct digital camouflaged pattern.
16 And he had a gun strap that he has used since I've known
17 him, and that's what stayed on that shotgun.

18 Q Do you know what the differences between, you know,
19 Benelli Super Black Eagle models? And I think we've heard
20 three and two and one. Do you know the differences between
21 the various models?

22 A I do.

23 Q Okay. So when you look at it, they have distinctive
24 features on them that would tell you whether it's a three
25 or a two or a one?

1 A Very subtle differences, but yes.

2 Q But you feel comfortable that you know the difference?

3 A Uh-huh.

4 THE COURT: Is that a yes or no?

5 THE WITNESS: Yes, sir. Sorry.

6 Q I'm going to show you what's already entered in
7 evidence as State's Exhibit 88.

8 MR. FERNANDEZ: Permission to approach the witness?

9 THE COURT: Yes.

10 Q Nathan, I'm handing you what's been marked and entered
11 into evidence as State's Exhibit 88. Do you feel
12 comfortable taking this for a second and telling me if you
13 know what it is?

14 A I do.

15 Q There you go. Be aware of the muzzle.

16 A This is Paul's rifle.

17 Q Okay, and you know that because you've used this a
18 bunch of times?

19 A That's correct.

20 Q Okay. I'll also now show you what's entered into
21 evidence as State's Exhibit Number 4, which I hope is this
22 one. This is State's Exhibit 4. Do you feel comfortable
23 taking a look at this for me for a second and let me know
24 if you know which firearm this is?

25 A I do. This is Paul's shotgun.

1 Q How do you know?

2 A I've used it several times, and the distinct
3 camouflage pattern, along with Paul's gun strap.

4 Q This strap in particular is Paul's?

5 A That's correct.

6 Q How do you know this is a Model 3 Benelli Super Black
7 Eagle?

8 A Would you like me to explain?

9 Q Absolutely.

10 A So there are a few subtle differences, one being the
11 forearm grip. The Super Black Eagle 3 has a slight flare
12 or increase in curve. Another difference would be the
13 trigger magazine port has an indentation that allows you to
14 insert shotshells easier. The Super Black Eagle 2 and
15 previous models don't have that. Another difference would
16 be the button that releases the bolt, which makes the
17 weapon operable. The previous model, the original Number
18 2, are circular, whereas this one is more rectangular. The
19 easiest way to tell the difference is the label 2 and 3.

20 Q Thank you. I'm going to show you now what's been
21 entered into evidence as State's Exhibit 91. Do you feel
22 comfortable handling this gun for a second and let me know
23 if you recognize what it is?

24 A I do.

25 Q Okay. Do you recognize what this gun is?

1 A I recognize that as Buster Murdaugh's shotgun.

2 Q Okay. What model is this?

3 A A Super Black Eagle 2.

4 Q And you know it's a 2 because of other features you
5 just mentioned and pointed out to the jury?

6 A That's correct.

7 Q Would you do that again, and tell us why you know
8 that's a 2?

9 A Like I mentioned earlier, there's slight flare on the
10 3. This is straighter; one area does not have the
11 indentation for the magazine port, and the button is
12 circular.

13 Q And you said it was Buster's shotgun. How do you know
14 that?

15 A The Mojo sticker on the barrel.

16 Q The sticker at the top of the barrel there?

17 A That's correct.

18 Q You are familiar with it, Mojo?

19 A That's correct.

20 Q Did Alex have a gun that he favored, a shotgun?

21 A He did.

22 Q What was one that he favored?

23 A It was a Super Black Eagle original, a black shotgun.

24 Q Are you familiar -- did Paul have a 300 Blackout rifle
25 prior to the black one you just identified?

1 A That's correct.

2 Q All right. Were you familiar with what happened to
3 that firearm, the original one?

4 A I am.

5 Q All right. Tell us the story.

6 A It was a party and he had -- it was a -- there was a
7 black 300 Blackout and a tan 300 Blackout. He had the tan
8 one and it got stolen from a party one night.

9 Q Can you speak up?

10 A It was stolen from a party one night.

11 Q Do you know what year that was, approximate year?

12 A I would say early 2018.

13 Q And that was the -- that firearm that was stolen was
14 what color again?

15 A Tan.

16 Q Tan. All right. At what point in the Moselle
17 property was the -- what year, approximate year was the
18 second entrance created, that one with the brickwork?

19 A I'm not sure.

20 Q It was a few years, though, after they owned the
21 property, the family had owned the property?

22 A That's correct.

23 Q Was it common to use either entrance by the family to
24 leave and enter the property?

25 A Yes and no.

1 Q All right. Well, explain.

2 A Paul and I would use -- and friends would use the
3 entrance by the sheds more, whereas Alex and Maggie would
4 use the main gate entrance more.

5 Q If you all -- and let me ask you. What was going --
6 what was the -- before we get to my next question, the
7 hanger area with the kennels, are you familiar with it?

8 A That's correct.

9 Q Would you describe to the jury just the very basic
10 layout of that area?

11 A It was kennels as you were riding into the driveway.
12 The kennels would be on your left, the shed or hangar would
13 be directly on your right. There was another shed that
14 they had built in front of the hangar, and there was a skin
15 shed for animals at the right.

16 Q And would you spend a lot of time down at the hangar
17 area and kennel area?

18 A We would.

19 Q Why would y'all hang out there? Why was that the --
20 kind of the collection place?

21 A It was just a central location where everything was
22 located.

23 Q Tools?

24 A Correct.

25 Q And fire -- farm equipment?

1 A Correct.

2 Q If you all were spending time down at the kennels and
3 someone was leaving the house, would it be common for them
4 that someone, whether it's, you know, Alex or Maggie, to
5 stop by on their way out leaving the property?

6 A Yes, sir.

7 Q That would be what would normally happen?

8 A Yes, sir.

9 Q I'm going to play what's been marked as -- I'm going
10 to show you what's been -- not marked but entered into
11 evidence was State's Exhibit 297. If you would, if you
12 have a little screen there, if you wouldn't mind watching
13 that for me and listening.

14 (The video was played. Audio not transcribed.)

15 Q Could you hear voices on that video that we just
16 played?

17 A I do.

18 Q Whose voices did you hear?

19 A Paul Murdaugh's, Maggie Murdaugh's, and Alex
20 Murdaugh's.

21 Q Could you tell where they were located in that video?
22 Did you get a sense of where that was?

23 A Dog kennels.

24 Q The kennels down at the hangar area?

25 A That's correct.

1 Q We heard yelled out a name called Bubba. Are you
2 familiar with Bubba?

3 A I am.

4 Q Who's Bubba?

5 A Paul's dog.

6 Q All right. What kind of dog is he?

7 A A yellow lab.

8 Q Is he a trained -- or was he a -- was he house pet or
9 a pet?

10 A At that time, yeah.

11 Q Was he also trained to hunt or be a hunting dog or
12 bird dog?

13 A That's correct.

14 Q Did Bubba have a -- well, describe Bubba. How would
15 you describe Bubba?

16 A Hard-headed.

17 Q Did Bubba have a thing where he liked to chase
18 chickens?

19 A I would say yeah.

20 Q If a chicken got out of the pen, would he chase it?

21 A That's correct.

22 Q Have you ever been there when he caught chickens?

23 A He would chase anything.

24 Q Were you ever there when he caught birds, though, that
25 would come down to that coop?

1 A He's tried. Would I say I've seen him? No.

2 Q Were you aware then that Bubba -- were you aware that
3 Bubba would chase those chickens?

4 A Absolutely.

5 Q And had you been aware that he'd killed chickens
6 before by getting them?

7 A I have.

8 Q Have you ever had to wrestle anything out of Bubba's
9 mouth and try to catch him when he doesn't want to get
10 caught?

11 A Tried to catch him.

12 Q And if he doesn't want to be caught, what's going to
13 happen?

14 A You're not catching him.

15 Q Did you begin working at the law firm we've heard
16 called PMPED?

17 A That's correct.

18 Q All right. When did you start working there?

19 A I believe it was February of 2019.

20 Q Okay, and what was your job there?

21 A I was a runner.

22 Q Runner for the law firm in general?

23 A That's correct.

24 Q Without specifically -- not, you know, talking about
25 the work you did for Alex, but what kind of work would you

1 do there generally?

2 A Be a courier for court documents to different
3 courthouses and law offices across the state. Assist
4 paralegals and attorneys with really whatever they needed.
5 Just help around the office.

6 Q And you worked there from 2019 until -- when is the
7 last time you worked there?

8 A I want to say it was May of '21.

9 Q Okay. So after -- so May of 2021 or --

10 A Excuse me, 2022.

11 Q 2022. So, you would have continued to work there
12 through the tragic events of June 7, 2021?

13 A That's correct.

14 Q So, you saw the upheaval at the law firm as well? You
15 witnessed that?

16 A That's correct.

17 Q Nathan, I'm going to direct your attention to the
18 weekend leading up to June 7th. Could you tell us little
19 bit about the -- any communications you would have had with
20 Paul leading up to June 7th? Did y'all talk any leading up
21 to it?

22 A To the best of my memory, we spoke that Saturday; I
23 think he called me over the weekend.

24 Q Did it seem like a normal conversation?

25 A Yes, sir.

1 Q And what were y'all talking about?

2 A He was going to Charleston, I believe, and he was
3 talking on the way.

4 Q Is that the last time you talked to Paul?

5 A That's correct.

6 Q How were you made aware of what happened? How did you
7 find out?

8 A I received a phone call from my mother the night of.
9 I'm not sure how she knew, but shortly after I received a
10 phone call from one of the law partners that told me.

11 Q And they called you because they knew you were close
12 with Paul?

13 A That's correct.

14 Q Where were you living at the time?

15 A I was living with another friend of mine in Allendale
16 County.

17 Q And did you go out there that night?

18 A I did not.

19 Q Did you attend he funeral and wake?

20 A I did.

21 Q Is that the last time you went to Moselle?

22 A Yes, sir.

23 Q After these events, how did it affect you?

24 A It was hard. He was a really good friend and a really
25 good person.

1 Q After these events, I think you said already, but you
2 continued to work at the law firm?

3 A That's correct.

4 Q How -- was Alex, was he out of the office during --
5 for some time after this event on June 7th?

6 A That's correct.

7 Q Did he eventually start coming back into the office?

8 A A little bit.

9 Q Did you have an opportunity or an occasion, or
10 multiple occasions, to do running for Alex?

11 A Yes, sir.

12 Q And this is both -- this would be before the murder?

13 A That's correct.

14 Q Tell us a little bit about what Alex would have you
15 do.

16 A If I need to pick up court document from different law
17 firms or courthouses, drive him to depositions, cash
18 checks, simple things.

19 Q Sorry, you said cash checks?

20 A That's correct.

21 Q He had you cash checks for him?

22 A That's correct.

23 Q All right. Well, tell me. Where would he send you to
24 cash the checks?

25 A Palmetto State Bank.

1 Q What were your instructions for that?

2 A Cash a check.

3 Q And what would you do with the money?

4 A Take it back to his office and --

5 Q Like cash?

6 A That's correct.

7 Q Was it in an envelope or were you just holding it?

8 A It was in a Palmetto State envelope.

9 Q And you would take that envelope of cash, and where
10 would you bring it?

11 A Back to his office.

12 Q All right, and just hand it to him?

13 A That's correct.

14 Q How many times did he have you cash checks like that?

15 A Very frequently.

16 Q Very frequently?

17 A Correct.

18 Q Many times?

19 A Many times.

20 Q Was there ever a time when you cashed that check there
21 was a roomful of -- or, I mean, has there ever been a time
22 when you cashed the back, brought it back to Alex's office,
23 and there was someone in his office?

24 A That's correct.

25 Q Multiple people, right? Is that correct?

1 A Correct.

2 Q Tell us who those folks were that you -- would have
3 been there when Alex was sending you to get cash, coming
4 back with the cash and there is someone sitting in his
5 office.

6 A It was different occasions. One particular occasion
7 was Greg Alexander.

8 Q Who is he?

9 A I believe he's the chief of police for Yemassee.

10 Q Okay.

11 A Cory Fleming.

12 Q Do you know Cory Fleming?

13 A I do.

14 Q What did he do?

15 A He was an attorney as well. He was Alex's best
16 friend.

17 Q Okay, and who else?

18 A And Chris Wilson.

19 Q Do you know who Chris Wilson is?

20 A I do.

21 Q Who is he?

22 A He's an attorney in Bamberg, I believe.

23 Q When did Alex stop asking you to cash checks? What
24 was the timeframe?

25 A I believes it was a few weeks before the murders,

1 so --

2 Q A few weeks. You've been doing this a lot, and a few
3 weeks before the murder he asked you -- he doesn't ask you
4 to cash any more checks.

5 A That's correct.

6 Q Did you have an opportunity, or were you assigned to
7 assist -- or let me ask you this. Do you know who Jeannie
8 Seckinger is?

9 A I am.

10 Q And who is she, and who was she at the time to you
11 back in 2021?

12 A She was my immediate supervisor.

13 Q And were you ever -- after the events of June 7th,
14 were you assigned and tasked to assist her in her
15 investigation of financial improprieties within the firm?

16 A In some ways, yes.

17 Q All right.

18 MR. FERNANDEZ: Beg the Court's indulgence.

19 (Break in proceedings.)

20 Q All right, and continuing, you were assigned to assist
21 Jeannie, and what kind of things were you doing in that,
22 you know, capacity?

23 A We would look through different cases. She would have
24 me get cases from probate court, go through and highlight
25 clear checks and if I found a discrepancy, to bring it to

1 her.

2 Q Did you understand the scope and, and what you were
3 looking for? Did she kind of involve you in that?

4 A Somewhat.

5 Q Did you figure out kind of shortly thereafter what you
6 were looking for, or what the reason was?

7 A I would say so.

8 Q I'm going to direct your attention to July of 2021,
9 specifically July 4th -- or the July 4th timeframe. Do you
10 have that in your brain?

11 A I do.

12 Q Did you drive Alex to the airport?

13 A I did.

14 Q Tell us about that. Why did you drive him to the
15 airport?

16 A Well, at the time I was still a runner and he asked me
17 to give him a lift to the airport, so that's what I did.

18 Q Where was he going?

19 A I believe he was going to the Florida Keys with
20 Maggie's family.

21 Q So, he's going on vacation to the Keys on July 4th
22 weekend, or July 4th timeframe?

23 A That's correct.

24 Q And did you, in fact, drive him to the airport?

25 A That's correct.

1 Q Did you have a chance -- did he say anything to you on
2 that ride to the airport?

3 A We talked.

4 Q Did he tell you anything about the boat case?

5 A He did.

6 Q What did he say?

7 A He said that he would like to clear Paul's name.

8 Q And do what, and beat the boat case?

9 A Beat the boat case.

10 Q So, now with Paul gone, he's talking about he can beat
11 the boat case.

12 A That's correct.

13 Q This is a month after the murder?

14 A That's correct.

15 MR. FERNANDEZ: Beg the Court's indulgence.

16 (Break in proceedings.)

17 MR. FERNANDEZ: Nothing further, Your Honor. Thank
18 you.

19 THE COURT: Yes, sir?

20 MR. GRIFFIN: Please the Court?

21 CROSS-EXAMINATION

22 BY MR. GRIFFIN:

23 Q Good afternoon.

24 A Good afternoon.

25 Q It was very important to Alex to clear Paul's name

1 from the accusations in the boating case, wasn't it?

2 A I don't know.

3 Q That's what he told you, right?

4 A Yeah. That's what he said, but I don't know what he
5 was thinking.

6 Q Well, you know that he stood behind Paul all
7 throughout the boating case, the criminal part, right?

8 A That's correct.

9 Q And a lot of people in the Hampton community turned
10 their backs on Paul, didn't they?

11 A That's correct.

12 Q You didn't, did you?

13 A No, sir.

14 Q Alex and Maggie didn't, did they?

15 A No, sir.

16 Q Your brother didn't, did he?

17 A No, sir.

18 Q And are you sure it was July 4th?

19 A The week of the 4th, that's correct.

20 Q Okay, and he was going to Florida on a vacation and
21 visiting with Maggie's parents, Maggie's sister, and
22 brother-in-law. You understood that?

23 A Yes, sir.

24 Q Now, you were talking about you went and got some --
25 cashing some checks with -- for Alex, and sometimes you

1 would come back, give him the cash, and you mentioned that
2 Greg Alexander was in his office one time, Cory Fleming one
3 time, and Chris Wilson one time. Do you remember that?

4 A That's correct.

5 Q What did you do when you walk in? Just give the
6 envelope to Alex?

7 A Yes, sir.

8 Q Did you sit down and see what he did with the money?

9 A Not at all.

10 Q Are you suggesting that he was giving Greg Alexander
11 any of the money?

12 A I'm not suggesting anything.

13 Q Okay. Do you know if that's what the Attorney General
14 was trying to suggest by asking you that?

15 MR. FERNANDEZ: Objection, Your Honor.

16 THE COURT: Sustained.

17 Q You've known Paul -- or you knew Paul all of his life
18 for the most part, correct?

19 A Correct.

20 Q And how old are you?

21 A Twenty-three.

22 Q And I think you described Alex and Maggie as kind of
23 your second parents.

24 A That's correct.

25 Q And you spent a lot of time at Moselle. You hunted

1 with Paul and Buster, too, I take it.

2 A That's correct.

3 Q And you lived there at that cabin you talked about
4 right there on the edge of Moselle Road, right?

5 A That's correct.

6 Q Okay, and Paul's go-to guns were a 300 Blackout and
7 the 12 gauge Benelli that you identified here in the
8 courtroom, right?

9 A That's correct.

10 Q But you knew that Paul had originally been given a 300
11 Blackout for Christmas that had been stolen, correct?

12 A Correct.

13 Q Did you go to the party with Paul and he had the 300
14 Blackout in his truck, go into the party, come back and
15 it's gone?

16 A Not exactly how it happened.

17 Q How did it happen?

18 A He didn't realize it was missing for a few days.

19 Q And Paul would never lock his truck, would he?

20 A No, sir.

21 Q And he would leave guns in his truck, right?

22 A That's correct.

23 Q Did you know that that 300 Blackout had been replaced?

24 A I did not.

25 Q Okay. When did you learn that?

1 A This trial.

2 Q During the trial.

3 A That's correct.

4 Q But up until the trial, you never knew that it had
5 been replaced.

6 A No.

7 Q But you had seen Paul use the 300 Blackout you
8 identified as his go-to gun, correct?

9 A That's correct.

10 Q And the 300 Blackout that you identified has a thermal
11 scope, did it not?

12 A Correct.

13 Q And whose gun did you think got stolen, Paul's or
14 Buster's?

15 A I would assume Paul's.

16 Q Well, are you aware that the 300 Blackout replacement
17 did not have a thermal scope?

18 A I didn't know about the gun then, no.

19 Q So, do you know whether or not this is Buster's 300
20 Blackout sitting here in the courtroom?

21 A That is the gun that I used at Moselle.

22 Q Okay. Now, when Paul would clean his truck out, he
23 would take -- well, let me back up. Did Paul normally keep
24 guns in his truck?

25 A Correct.

1 Q 300 Blackout, 12 gauge. Anything else?

2 A Sometimes pistols.

3 Q And there were times when Paul would clean his truck
4 out, and then he would take the guns and leave them in the
5 shed down there by the kennels, correct?

6 A That's correct.

7 Q And sometimes he would forget that he left them down
8 there, right?

9 A That's correct.

10 Q And I think you described him as being careless with
11 leaving guns around. Is that right?

12 A I would say so.

13 Q And he had even left guns in your truck, right?

14 A Correct.

15 Q Now, Paul was a guy who liked to work with his hands
16 outside, correct?

17 A Correct.

18 Q And he loved the Moselle property. Is that right?

19 A I would say so.

20 Q And he liked to -- liked to work the land with the
21 equipment and plant for game management, for duck hunting
22 and dove hunting and things like that, right?

23 A Correct.

24 Q And to do that, you know, he was -- wasn't always on
25 his phone, right? I mean, he liked to work with his hands.

1 Is that fair to say?

2 A I wouldn't say that altogether. I mean, he would take
3 several breaks while he was working with his hands.

4 Q Right, and I think you've described him, he would put
5 his phone down while he was doing some work and then he
6 would forget where it was. He would lose it and he would
7 go back and find it later.

8 A That's correct.

9 Q That happened fairly regularly, didn't it?

10 A I would say so.

11 Q And you listened to the video that was played. Did
12 you hear water running in the background?

13 A I'm not sure.

14 Q What kind of work would Paul do down there by the
15 kennels?

16 A What do you mean?

17 Q I mean, you know, would he -- if Bubba or the other
18 dog had messed in their dog run, would he clean it up?

19 A Yeah, I'd say so.

20 Q And if he did that, you know, perhaps he would put his
21 phone down while he did that so it wouldn't get wet?

22 A I would assume so.

23 Q That's a reasonable thing to do, right?

24 A I would say so.

25 Q Okay. Now, you were close with Alex, Maggie, Paul,

1 and Buster, you and your brother were, right?

2 A Yes, sir.

3 Q You were able to observe Alex's relationship with
4 Paul, right?

5 A Yes, sir.

6 Q How would you describe it?

7 A I would say it was a very loving relationship.

8 Q And -- okay, and how would you describe Alex's
9 relationship with Maggie?

10 A I would describe it the same.

11 MR. GRIFFIN: One second, Your Honor.

12 (Break in proceedings.)

13 Q Did -- to your knowledge, did -- was -- after the
14 boating accident, did Paul receive threats of any kind?

15 A That's correct.

16 Q What kind of threats were you aware of?

17 A Just threats that he would say people would text him,
18 different social media platforms, but he didn't really go
19 into any detail or anything.

20 Q I'm sorry, I didn't --

21 A Didn't go into very vivid detail about anything. He
22 would just --

23 Q And his circle of friends got really close, tight,
24 after the boating accident, and you were -- you and your
25 brother, I mean, he talked to y'all frequently, did he not?

1 A That's correct.

2 Q And then he would go to Charleston and visit with
3 friends down there, correct?

4 A That's correct.

5 Q But he didn't feel comfortable, you know, in the
6 Hampton area where he lived because of the boating
7 accident. Is that right?

8 A He stayed away.

9 Q Yes, sir.

10 MR. GRIFFIN: That's all I have. Thank you.

11 THE COURT: Redirect?

12 REDIRECT EXAMINATION

13 BY MR. FERNANDEZ:

14 Q Nathan, you were asked about threats to Paul. Did you
15 ever know that Maggie received any threats?

16 A I'm not aware of any.

17 Q I'm going to ask you. You know, counsel asked you a
18 about -- a little bit about the kennel and asked if you
19 heard water. Are you familiar with how generally the
20 kennels were cleaned? Were you there when the kennels
21 would be cleaned?

22 A Sometimes.

23 Q Okay. Generally speaking, describe the kennels for
24 me. What was actually inside one of the kennels runs?

25 A The kennels had a dog house, beds in the dog house.

1 It was kind of a concrete pad.

2 Q And if you're going to rinse off the kennels, what
3 would you do with the dog bed?

4 A You would put it on top of dog house.

5 Q Okay, and why was that?

6 A So it wouldn't get wet.

7 Q And what -- would you just leave the -- would the
8 family, or if you were cleaning it, leave the dog bed up on
9 the top of the kennel, or were they going to bring it down
10 when the kennel -- after a certain point in time?

11 A You would wait for it to dry and then bring the bed.

12 Q If the family -- if you were down there or anyone was
13 down there at the kennel area and it was nighttime, would
14 you turn the lights on?

15 A Yes, sir.

16 Q Are there sufficient lights out there to make it a
17 fairly well lit area if all the lights are on?

18 A I would say so.

19 Q If you're at the main house and the lights are on down
20 at the kennels, can you see that area from the house?

21 A Yes.

22 Q Would it be very visible to you to see that there's
23 lights on down there?

24 A Yes.

25 Q Would the fans -- are there fans in the kennel area?

1 A There are.

2 Q Would the fans be left on generally for the dogs?

3 A Generally.

4 Q And, again, if anyone was down there working, would
5 the lights be turned on?

6 A Yes, sir.

7 MR. FERNANDEZ: No further questions.

8 MR. WATERS: David.

9 (Break in proceedings.)

10 THE COURT: Anything further?

11 MR. FERNANDEZ: One second, Your Honor.

12 (Break in proceedings.)

13 BY MR. FERNANDEZ:

14 Q All right, counsel asked you a question about Paul's
15 phone usage, and I think you said Paul uses his hands and
16 what he would do with his phone. Do you recall if Paul
17 didn't -- if Paul did have to use his phone, would he put
18 it in any of his pockets?

19 A If he was working outside in that capacity, the pocket
20 he would put it in would be his back pocket.

21 Q And that was the common thing he would do almost
22 nearly every time?

23 A That's correct.

24 MR. FERNANDEZ: Nothing further. Thank you, Your
25 Honor.

1 THE COURT: Anything further?

2 Just a moment, sir.

3 MR. GRIFFIN: Nothing, Your Honor. Thank you.

4 THE COURT: You may step down.

5 (The witness exited the stand.)

6 THE COURT: All right, ladies and gentlemen, that will
7 do it for this day. Please, if you'll have a good weekend
8 and we'll see you at 9:30 Monday morning.

9 (The jury left the courtroom.)

10 THE COURT: Everyone be seated, please.

11 Anything before we adjourn?

12 MR. HARPOOTLIAN: Your Honor, purely scheduling
13 purposes, a week from Monday is President's Day. It's a
14 state holiday. Are we going to have court or not?

15 THE COURT: I do not anticipate having court on
16 President's Day.

17 MR. HARPOOTLIAN: I'm sorry?

18 THE COURT: I do not anticipate having court on
19 President's Day. We also will adjourn hopefully no later
20 than had 4:30 next Thursday.

21 MR. HARPOOTLIAN: 4:30, just for that day?

22 THE COURT: Next Thursday.

23 MR. HARPOOTLIAN: Next Thursday, but we will be in
24 court on Friday.

25 THE COURT: Yes.

1 MR. HARPOOTLIAN: Okay. I just want to make sure.
2 And I wondered if the Attorney General had any more refined
3 position on if he thinks he can move quickly.

4 MR. WATERS: As I stated yesterday, we're shooting for
5 Wednesday and we're still on track for that, Your Honor.

6 MR. HARPOOTLIAN: I think that allows us to begin to
7 fly people in next week. So, you're going to adjourn at
8 4:30 on Thursday but -- and not have court on the following
9 Monday, that's --

10 THE COURT: Yes, sir.

11 MR. HARPOOTLIAN: Okay. That's great information.

12 THE COURT: Yes, sir.

13 MR. HARPOOTLIAN: Thank you.

14 THE COURT: Very good. We're in recess.

15 (Whereupon, the case was at ease.)

16 *MONDAY, FEBRUARY 13, 2023*

17 (Court resumed at 9:47 a.m.)

18 THE COURT: Good morning.

19 (Audience responded good morning.)

20 THE COURT: We have some matters with the jury, with
21 two jurors who have tested positive for Covid, and they
22 will not be able to be continued -- to, to continue.
23 They've confirmed the positive test by sending them to the
24 Clerk of Court, who's for -- who has forwarded a copy --
25 copies to me. And I've spoken with each of those jurors

1 and they are -- one is symptomatic, and one had a cough and
2 sore throat, and they've both been released. So, we have
3 two alternates, two other jurors -- two other -- yeah, we
4 have two alternates that will become part of the regular
5 panel, so we'll need to do that this morning.

6 Any comment?

7 MR. HARPOOTLIAN: Your Honor, and I with great
8 consternation, having just gotten over Covid myself over
9 the Christmas holidays and doing a little studying on it,
10 my understanding is that if you've been exposed to somebody
11 with Covid, it can be up to five days before you exhibit
12 symptoms.

13 My only concern, my only concern is that we don't
14 create a train wreck with this jury testing negative now,
15 and in abundance of caution should we not, I hate to use
16 the word delay but that's what it will be, until some
17 health professional will tell us if they were exposed.
18 Last Friday when they were together, they would show
19 symptoms or test positive by Tuesday or Wednesday. I mean,
20 I'm not trying to -- trust me --

21 THE COURT: I understand.

22 MR. HARPOOTLIAN: -- it's an economic disaster for us.

23 THE COURT: Well, we've had a doctor who came and
24 tested them this morning and who recommended that they be
25 tested again on Wednesday.

1 MR. HARPOOTLIAN: So --

2 THE COURT: And she is a doctor who fully understands
3 the CDC guidelines and other precautions, and so your
4 concern is being addressed by the Court.

5 MR. HARPOOTLIAN: Are you going to keep them together
6 until now and Wednesday?

7 THE COURT: Yes, and we've recommended that they --
8 and they've agreed to wear masks, as everyone in here
9 probably should other than the essential people who have to
10 talk all the time. But my focus primarily is with the
11 jurors. Of course our camera person, I notice they tend to
12 wear masks and most others do not, some clerk personnel.

13 Yes, sir?

14 MR. HARPOOTLIAN: Your Honor, my only other concern
15 is -- well, I understand the Clerk of Court is now out with
16 a Covid --

17 THE COURT: Yes.

18 MR. HARPOOTLIAN: And one of her --

19 THE COURT: And her staff -- her staff, they've been
20 tested and they're all negative.

21 MR. HARPOOTLIAN: I don't know what to say. I want to
22 make sure that his -- as you do, that this jury does not
23 infect each other and then we're in, you know, a position
24 --

25 THE COURT: Yeah, or infect me or you. We all have

1 that same concern, and the jurors are aware of that and
2 they have a positive attitude about it, and -- according to
3 the doctor who administered the test to them this morning.

4 MR. HARPOOTLIAN: The last question, do you have
5 masks? I didn't bring a mask.

6 THE COURT: I do. I have one right here, and I
7 have -- my clerk has one right there, and we have a few
8 others in the back. You're welcome to have one of them if
9 you want, would like to have it. The clerk's staff, she's
10 going somewhere --

11 MR. HARPOOTLIAN: Thank you, Your Honor.

12 THE COURT: -- heading toward masks or something.

13 MR. HARPOOTLIAN: We're good, Your Honor, thank you.

14 THE COURT: All right.

15 Mr. Waters?

16 MR. WATERS: Yeah. I was going to echo the same
17 concern, you know, that we have two who were released and
18 then we have it kind of spread through those that are
19 remaining if, you know -- and again, this is not what I
20 want to do at all, if there's some sort of delay to see
21 what happens because I didn't -- in talking with the
22 defense as we first heard about these issues, I think we
23 were both in agreement that we would rather, if forced to,
24 delay a little bit rather than end up with a mistrial and
25 be unable to continue at all, and that would just be my

1 only -- my only point that I would raise at this time.

2 And, you know, we could have two if we go ahead and
3 release them, and we could have some others become
4 symptomatic and we would just have to, you know, wait a few
5 days for it to run its course. But that's -- that would be
6 my only thought or recommendation, but obviously you've had
7 a doctor come in here and discuss a course of action.

8 MR. HARPOOTLIAN: And, Your Honor, we would concur
9 that -- and again, trust me, I'm not interested in delaying
10 this at all, but what I don't want is to run the risk that
11 we have a mistrial because they all get Covid, or they all
12 get symptomatic. It just seems to me if by Wednesday they
13 know it might be prudent to adjourn for a couple of days.
14 And I'm not questioning your decision.

15 THE COURT: Yes, sir.

16 MR. HARPOOTLIAN: I'm just concerned that we not --
17 and if they have masks on, that's great, but when they go
18 back in the jury room and drink the water or have lunch or
19 whatever they're going to do, they'll have those masks off.
20 It's not 100 percent. I caught Covid the first week of --
21 the second week of December. It took me three weeks to get
22 over it, and I don't want to lose this jury.

23 THE COURT: Yes, sir?

24 MR. WATERS: We don't want to either. And, again, if
25 we were going to do that, I would say that the two that

1 have tested positive, we would, you know, at least keep
2 them in the bullpen, I guess, until we figure that out or
3 see what happens.

4 THE COURT: No, they're not in the bullpen. The two
5 with Covid that have been released --

6 MR. WATERS: Oh, they have been released? Okay.

7 MR. HARPOOTLIAN: No objection.

8 THE COURT: -- from jury service. And here are
9 your -- the masks here, it's right behind you there.

10 (Break in proceedings.)

11 THE COURT: Fortunately we have -- we selected, wisely
12 selected six alternates, and we'll be down to five or four,
13 four following --

14 MR. HARPOOTLIAN: No, three.

15 MR. WATERS: Three?

16 THE COURT: Three following the release of these two.
17 And, of course, we have no way of knowing. We just have to
18 take precautions as we all do as we navigate through life
19 during this period of time. And we need twelve to
20 deliberate, so that's the goal. That's why you have
21 alternates. Of course, any time you have a trial that's
22 protracted with -- that goes on and on and on, then you run
23 the natural risk of attrition, which we are experiencing
24 now, and be it Covid or some other problem, the longer --
25 the longer we stay here, the longer something will happen

1 to various folks involved.

2 MR. HARPOOTLIAN: Your Honor, all I can say about how
3 long it's going on, I'm reminded a quote from the Jerry
4 Spence, a dangerous trial lawyer in *Silkwood* in that case,
5 which went not much longer than we are. He says we began
6 this trial in winter; we finished it in spring. I thought
7 we would grow old together. So, I'm beginning to feel much
8 like Mr. Spence. But hopefully we can finish the State's
9 case this week and we can begin our case.

10 THE COURT: Yes. With regard to selection of the next
11 two jurors to become part of the twelve, the clerk has
12 placed the juror numbers of the remaining jurors in a box,
13 and the statute requires that they be selected -- I think
14 the words are -- the words by lottery. Any objection to a
15 clerk -- member of the clerk staff selecting the next two?

16 MR. WATERS: No objection, Your Honor.

17 MR. HARPOOTLIAN: No objection, Your Honor.

18 (Break in proceedings.)

19 THE COURT: All right, if you will pull number one,
20 Madame Clerk. All right. You can tell us what juror
21 number it is.

22 THE CLERK: Juror number 441.

23 THE COURT: Number 441 becomes a member of the regular
24 panel. And the next one?

25 THE CLERK: Juror 326.

1 THE COURT: Number 326 will become --

2 MR. HARPOOTLIAN: Your Honor, can we inquire what --
3 the juror numbers of those excused?

4 THE COURT: Yes, of course. The two jurors who now
5 have been excused, Juror 220.

6 MR. HARPOOTLIAN: 220.

7 THE COURT: Is that correct, Madame Clerk?

8 THE CLERK: Yes, sir.

9 THE COURT: 220, and 528.

10 MR. HARPOOTLIAN: 528.

11 THE CLERK: Yes, sir.

12 (Break in proceedings.)

13 MR. HARPOOTLIAN: Your Honor.

14 THE COURT: Yes, sir?

15 MR. HARPOOTLIAN: Mr. Waters and I were opining as
16 this develops, and I'm not trying -- it's a joint concern.
17 We have a huge gallery out here. Are we exposing ourselves
18 to more risk by having them there?

19 THE COURT: Probably so.

20 MR. HARPOOTLIAN: Having brought that to your
21 attention --

22 THE COURT: Well, do you -- would you like me to issue
23 a mask mandate for everyone in the courtroom other than
24 witnesses who are testifying and people who have to speak
25 openly in court, like the judge and lawyers?

1 MR. HARPOOTLIAN: Yes, sir.

2 MR. WATERS: Well, and aside from a mask mandate, you
3 might, you know, have a little bit of social distancing. A
4 little less numbers might be warranted. I mean, none of us
5 want to limit anything, but we're in a different paradigm,
6 and both of us have a concern about getting this thing to
7 the end without Covid causing any problems. That's the
8 paramount concern for both the State and the defendant.

9 MR. HARPOOTLIAN: And, Your Honor, half our alternates
10 are gone now.

11 THE COURT: Sir?

12 MR. HARPOOTLIAN: Half our alternates are gone. We're
13 three weeks in and three jurors down.

14 THE COURT: Right.

15 MR. HARPOOTLIAN: At this rate we could have a
16 problem.

17 MR. WATERS: Maybe we need to have somebody doing the
18 little thermometer thing at the door.

19 THE COURT: All right. We'll leave all that with the
20 clerk staff. They are able to monitor that, I believe.
21 I'm not going to order any social distancing. We cannot
22 order any social distancing with the jurors. Of course,
23 when Covid came in initially, we reversed the courtroom and
24 had the jurors seated in the audience and that was our
25 means of keeping them socially distanced. I don't think we

1 can require masks because people in the audience are here
2 for the most part of their own volition, and they can watch
3 it all on TV if they do not wish to wear masks. But I'm
4 not going to order any social distancing. And for the
5 moment, we're going to encourage everyone here to mask up
6 for your own protection, as well as the protection of these
7 proceedings and of each other, and then we'll explore how
8 far we need to go with that as the day progresses.

9 Otherwise, is there anything else before the jury
10 comes?

11 MR. WATERS: Your Honor, one other matter. And I --
12 just to let you know, there were some developments over the
13 weekend. The -- back in March of 2022, there had been
14 search warrants prior to that issued to GM, and in
15 particular for OnStar data. And in March of 2022, GM sent
16 a letter to law enforcement, to SLED, in which they
17 advised, aside from some basic sort of ownership
18 information and that sort of thing, that they had no data.

19 Late Friday after court, Friday evening, I got a call
20 from John Conrad, who, of course, is Your Honor is aware,
21 has been handling a lot of that digital evidence. We
22 received a communication from GM stating that, probably
23 because the trial is going on and maybe in response
24 somebody was watching the testimony of Falkofske, that they
25 had gone back and looked again, and this time they found a

1 lot of data that includes GPS location data from the
2 Suburban that the defendant had on June 7, 2021. That
3 information came in Saturday evening, and I had a chance,
4 of course, to look at it Sunday morning. I immediately
5 called Mr. Griffin and we talked, and we provided that
6 information to them. And so that information came in.

7 Of course, when we became aware of it, GM actually
8 sent a letter with it saying yeah, we told you back in
9 March we didn't have anything and we just found it, and
10 here you go, and so we've actually had that data and
11 provided it to the defense. Obviously we'll let the
12 defense speak for themselves, but we've done everything to
13 facilitate their review of it. If anything, I think it
14 confirms a lot about the timeline that we're both working
15 within, so I don't know that they have any objection about
16 that, and we're just trying to absorb it on the fly, and
17 it's a substantial amount of information. But I wanted to
18 raise that to the Court's attention and of those
19 information, and, of course, let the defense speak for
20 themselves.

21 THE COURT: Yes, sir.

22 MR. HARPOOTLIAN: Your Honor, again, it is a massive
23 amount of data which we forwarded to our experts yesterday,
24 last night. They're beginning to look through it. Some of
25 it is very helpful to us. We don't see it in any way

1 contradicting the State's previous timeline. But the data
2 can show you car speed, it can show you GPS, exactly where
3 they were. It can show, you know, just many, many, many
4 things that we did not have before.

5 And, again, this is not about who didn't do what and
6 when. GM concedes they didn't give it. The problem is
7 they're -- it's not a problem. They're going to bring
8 somebody from GM to authenticate it, as I understand it,
9 and then give it to their expert who they were going to use
10 for a timeline anyway and have him or her digest it.

11 We will not be able to cross-examine their expert
12 until our experts have a chance to digest it on a granular
13 level. I'm just giving the Court a heads up. We got it to
14 him yesterday. We suspect it's going to take them two or
15 three days to do that, and so I know we're talking about --
16 telling us they'll rest their case by Wednesday, and we're
17 going to try to get ready by Wednesday, but I can't
18 guarantee that. I mean, again, we just got it yesterday.

19 So, the only hang up, once they authenticate it,
20 before we cross-examine their expert, we need an
21 opportunity to have our experts advise us what, if
22 anything, we need to ask them. I mean, that's just, you
23 know, how it works.

24 MR. WATERS: And, Your Honor, just to be clear about
25 this particular data, there's two sets of data. The most

1 important data to what we're doing -- and again, it's
2 confirmed by the timeline. It's just actually confirmatory
3 of the timeline that we've been presenting to this jury,
4 but we have specific location data, data points that are
5 being logged every, you know, 30 seconds or so, or
6 something like that, as well as vehicle speed. That's the
7 crucial data that's in this for the relevant time period.

8 There's another file that has some various sensor data
9 that's logged, but in our initial review, I don't think
10 there's going to be anything in that information that's
11 going to be helpful to either side.

12 We have -- I actually was talking with the defense
13 counsel earlier, and they were able to load already,
14 because I was going to suggest they do this. Load that
15 location data into Google Earth and it works pretty well.
16 So, I think it's something that's going to be able to be
17 digested fairly quickly, and at least in our review it does
18 not appear that there's any information in there that's
19 different than the timelines that we were already working
20 from. It's just much more specific and confirmatory of
21 what had already been established.

22 MR. HARPOOTLIAN: Your Honor, with all due respect to
23 Mr. Waters, his opinion on what's important to us is not --
24 if we find things in that other data he talks about that's
25 not relevant or not -- or something not of interest to them

1 that is of interest to us, experts -- it can't load it into
2 Google Earth. You have to do some things with it to get it
3 in a position. I mean, Mr. Barber, who's our computer whiz
4 kid, was able to do the Google stuff yesterday and
5 indicates that other materials -- the car function. Are
6 the doors locked? Are they unlocked? Is it in gear? Is
7 it not in gear? And the information about other functions
8 of the vehicle, it's just amazing what they captured. I
9 mean, it's scary because they know everything about how
10 you're operating your vehicle. And speed, where you are,
11 all those sorts of things. We're getting that and our
12 experts are downloading it.

13 We think there's some relevance to the other
14 databases, but we can't -- I can't represent to you here
15 today that it is or isn't, but we have seen a couple of
16 things we think could be very helpful to our case.

17 So, all I'm saying, all I'm attempting to do -- and
18 let me make this clear. There's nothing -- we're not
19 implying in any way that the State did anything untoward
20 here. I want to make that perfectly clear. Now, GM after
21 all the money we gave them to bail them out couldn't get
22 this done. That may be another matter altogether. And
23 somebody must have been watching the trial because between
24 the time the FBI agent testified -- and they got the data
25 in less than two days, as I understand it. So, somebody

1 hit a button and generated that data in less than 48 hours,
2 so it wasn't hard to access.

3 THE COURT: Right.

4 MR. HARPOOTLIAN: Again, not -- the State has nothing
5 to do with this delay. I just wanted to raise with the
6 Court before they call their timeline expert, we may need
7 some period of time to get our experts to get it digested
8 and then back to us.

9 THE COURT: Well, at its core it's an unexpected
10 witness coming into the trial. I know there are -- there
11 have been some cross-examination on that issue in general,
12 so the State has now disclosed an additional witness, and
13 certainly in fairness to the defense he should have an
14 opportunity to adequately prepare to confront that witness,
15 if need be. And I'm sure that witness is down the line,
16 you know, not the next witness the State is calling since
17 the State indicated that you expected to be through on
18 Wednesday, and that did not include this witness. So, you
19 must have other witnesses in your -- that you should be
20 ready to proceed with, and we'll deal with the other issue
21 as it might come up.

22 MR. HARPOOTLIAN: And, Your Honor, we'll keep you
23 posted.

24 THE COURT: Yes, sir.

25 MR. HARPOOTLIAN: You know, we're in court from 9:30,

1 don't get back until 6:00 or 6:30, and be able to talk to
2 the experts, so we're going to have to talk to them
3 tonight, but, again, we're somewhat strained as to how much
4 discussions we can have and what time.

5 THE COURT: Understood.

6 MR. HARPOOTLIAN: Thank you.

7 MR. WATERS: And, Your Honor, again we're having to
8 digest it as well, but it's going to be incorporated in our
9 timeline witness, who is expected to be called either
10 tomorrow or Wednesday.

11 THE COURT: All right. Anything else before the jury
12 comes?

13 MR. WATERS: Nothing from the State, Your Honor.

14 MR. HARPOOTLIAN: Nothing from the defense, Your
15 Honor.

16 THE COURT: All right. Let's bring the jury.

17 (The jury returned to the courtroom.)

18 THE BAILIFF: The jury is present, sir.

19 THE COURT: All right, very good.

20 Good morning.

21 (Jurors responded good morning.)

22 THE COURT: Day number sixteen.

23 Ladies and gentlemen, you might notice that a few of
24 your jurors are missing. Those jurors have been excused.
25 I see many of you are masked up, but we -- hopefully we'll

1 do everything we can to keep everyone safe, including
2 members of the Court. I'm not going to order any wearing
3 of masks by jurors but encourage it. But we have excused
4 two jurors and now have two other jurors who will move up
5 to be among the first twelve jurors, and that means we'll
6 have two, four, six, eight, ten, twelve, fourteen, so three
7 extra, three alternates remaining.

8 So, Juror Number 441. Who is 441? All right. 441,
9 you are a member of the first twelve.

10 And Juror Number 326? 326, you're a member of the
11 first twelve. Of course, it doesn't matter where you sit.
12 You just need to know that.

13 And with that, we are ready to move forward. State's
14 case, next witness.

15 MR. WATERS: Thank you.

16 MS. GOUDE: State calls Ryan Kelly.

17 The witness, RYAN KELLY, was first duly sworn and
18 testified as follows:

19 THE CLERK: Thank you. Take a seat in the witness
20 stand. You can adjust the mic if you have to. State your
21 name again for the record and spell your last name.

22 THE WITNESS: Ryan Kelly, K-e-l-l-y.

23 MS. GOUDE: And, Your Honor, for the record, we are
24 calling Agent Kelly for limited purposes this morning.

25 THE COURT: Yes, ma'am.

1 DIRECT EXAMINATION

2 BY MS. GOUDE:

3 Q Agent Kelly, could you please tell the jurors where
4 you work?

5 A I am a special agent with the South Carolina Law
6 Enforcement Division, SLED.

7 Q And what is your position at SLED?

8 A I'm a senior special agent.

9 Q And in your position as a Senior Special Agent, were
10 you involved in the investigation into the deaths of Paul
11 and Maggie Murdaugh?

12 A Yes, ma'am, I was.

13 Q I'm going to ask you to take a look at some exhibits
14 here. State's Exhibit 464.

15 A Yes, ma'am.

16 Q Could you tell us what that is?

17 A These are the buccal swabs of Phillip Beach, Renee
18 Beach, Robin Beach, and John Murdaugh.

19 Q And State's 465?

20 A These are the buccal swabs of Ronald Freeman. Let's
21 see --

22 Q 466?

23 A The buccal swab of Michael List.

24 Q 467?

25 A Buccal swab of Matthew Loose.

1 Q And 468?

2 A It's a buccal swab. I'm trying to see here. It's a
3 buccal swab of Curtis Smith.

4 Q Okay, and, Agent Kelly, who collected those buccal
5 swabs?

6 A I did.

7 Q Okay, and how did you collect them?

8 A We have a process where we put on rubber gloves and we
9 have Q-tips that are sealed. We break the packaging, unseal
10 the Q-tip. We insert one Q-tip into the side of their
11 cheek and we obtain a buccal swab sample. We then remove
12 the Q-tip, seal it in an envelope, seal the envelope. We
13 then take the second Q-tip which is in the packet. We
14 break the seal, insert it into the other cheek where we
15 swab. That Q-tip is then secured into a sealed envelope,
16 and then the two separate sealed envelopes are then placed
17 into a third envelope, where it's sealed, and signed, and
18 initialed on the seal.

19 Q And you did that with each of these buccal swabs?

20 A Yes, ma'am, I did.

21 MS. GOUDE: Your Honor, at this time the State would
22 move to admit State's Exhibits 464, 465, 466, 467, and 468.

23 THE COURT: What says the defense?

24 MR. GRIFFIN: No objection, Your Honor.

25 THE COURT: They are admitted.

1 (BUCCAL SWAB MARKED AS STATE'S EXHIBIT NUMBER 464 WAS
2 RECEIVED INTO EVIDENCE.)

3 (BUCCAL SWABS MARKED AS STATE'S EXHIBIT NUMBER 465
4 WERE RECEIVED INTO EVIDENCE.)

5 (BUCCAL SWABS MARKED AS STATE'S EXHIBIT NUMBER 466
6 WERE RECEIVED INTO EVIDENCE.)

7 (BUCCAL SWABS MARKED AS STATE'S EXHIBIT NUMBER 467
8 WERE RECEIVED INTO EVIDENCE.)

9 (BUCCAL SWABS MARKED AS STATE'S EXHIBIT NUMBER 468
10 WERE RECEIVED INTO EVIDENCE.)

11 MS. GOUDE: Thank you, Your Honor. We have no
12 further questions for Senior Special Agent Kelly at this
13 time.

14 THE COURT: Cross-examination?

15 MR. GRIFFIN: No questions.

16 THE COURT: Thank you, sir.

17 THE WITNESS: Thank you, Your Honor.

18 (The witness exited the stand.)

19 THE COURT: Your next witness?

20 MS. GOUDE: Rachel Nguyen.

21 The witness, RACHEL NGUYEN, was first duly sworn and
22 testified as follows:

23 THE CLERK: Take a seat in the witness stand. You can
24 adjust the mic if you have to. State your name again,
25 please, for the record, and spell your last name.

1 THE WITNESS: Rachel Nguyen, N-g-u-y-e-n.

2 VOIR DIRE EXAMINATION

3 BY MS. GOUDE:

4 Q Good morning.

5 A Good morning.

6 Q Agent Nguyen, could you please tell the jurors who you
7 work for?

8 A I work for the South Carolina Law Enforcement
9 Division, most commonly known as SLED.

10 Q And how long have you worked at SLED?

11 A I've worked at SLED for approximately eight and a half
12 years.

13 Q Could you pull the microphone a little closer so we
14 can make sure to hear you, or speak up a little? Thank
15 you. And what is your position at SLED?

16 A I'm a forensic scientist within the DNA Casework
17 Department at the SLED Forensics Laboratory.

18 Q So, what does that mean? Tell us a little bit more
19 about your job.

20 A Like my job duties?

21 Q Yes.

22 A So, I am responsible for direct DNA analysis when
23 requested by a DNA analyst. What that is, is the beginning
24 portion of the laboratory section component of DNA
25 analysis. That involves DNA extraction, as well as DNA

1 quantitation. Extraction meaning to separate any possible
2 DNA from the sample, such as a swab or a cutting, and
3 quantitation would be to see how much, if any, is present
4 in a sample. I'm also responsible for serology analysis,
5 as well as evidence processing. Serology analysis is body
6 fluid identification.

7 At SLED we test for blood, semen, and saliva.
8 Evidence processing would be to process items for possibly
9 touch DNA, for ownership DNA. Touch DNA would be to
10 retrieve any possible DNA on an item from handling it.
11 Ownership DNA would be potentially retrieving any DNA from
12 wearing an article of clothing.

13 In addition to those types of analysis, I also issue
14 reports on my findings when appropriate. I am able to
15 technically and administratively review reports by other
16 serologists, and then I provide courtroom testimony when
17 required.

18 Q Now, you must have some kind of special training and
19 education to be able to do these things. Can you tell us
20 about that?

21 A So, I have two Bachelor's of Science Degrees from the
22 University New Haven, one in forensic science and one in
23 biology. Upon being employed within the DNA Casework
24 Department, I underwent approximately a year long training
25 program under a court qualified forensic serologist.

1 During this time I was able to observe, as well as practice
2 the different types of serological analysis, as well as
3 evidence processing. I was also taught how to issue
4 reports based on any findings, as well as technically and
5 administratively review any reports issued by other
6 serologists. I also was able to observe courtroom
7 testimony.

8 At the end of my training program, I then underwent a
9 competency testing phase. This phase is to test my
10 knowledge and abilities to perform this these types of
11 analysis independently. The competency testing phase was
12 comprised of four elements: a written exam, an oral exam, a
13 mock case to perform analysis on, as well as mock courtroom
14 testimony. Once those four components were successfully
15 completed, I was then deemed able to perform independent
16 analysis on casework.

17 In addition to my serology and evidence processing
18 training, I also, as I mentioned, am trained in direct DNA
19 analysis. That was also an approximately year long
20 training program under a court qualified DNA analyst.
21 During that time I was able to observe, as well as practice
22 the different types of protocols that are involved.

23 At the end of that training program, once again I went
24 through a competency testing phase. It was comprised of
25 the same four components, and I successfully completed all

1 four components and, therefore, am also able to perform
2 independent analysis in the area of direct DNA analysis.

3 THE COURT: Just a moment. Ma'am, I'm going to need
4 you to speak into the mic a little --

5 THE WITNESS: Okay.

6 THE COURT: -- better or for my benefit, if not for
7 the jury's benefit.

8 THE WITNESS: Okay.

9 Q Okay. So, Agent Nugyen, have you testified in court
10 before?

11 A I have.

12 Q And how many times have you tested in court --

13 A This will be --

14 Q -- in this state?

15 A Oh, sorry. This will be my nineteenth time.

16 Q And have you been qualified as an expert when you
17 testified in prior proceedings?

18 A I have been qualified as an expert.

19 Q As an expert in forensic serology?

20 A Yes, ma'am.

21 MS. GOUDE: Your Honor, at this time the State would
22 move to qualify Agent Nugyen as an expert in forensic
23 serology.

24 MR. BARBER: No objection.

25 THE COURT: She is admitted as an expert in the field

1 of forensic serology.

2 MS. GOUDE: Thank you, Your Honor.

3 DIRECT EXAMINATION

4 BY MS. GOUDE:

5 Q Agent Nugyen, you were working in this serology
6 department back in June of 2021?

7 A I was.

8 Q And did you examine some items of evidence in the
9 investigation of the murders of Paul and Maggie Murdaugh?

10 A I did.

11 Q I'm going to show you State's Exhibits 63 through 66.
12 I'll have you take a look at these items for us.

13 (Break in proceedings.)

14 Q Are those items that you examined?

15 A Yes, they are. I can identify these items because on
16 the small manila envelopes contained within, I have written
17 the unique case number that was assigned to this case at
18 SLED, as well as each of their item numbers, my initials,
19 and the date I opened the packaging.

20 Q Okay, and each of those items is a 300 Blackout case?

21 A Yes.

22 Q Okay. Now, what did you do with those items?

23 A So when cartridge casings are submitted for touch DNA,
24 which is what these were submitted for, we process them
25 with a soaking method. So, each cartridge case is placed

1 within a tube, submerged within a solution, lightly shaken,
2 and then has to -- it has to sit with for at least 30
3 minutes. Once that 30 minutes is up, each individual
4 cartridge case will then be removed from its tube. The
5 solution will be placed with -- poured into a filtration
6 unit. The cartridge case will be dried, it will be labeled
7 with the individual item number, and then placed on a rack
8 to further dry thoroughly. The solution that is placed
9 within this unit -- the filtration unit looks like an hour
10 glass. So, there's a chamber on the top and a chamber on
11 the bottom, and it's separated by a filter. So, it's a
12 liquid that is being poured in the top chamber, will filter
13 through the center which has a filter which we call an
14 embed collection. The goal is that if there's any DNA
15 present on these cartridge casings, it will be trapped
16 within the filter, and then the water goes to the bottom.
17 I'm sorry, the solution. And then the filter is sat out
18 for -- to dry for at least 24 hours.

19 Once the filter is dried, it is then cut -- prepared
20 for analysis. So, it is cut in half, placed in a tube,
21 labeled with the case number, the item number, and then it
22 is forwarded for further analysis. The -- and that
23 collection from these items was identified as SLED Item
24 7.1.

25 Q Agent Nugyen, I'm going to show you State's Exhibit

1 459. If you could tell us, is that what you collected from
2 those cases there?

3 A Yes. So, within here is, as I mentioned, SLED Item
4 7.1. Once again, I recognize this because it has the
5 unique case number, the container number, my name and date
6 on the outside, as well as my name and date on a seal at
7 the top.

8 Q And what did you say you did when you collected the, I
9 guess, disc?

10 A The -- so once in that collection -- or the filter is
11 dry, I will cut it in half, and then half again. So, each
12 quarter will be placed within a tube for DNA analysis.
13 It's labeled with the unique case number, the item number,
14 and it is forwarded for further analysis.

15 Q So, you forwarded that to DNA for more analysis?

16 A That is correct.

17 Q Okay.

18 MS. GOUDE: Your Honor, at this time the State would
19 move 459 into evidence.

20 MR. BARBER: No objection.

21 THE COURT: It's admitted.

22 (DNA ITEMS MARKED AS STATE'S EXHIBIT NUMBER 459 WERE
23 RECEIVED INTO EVIDENCE.)

24 Q All right, I'm going to show you State's 33 and 34,
25 which are fired shotshells. Did you perform any kind of

1 testing on those two items?

2 A Yes. So, State's 33 and State's 34 are consistent
3 with SLED Item Number 9 and 10, which were fired
4 shotshells. These were all also submitted to the
5 laboratory for touch processing. These shotshells were
6 swabbed for the touch collection.

7 So, basically I take two swabs, sterile swabs, and
8 moisten one with the ionized water, and then I will rub it
9 against the exterior of both of them, and then leave them
10 out to dry. Once the swabs are dried, I will then prepare
11 them for DNA analysis, which involves just cutting a small
12 portion from each swab, placing it within a tube, labeling
13 with a case number, the item number, and forward it for
14 further analysis. For this I -- these swabs from the
15 entire exterior of these two items were identified as Item
16 10.1.

17 Q And I believe Item 10.1 is also in State's Exhibit 459
18 that's been admitted. And you can open that if you need
19 to.

20 A Yes. This also contains Item 10.1.

21 Q Which are the swabs from these shotshells here.

22 A That is correct.

23 Q And then what did you do with those swabs once they
24 were collected?

25 A So, they were prepared for DNA analysis and forwarded

1 to the DNA section for further analysis.

2 Q Okay. I'm going to hand you what's been marked as
3 State's Exhibit 18, which I believe is your Item 17.

4 A Yes. So, I recognize this from the same process.
5 It -- I have my -- the unique case number, the item number,
6 my initials, and the date I opened. Item 17, which is
7 State's Exhibit 18, I also have my initials and date from
8 when I sealed this pouch.

9 Q And now what is that item?

10 A Item 17, SLED's Item 17 are swabs collected from
11 exterior doorknob of storage room door.

12 Q And what did you do with that item?

13 A So, I prepared these swabs for DNA analysis. Once
14 again, I just cut a small portion from the swabs and
15 forwarded for further analysis.

16 Q State's 259.

17 A State's 259 I do recognize for the same reason. I
18 have the -- written the case number, the item numbers, my
19 initials, and date that I opened these items. Found within
20 State's 259 are Items 15 and 16. Item 15 are swabs from
21 camo Benelli 12 gauge shotgun receiver forward of the
22 loading port. And swabs identified as Item 16 are swabs
23 collected from barrel of camo Benelli 12 gauge shotgun.

24 Q Now, did you do any testing of those swabs?

25 A Yes. Items 15 and 16 had blood requests on them, so

1 these were tested with a presumptive blood test. A
2 presumptive test only indicates the possible presence of a
3 body fluid. And how I did that is because since these are
4 swabs, I took a sterile swab, moistened it with deionized
5 water, then rubbed it gently upon the swabs that are
6 identified as those items. I then tested that test swab
7 for the possible presence of blood.

8 THE COURT: And it appears that this is a personal
9 conversation.

10 THE WITNESS: I'm sorry.

11 THE COURT: You know, the prosecutor is behind you,
12 and you're looking at her, and the mic is in front of you.
13 And so let's -- Attorney General, perhaps if you would move
14 in a different direction, the witness will speak in a
15 different direction --

16 MS. GOUDE: Yes, Your Honor.

17 THE COURT: -- and I can understand what she's saying,
18 or she can speak louder, or speak into the mic rather than
19 speaking to you.

20 Q So if you could, please continue explaining what the
21 item is, please.

22 A Yes. So, I tested these presumptively for the
23 presence of blood. So, Item 15, which were the swabs from
24 the receiver forward of the loading port of the camo
25 Benelli 12 gauge shotgun, tested positive for the possible

1 presence of blood. Item 16, swabs collected from barrel of
2 camo Benelli 12 gauge shotgun, tested negative for the
3 possible presence of blood. Both sets of swabs were
4 forwarded to the DNA section for further analysis.

5 Q Okay. So, at this point we don't know -- we just know
6 there's blood.

7 A There is the possible presence of blood on Item 15.

8 MR. BARBER: I'm objecting to the leading.

9 THE COURT: Pardon?

10 MR. BARBER: Objecting to the leading question, Your
11 Honor.

12 THE COURT: All right. Please do not lead the witness
13 and restate the question.

14 Q And what did you say was present, presumptively
15 present on those items?

16 A So, Item 15 was positive for the possible presence of
17 blood. Item 16 was negative for the possible presence of
18 blood.

19 Q And what did you do after you made those
20 determinations?

21 A So, both of these sets of swabs were prepared for DNA
22 analysis and forwarded to the DNA section for further
23 testing.

24 Q I'm going to hand you State's Exhibit 398. If you
25 will, take a look at those two items and tell the jury what

1 those are.

2 (Break in proceedings.)

3 A State's Exhibit 398 are SLED Items 22.4 and 22.5,
4 which corresponds to Item 22.5, is described as
5 reddish/brown debris swabbed from the right side of Item 22
6 receiver. And 22.5 is described as reddish/brown debris,
7 swabbed with -- from the left side of the Item 22 receiver
8 above manufacturer information.

9 Q And what did you do with those items?

10 A These items also had a blood request, so the same
11 process as the previous items I just mentioned. I took a
12 sterile swab, moistened it with deionized water, swabbed
13 these swabs, and then with that test swab is what I tested
14 for the presumptive blood test.

15 Q Will you please explain the results?

16 A So, both Items 22.4 and 22.5 tested positive for the
17 possible presence of blood.

18 Q And then what did you do with those items once you did
19 the blood test?

20 A These two sets of swabs were then prepared for DNA
21 analysis and forwarded it the DNA section for further
22 testing.

23 Q Now, there was a number of guns in this case that were
24 processed. Is that right?

25 A I believe so.

1 Q Okay. Could you tell us about the testing you did on
2 State's Exhibit 89, your Item 30, the Mossberg shotgun?

3 A So, when items of evidence are submitted to the SLED
4 laboratory, sometimes they have multiple requests of
5 different departments. In this case, Item 30, a Mossberg
6 shotgun, had three requests: for the latent prints
7 department, for the DNA department, as well as the firearms
8 department. So, we try to organize it so that no
9 department's analysis conflicts with another department.

10 In this case, this item was forwarded -- or was sent
11 to the latent prints department for processing. The latent
12 prints examiners are trained in collection for touch DNA as
13 well as swabbing of any stains that they may notice. So,
14 Item 30 had the blood request on it.

15 The latent prints examiner, which took this item into
16 their custody, requested that I come down as a second pair
17 of eyes to visually examine this item for any possible
18 staining. We located one stain, which I tested for the
19 possible presence of blood, and the result was negative.

20 Q And after that, did you -- are you aware of any
21 further processing on that Mossberg shotgun?

22 A I am not. So, I was there with the examiner, and it
23 remained within that examiner's custody the entire time.

24 Q All right. Let's move on to the other shotguns. We
25 have a Browning shotgun, a Benelli Black Eagle Two 12 gauge

1 shotgun, and the rifle, in addition to the guns we've
2 already talked about. Can you kind of sum up how you
3 analyzed those three different guns?

4 A So, those three different guns that you just mentioned
5 were Items 31, 32, and 33. They were done in the same
6 manner as Item 30, as I just mentioned. So, they were
7 within the custody of latent prints examiner. I went down
8 to visualize it for any possible staining. The results for
9 these three guns, however, was no apparent blood stains
10 present.

11 Q And did you do anything else to check for blood at
12 that point?

13 A I did nothing further with these items.

14 Q I'm going to show you State's Exhibit 83. If you
15 could, take a look and tell us what items are contained in
16 Exhibit 83.

17 A May I put the gloves on?

18 Q Yes.

19 A State's Exhibit 83 contains SLED Items 51 --

20 Q And, Agent Nugyen, you don't have to go through the
21 SLED items, thank you.

22 A -- through 60.

23 Q Yeah. And those items are what, though?

24 A They are all swabs that were taken from the Chevy
25 Suburban.

1 Q Okay, and can you tell us what kind of testing was
2 done on those swabs?

3 A So, it appears that these swabs were collected because
4 they were Bluestar positive, which from my understanding is
5 a presumptive test used by the Crime Scene Unit to indicate
6 areas of possible blood staining. Since they were already
7 presumptively tested, I used a confirmatory test to test
8 these swabs for the presence of blood. So, SLED Items 51
9 through 55 and 57 through 60 were all negative with that
10 testing, which means there is no human blood identified.
11 Item 56, which was swabs collected from steering wheel, had
12 a positive result, which means blood was identified on this
13 item.

14 Q And what kind of testing did you do to confirm that
15 blood?

16 A I used a confirmatory test called hematrace.

17 Q And how does hematrace work?

18 A So, hematrace is a card test. It's similar to a
19 pregnancy test or a -- or, more relevant, a Covid test.
20 You take a sample from the item of evidence, place it in a
21 solution, and it should sit there for awhile. And then
22 once it has mixed in with the solution, the solution will
23 then be placed on this card test, and then a result will be
24 revealed. Results are read after 10 minutes.

25 Q Okay, and what are the potential results from that

1 test just in general from hematrace testing?

2 A There's a positive result or a negative result.

3 Q Okay, and in this case, what was the result on this
4 steering wheel swab?

5 A On the steering wheel swab it was positive, which is a
6 result of blood identified.

7 Q And then what did you do with that swab once you
8 completed your testing?

9 A So, Item 56 was then prepared for DNA analysis and
10 forwarded to the DNA section for further analysis.

11 Q Okay. I'm going to next show you items -- or State's
12 Exhibits, excuse me, 251 and 252. Those are marked for
13 identification only.

14 (Break in proceedings.)

15 Q Okay. Can you tell us what are those items?

16 A So, State's Exhibit 251 corresponds to the left
17 fingernail clippings and right fingernail clippings of
18 Margaret Murdaugh. State's Exhibit 252 corresponds to the
19 left fingernail clippings and right fingernail clippings of
20 Paul Murdaugh.

21 Q So on State's 251, the fingernail clippings from
22 Margaret Murdaugh, what, if anything, did you do to those
23 items?

24 A So State's Exhibit 251, once received, is clipping
25 from her fingernails. So, I will take a portion of the

1 clippings that have been submitted, place it within a tube,
2 and forward it to the DNA section for further analysis.

3 Q Okay. When you say portion of the clippings, does
4 that mean you clipped some more and send to DNA, or what
5 does that mean?

6 A So, the literal fingernail clippings are what's being
7 submitted within the envelope. So, say there's five
8 clippings. I will forward approximately two to three of
9 what's been submitted, place it within the tube, and that's
10 what will be forwarded for analysis.

11 Q And did you do the same process with State's Exhibit
12 252, the fingernail clippings from Paul Murdaugh?

13 A Yes. State's Exhibit 252 will receive the same
14 preparation for DNA analysis.

15 MS. GOUDE: Your Honor, at this time the State will
16 move Exhibits 251 and 252 into evidence.

17 MR. BARBER: No objection.

18 THE COURT: They're admitted.

19 (FINGERNAIL CLIPPINGS MARKED AS STATE'S EXHIBIT NUMBER
20 251 WERE RECEIVED INTO EVIDENCE.)

21 (FINGERNAIL CLIPPINGS MARKED AS STATE'S EXHIBIT NUMBER
22 252 WERE RECEIVED INTO EVIDENCE.)

23 Q All right, Agent Nugyen, next if you could tell us a
24 little about State's Exhibit 418, which was Alex Murdaugh's
25 shirt. Could you describe how you first processed the

1 shirt when it was initially received by the lab?

2 A So, the white shirt from Richard Murdaugh was
3 submitted with a blood request. On June 9th of 2021, I
4 processed this item for the possible presence of blood.
5 So, that entails -- I first visually examined the shirt for
6 any areas that are consistent with the staining of blood.
7 Then I tested the these items that I have indicated with
8 our Phenolphthalein presumptive test for blood. Two stains
9 were indicated are -- were tested. Both stains were
10 positive for the possible presence of blood. One stain
11 located at the exterior front bottom edge of white shirt
12 was forwarded to the DNA section for further analysis.
13 Afterwards --

14 Q I'll stop you for just a second, and I'm going to hand
15 you State's 460. Now, you just said that that stain was
16 processed and sent to DNA. How did you process that? Did
17 you send the whole shirt, or how did that work?

18 A So the stain that I had located, I cut that stain from
19 the shirt and then prepared it for a DNA analysis, which
20 means I cut a small portion of that stain, placed it within
21 the tube, labeled that tube, and forwarded the cutting as
22 well as the portion that I had prepared to the DNA section
23 for further analysis.

24 Q And that cutting is contained in State's 460. Is that
25 correct?

1 A That cutting is contained in State's 460.

2 Q And what date did you perform that initial analysis?

3 A On June 9th of 2021.

4 Q And I think you mentioned there was another stain also
5 located on the shirt at that time.

6 A Yes. Two stains were presumptively tested.

7 Q Was that second stain cut on June the 8th?

8 A It was not. It remained in the shirt and was
9 identified with the presumptive test results.

10 Q Now due to ongoing investigation, did you come back
11 and examine that shirt again?

12 A Yes. So, afterwards a request was related to me to go
13 back to the shirt and retrieve that stain and forward it
14 for DNA analysis.

15 Q Did you do any other testing this second time around?

16 A So when I went to remove the second stain, I met with
17 members of the Crime Scene Unit, Lieutenant Wallace as well
18 as Special Agent Worley, and they processed the shirt with
19 their LCV testing, which, to my understanding, is their
20 presumptive test for blood.

21 Q And what was discovered during the LCV testing?

22 A So after removing the second stain from the June 9th
23 date that I processed it, ten additional stains were
24 identified from the LCV processing, which were cut from the
25 shirt and prepared for DNA analysis and forwarded for

1 further testing.

2 Q And I will show you State's 461. Are those the
3 additional cuttings from the shirt?

4 (Break in proceedings.)

5 Q And there are quite a few cuttings there.

6 A Uh-huh.

7 (Break in proceedings.)

8 A Yes. So, all the cuttings from the shirt are here.

9 Q Okay. Now, as far as you're concerned, did you
10 process the shirt any further?

11 A No. Besides preparing these additional stains that
12 were identified, nothing further was done.

13 Q And what did you do with those cuttings?

14 A I cut a small portion from each of the stains that was
15 indicated as being positive and forwarded it to the DNA
16 section for further analysis.

17 Q All right, and State's Exhibit 418 is the defendant's
18 shorts. How were those shorts processed in comparison to
19 the shirt?

20 A So, the shorts also were submitted with a blood
21 request. They were processed in a similar manner. Several
22 stains were tested. However, two were positive for the
23 possible presence of blood. A stain located at the front
24 left interior pocket of the pair of green shorts was
25 forwarded for further analysis. This was processed on the

1 same June 9th date of 2021. The shorts were also
2 additionally processed at the same time the shirt was
3 additionally processed to retrieve a second stain that was
4 indicated as a possible presence of blood. And then the
5 same members of the Crime Scene Unit also processed the
6 shirt with their LCV testing.

7 Q And I believe we still have item -- or, excuse me,
8 Exhibit 460 up there. Does that contain the first cutting
9 from the pair of pants on June 8th?

10 A Yes. State's Exhibit 460 contains the first cutting
11 from the pair of shorts from June 8th -- 9th, I'm sorry.

12 Q And then State's Exhibit 461, what cutting -- that
13 contains the cutting from the pants on July 21st. Is that
14 right?

15 A Yes. So, State's Exhibit 461 does contain the
16 additional cuttings. So, the second stain that had tested
17 positive on the June 9th processing date, as well as six
18 additional stains, were indicated from the Crime Scene Unit
19 when they processed the pair of shorts with their LCV
20 testing.

21 Q Okay, and then what did you do with those cuttings
22 once you took them?

23 A The cuttings for the shorts were prepared for DNA
24 analysis, once again cutting a small portion of the stain
25 and forwarding it for further analysis.

1 Q And I'm going to show you State's 473. If you would,
2 take a look at that. Do you recognize that as -- what do
3 you recognize that as?

4 A So, this appears to be a photo of Item 2 -- or 20.2,
5 which is the cutting from front left interior pocket of
6 pair of green shorts from Richard Murdaugh.

7 MS. GOUDE: Your Honor, at this time I would move
8 State's Exhibit 473 into evidence.

9 MR. BARBER: No objection.

10 THE COURT: It's admitted.

11 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 473 WAS
12 RECEIVED INTO EVIDENCE.)

13 MS. GOUDE: Permission to publish?

14 THE COURT: Yes.

15 (Break in proceedings.)

16 Q Okay, and, Agent Nugyen, if you could describe to the
17 jurors what they're looking at in the picture.

18 A So, this is a stain that was tested and as you can
19 see, I have labeled it with a SLED item number both on the
20 physical item as well as it's contained with a manila
21 envelope which has the unique case number, item number,
22 that it -- the request was for blood, the location it was
23 taken from, as well as that it's a cutting. In addition,
24 you can see my initials and date from when I prepared this
25 for DNA analysis.

1 Q Okay, and, again, I'm sorry, what were the presumptive
2 results of the testing for blood?

3 A So, the presumptive results for this stain are that it
4 was positive for the possible presence of blood.

5 Q And we talked a little bit about the cuttings of the
6 shirt and the shorts. Just to kind of aid the jury in
7 seeing what you actually did, I'm going to show you State's
8 471 and 472. Do you recognize those pictures?

9 A I do recognize these pictures. They're from the
10 additional processing that occurred on the shirt.

11 MS. GOUDE: Your Honor, at this time the State would
12 move 471 and 472 into evidence.

13 MR. BARBER: No objection.

14 THE COURT: They're admitted.

15 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 471 WAS
16 RECEIVED INTO EVIDENCE.)

17 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 472 WAS
18 RECEIVED INTO EVIDENCE.)

19 Q On State's 472, could you just kind of describe to the
20 jurors what they're looking at here, and point their
21 attention to the areas in the shirt that you cut. If you
22 can see.

23 A So, if you look in the square labeled E7, there is a
24 stain that's circled that has the Item Number 19.3, as well
25 as a plus sign. That was the second stain that I had

1 tested on the original processing date that was to be
2 retrieved during this time of processing. Then you can see
3 there are additional stains circled in blue with letter
4 identifiers. Those were areas of staining that was
5 identified from the Crime Scene Unit when they processed
6 with their LCV test. Each stain has the subitem twice.
7 That is to -- one is to stay with the stain once I've cut
8 it, and then one is to stay within the shirt so in the
9 event that you needed to know where that stain had
10 originated, you could locate it.

11 Q And then State's Exhibit 471?

12 A State's Exhibit 471 is the front of the shirt. It has
13 several areas of staining that were circled as a result of
14 the LCV processing by the Crime Scene Unit.

15 Q And those are also areas that you cut from the shirt.

16 A Yes. So, once again, I have written the subitem
17 numbers that they were assigned, and then removed each of
18 the stainings along the line that I've outlined, and
19 prepared those stains for further analysis for DNA.

20 Q And you said you followed the same process
21 regarding --

22 A That is correct.

23 Q All right. Let's move on to State's Exhibit 419,
24 which was the shoes of the defendant. Can you tell us what
25 you did with those shoes?

1 A So those shoes, which are described as a pair of red,
2 yellow, and white tennis shoes from Richard Murdaugh, they
3 have the same blood request. So, I visually examined the
4 shoes for any areas of possible blood staining and then
5 tested those stainings. Two were indicated as being
6 possibly positive for the possible presence of blood. One
7 was -- one stain was forwarded for DNA analysis, and it was
8 located on the left shoelace of the pair of red, yellow,
9 and white tennis shoes.

10 Q And are those cuttings in State's Exhibit 460 that you
11 already have up there with you?

12 A Yes. The cutting from the shoes is contained within
13 the State's Exhibit 460.

14 MS. GOUDE: Your Honor, at this time the State would
15 move State's 460 and 461 into evidence.

16 MR. BARBER: No objection.

17 THE COURT: They're admitted.

18 (CUTTINGS MARKED AS STATE'S EXHIBIT NUMBER 460 WERE
19 RECEIVED INTO EVIDENCE.)

20 (CUTTINGS MARKED AS STATE'S EXHIBIT NUMBER 461 WERE
21 RECEIVED INTO EVIDENCE.)

22 Q All right, Agent Nugyen, we're making some good
23 process here. State's Exhibit 226 was a blue raincoat.
24 Can you explain to the jurors what you did to process that
25 item?

1 A So, the blue raincoat also had two types of
2 processing. During the first time of processing, which
3 occurred on October 7th of 2021, the raincoat was processed
4 for the possible presence of blood. This was done by
5 myself as well as members of the Crime Scene Unit,
6 Lieutenant Wallace, as well as Special Agent Moore. I
7 first performed presumptive testing with our blood tests,
8 and then the Crime Scene Unit went behind and then
9 processed with the raincoat with their LCV testing.

10 I tested 71 stains. All 71 stains were negative for
11 the possible presence of blood. After that, the LCV
12 processing took place. No areas of interest were indicated
13 as interpreted by the Crime Scene Unit as being positive,
14 and, therefore, on October 7th of 2021, nothing was
15 forwarded for DNA analysis.

16 Q And why was nothing forwarded for analysis?

17 A There were no stains that indicated the possible
18 presence of blood.

19 Q All right. Then did you go back and reexamine the
20 raincoat?

21 A Yes. An additional request came in for the raincoat
22 for ownership. Once again, ownership is a collection
23 method for DNA to identify the primary wearer of an item.

24 Q Okay, and how did you process that for ownership?

25 A Two sets of swabs were taken off the raincoat. The

1 first set of swabs was identified as Item 173.2, which were
2 swabs from interior cuffs, collar, and hood, interior and
3 exterior zipper area, zipper and zipper pull of the blue
4 raincoat. The second set of swabs that were taken from the
5 raincoat were identified as Item 173.3, swabs from side
6 openings, zipper area, and both interior portions of
7 exterior pocket of the blue raincoat. In addition --

8 Q I'll -- excuse me. I'll hand you State's 462.

9 (Break in proceedings.)

10 Q And what are those? Are those the swabs you were just
11 telling us about?

12 A State's Exhibit 462 are both sets of swabs that I just
13 recently spoke about from collecting from the raincoat.

14 Q And what did you do with those swabs?

15 A These swabs were prepared for DNA analysis and
16 forwarded to the DNA section for further analysis.

17 MS. GOUDE: At this time, the State would move to
18 admit State's Exhibit 462.

19 MR. BARBER: No objection.

20 THE COURT: It's admitted.

21 (RAINCOAT SWABS MARKED AS STATE'S EXHIBIT NUMBER 462
22 WERE RECEIVED INTO EVIDENCE.)

23 Q And, Agent Nugyen, when you were examining the
24 raincoat for ownership, did you find anything on that
25 raincoat to help with that analysis such as hair or

1 anything like that?

2 A So, part of the ownership processing is to look for
3 hair. The raincoat -- there was no hair found.

4 Q Did you also notice anything about the condition of
5 the raincoat?

6 A Yes. So on my evidence worksheet, which is where we
7 document the items that we perform processing on as well as
8 the respective results, I also document any describing
9 factors. So, on this worksheet in regards to the blue
10 raincoat, I do have that the plastic seam liner was coming
11 off throughout the item.

12 Q That the -- what did you say?

13 A I called it a plastic seam liner.

14 Q Was coming off? I can't hear you.

15 A Coming off throughout the item.

16 Q Thank you. All right. Also in this case, did you
17 receive a number of buccal swabs?

18 A I did.

19 Q Okay, and that is -- what did you do with those buccal
20 swabs when you received them?

21 A So, buccal swabs don't require any testing on my part.
22 I just prepare those buccal swabs for DNA analysis, once
23 again cutting a small portion off of each swab, placing it
24 within a tube, and forwarding it for further analysis.

25 MS. GOUDE: All right, Agent Nugyen, the State has no

1 further questions at this time. If you will, please answer
2 any questions from the defense.

3 THE COURT: Mr. Barber.

4 CROSS-EXAMINATION

5 BY MR. BARBER:

6 Q Good morning -- excuse me. Good morning, Agent
7 Nugyen.

8 A Good morning.

9 Q Is it Agent? Am I right? Just very briefly. At the
10 outset you discussed collecting for DNA -- DNA testing for
11 the Blackout cartridges. Is that correct?

12 A Collecting for the possible presence of touch DNA,
13 yes.

14 Q Yes, and did you only test two of those cartridges?

15 A All seven were processed using the soaking method.

16 Q Okay. With that processing method, any results that
17 you were -- received, would they be specific to any one
18 cartridge, or would it just be for the collection of all
19 seven?

20 A I'm sorry, can you repeat?

21 Q Would you have results for DNA from the way that you
22 collected the sample for a specific shell case, or would it
23 be for all seven as a set?

24 A Okay, I just want to clarify. I did say there were
25 seven cartridges. There were only six. So, although they

1 are being individually soaked, they are being combined
2 within that filtration unit, so the results would be from
3 all of the cartridges together.

4 Q Okay, and you did -- you had positive presumptive
5 tests for two shotguns, correct? Portions of two shotguns?

6 A Do you have an item number that corresponds?

7 Q I can get those in a second. Do you remember there
8 were two shotguns you just testified had positive
9 presumptive blood tests? One was SLED Item Number 15.

10 A Yes. So, the swabs from the Benelli shotgun, Item 15,
11 was positive for the possible presence of blood. However,
12 I believe you mean the second set of swabs, Item 16. That
13 was negative.

14 Q And then there was later a item -- SLED Item 22?

15 A Oh, yes. The two sets of swabs from SLED Item 22 were
16 both positive for the possible presence of blood.

17 Q So, I guess what exactly is a presumptive test?

18 A So, a presumptive test is indicating the possible
19 presence of a body fluid, in this case blood. It's not
20 confirming the presence. It's just an indication so that
21 we can further test that stain.

22 Q And how does it indicate the possible presence of
23 blood?

24 A So, the Phenolphthalein test interacts with the
25 hemoglobin found within blood, and that's what is basically

1 giving a positive result with.

2 Q Is it fair to say that it changes color? It's like a
3 dye that changes color?

4 A So, it's a color change test based on the presence of
5 the hemoglobin. A swab that's being tested will turn a
6 bright pink color.

7 Q And are -- is that presumptive test specific to human
8 blood?

9 A It is not specifically human blood. It can be human
10 blood or animal blood.

11 Q Could chemicals other than blood cause a positive test
12 result?

13 A So, the Phenolphthalein test has what we call false
14 positives, which can give a positive result, but it is not
15 blood. It also can give a positive result for pus and
16 sometimes in the presence of bacteria. Those include
17 copper salts, salts, nickel salts, rust, as well as some
18 plant and peroxide peroxidases, which include broccoli,
19 cauliflower, horseradish.

20 Q Okay. So, there are a number of things that can give
21 a positive result. Is that why you also have the
22 confirmatory test?

23 A If we test something for the possible presence of
24 blood, we don't typically do a confirmatory test unless
25 it's requested. We just store that sample for DNA

1 analysis.

2 Q Okay. Who had requested a confirmatory test?

3 A It -- usually an investigator of an agency may request
4 it. Sometimes solicitors or defense attorneys may request
5 an additional test.

6 Q And the confirmatory test, I think you testified, is
7 just basically like a Covid test?

8 A It works similar to a Covid test.

9 Q Two lines means human blood?

10 A It will have a line to indicate that the test is
11 working properly, which is a control line, and then if it
12 is positive it will have an additional second line. If
13 that second line does show up, that means that the test is
14 negative.

15 Q Is it an accurate test?

16 A I would say that it's an accurate test as long as the
17 control line is present.

18 Q It's more accurate than the presumptive test. That's
19 why you use it, correct?

20 A So, the confirmatory test is saying that, yes, blood
21 is identified on the item that's being tested.

22 Q Human blood.

23 A Human blood, as well as higher primate blood and
24 ferret blood.

25 Q And you did not do any confirmatory tests on the

1 shotguns?

2 A I did not do any confirmatory tests on the shotgun
3 swabs.

4 Q And that was simply because nobody asked you to,
5 correct?

6 A The -- in effort to not consume any of the sample on
7 the swabs, as a swab is a small area, we just forward it
8 for DNA analysis.

9 Q But in the Chevy Suburban, you did perform a hematrace
10 test.

11 A Yes, because that -- these swabs for the Chevy
12 Suburban were already previously processed with another
13 presumptive test by the Crime Scene Unit, we could not
14 presumptive test behind because our two tests work in a
15 similar manner.

16 Q Whose decision was it to do the hematrace test on the
17 Chevy Suburban?

18 A That is typically how we process items of evidence
19 that we receive from the Crime Scene Unit in the form of
20 swabs based on any of their presumptive testing.

21 Q But, like, who made the decision to do the hematrace
22 test on that steering wheel? The name of the person.

23 A I performed the hematrace test.

24 Q On your own initiative.

25 A No. That is a common way we do testing on swabs that

1 have already been collected based on a presumptive test.

2 Q Did someone instruct you to perform a hematrace test
3 upon the steering wheel?

4 A No. It is part of our general operating procedures.

5 Q But you did not perform hematrace tests on the
6 weapons?

7 A The, the swabs that were collected off of the weapons,
8 no, because they were not presumptively testing prior. So,
9 I could use our presumptive test on those items.

10 Q Did you perform or prepare any samples on the victims'
11 clothing or bodies other than the fingernail clippings that
12 you discussed?

13 A I do not believe so.

14 Q Okay. So, the only thing from the body of Maggie
15 Murdaugh or Paul Murdaugh that you tested were the
16 fingernail clippings for Maggie Murdaugh?

17 A So, I prepared the fingernail clippings for DNA
18 analysis, as well as the buccal swabs from those
19 individuals.

20 Q But nothing else from their bodies, correct?

21 A No. I did not test their clothing.

22 Q Or their clothing. Or their clothing.

23 A I did not test their clothing.

24 Q When looking at the t-shirt that you just testified
25 about, in those cuttings I think you have in the -- you

1 open the bag and the cuttings were there and you prepared
2 them. Did you perform any serology tests on those
3 cuttings?

4 A No. I just removed those cuttings from the shirt as
5 the result of the crime scene testing.

6 Q Are you aware of any serology tests being performed on
7 those cuttings?

8 A Of the shirt?

9 Q Yes, of those big shirt cuttings.

10 A I believe there was further analysis performed on
11 those cuttings.

12 Q Did somebody other than you later perform serology
13 tests on those cuttings, to your knowledge?

14 A It is my understanding that there was additional
15 testing on those cuttings.

16 Q Serology testing?

17 A Serology testing.

18 Q Specifically hematrace?

19 A I believe there was hematrace performed on the
20 cuttings from the shirt.

21 Q But that -- just to be clear, that wasn't performed by
22 you.

23 A I did not perform hematrace on any of the cuttings on
24 the shirt.

25 Q Did you perform any hematrace tests on the shorts or

1 tennis shoes?

2 A I did not perform any hematrace testing on the shirts
3 or the shoes.

4 Q Just, I guess, maybe a little bit of background and
5 understand maybe who does what, when you were working on
6 this case, do you have like a direct supervisor?

7 A I do have a direct supervisor.

8 Q And who is that person?

9 A Her name a Laura Hash.

10 Q And is she the person who directs your activities as
11 regard to this case?

12 MS. GOUDE: Objection, Your Honor. Relevance.

13 THE COURT: The objection is overruled.

14 A I'm sorry, what was the question?

15 Q Is Lieutenant Laura Hash the person who directs your
16 activities with regard to this case?

17 A So based on our operating manual, as well as my
18 training and experience, based on the request of certain
19 items that are submitted, I will decide how those are
20 tested. However, if additional processing is requested,
21 those usually are communicated to me through my direct
22 supervisor.

23 Q And just for clarity, we've talked a bit about DNA,
24 but you're just preparing samples and they go to someone
25 else who does the analysis and reports. That's not you,

1 correct?

2 A That's correct. I am just preparing the samples for
3 further analysis.

4 Q Is the only hematrace test that you did for this case
5 the steering wheel? Well, strike that. The Chevy
6 Suburban, I believe there may have been some negative tests
7 for the Suburban, but were those the only hematrace tests
8 you did for this case?

9 A No. I did hematrace these swabs from the Chevy
10 Suburban. I also hematrace tested swabs collected from a
11 Ford F250.

12 Q And what were the results from the Ford F250?

13 A There were four swabs submitted from the Ford F250,
14 and the results for all four of those sets of swabs were
15 negative for human blood.

16 Q So, the steering wheel was the only positive test that
17 you did for hematrace?

18 A Yes. The steering wheel from the Chevy Suburban is
19 the only positive hematrace result that I have.

20 Q Okay.

21 MR. BARBER: Beg the Court's indulgence.

22 (Break in proceedings.)

23 Q One final question, or a little set of questions. It
24 seems like sometimes the crime scene people or the
25 department -- I shouldn't just say people; I guess they're

1 a department -- do presumptive blood tests. Is that
2 correct?

3 A Yes. It's my understanding that the Crime Scene Unit
4 does perform presumptive blood tests.

5 Q And the words -- the initials LCV have been used. I
6 think you might have mentioned it. What does that mean?

7 A It stands for Leucocrystal Violet.

8 Q And can you describe that test?

9 A I don't know much about the test. I just know that it
10 is a test that the Crime Scene Unit uses for -- as their
11 presumptive blood test.

12 Q Do you know what color it turns when there's a
13 positive result?

14 A It'll turn a purple color.

15 Q So with -- I think the -- let me ask this. Why -- we
16 saw a picture of the shirt gritted out. Do you remember
17 that exhibit?

18 A I do.

19 Q Why was the presumptive test done? Was that the SLED
20 laboratory? Was that the location that was --

21 A Are you asking about the LCV processing?

22 Q Yes. Where was that testing done?

23 A That was done at the SLED laboratory.

24 Q Why was that done by the Crime Scene Unit and not the
25 serology unit?

1 A We do not use LCV testing, and I am unsure as to why
2 that particular test was chosen to be used by the Crime
3 Scene Unit.

4 Q Because earlier you did testing on the hem, right, the
5 pheno tests on the front and back hem of the shirt. Is
6 that correct?

7 A I did.

8 Q But then the Crime Scene Unit later came back and in
9 the lab did a different kind of test.

10 A That's correct.

11 Q And you don't know why?

12 A I was not part of that decision. I was just notified
13 that they would be performing that test while I was
14 retrieving the additional stain that I had tested earlier.

15 Q And finally it seems like if something is tested
16 presumptive in the field and comes to you, you do a
17 confirmatory test. Is that what happened with the Chevy
18 Suburban?

19 A Yes, that's correct.

20 Q But if something comes to you and there's not been a
21 presumptive test like with the shotguns, then you don't
22 perform a confirmatory test.

23 A No, I do the presumptive test.

24 Q Do you know why that's the policy?

25 A It's an effort to not consume as much sample on a

1 swab. A swab is a very -- it's like a sterile Q-tip, so
2 essentially the surface area is very small. So, in efforts
3 to not consume the sample and to give more for DNA
4 analysis, that's what's done.

5 Q If something goes to DNA analysis and there's some
6 result, does it ever come back for a blood test to see if
7 the source of the DNA test was blood?

8 A To be pheno tested?

9 Q No, for hematrace tests.

10 A As I mentioned, hematrace testing can be requested on
11 the back end, as any of our card tests can be.

12 Q In your experience -- I think we had some testimony
13 about your experience. If DNA is found on something, is
14 there ever then a time that you go back and say, hey,
15 there's the source of this DNA blood, and do a hematrace
16 test?

17 A Hematrace specifically? To my knowledge, no. But in
18 my experience, there have been times that solicitors or
19 defense attorneys will request a card test be done on a
20 sample after the DNA analysis has been performed.

21 MR. BARBER: No further questions, Your Honor.

22 THE COURT: Any redirect?

23 MS. GOUDE: None from the State, Your Honor.

24 THE COURT: Thank you. You may step down.

25 (The witness exited the stand.)

1 THE COURT: We'll be in recess for about 10 minutes or
2 so. Do not discuss the case.

3 (The jury left the courtroom.)

4 (A break was taken.)

5 THE COURT: You may bring the jury.

6 (The jury returned to the courtroom.)

7 THE BAILIFF: The jury is present, sir.

8 THE COURT: Thank you.

9 Your next witness.

10 MS. GOUDE: The State calls Sara Zapata.

11 The witness, SARA ZAPATA, was first duly sworn and
12 testified as follows:

13 THE CLERK: Take a seat in the witness stand. You
14 can adjust the mic so we can hear you clearly. Ma'am,
15 state your name again for the record, and spell your last
16 name.

17 THE WITNESS: Sara Zapata, Z-a-p-a-t-a.

18 VOIR DIRE EXAMINATION

19 BY MS. GOUDE:

20 Q Agent Zapata, I think you have a, I guess -- what
21 would you call that? A container of -- is that your notes
22 up there?

23 A Yes. My case file and other relevant documents.

24 Q To aid you in your testimony if necessary.

25 A Yes.

1 Q Could you tell the jurors where you work?

2 A I work for the South Carolina Law Enforcement
3 Division, commonly known as SLED.

4 Q And how long have you worked for SLED?

5 A For about seven and a half years.

6 Q What is your job title there?

7 A I am a forensic scientist in the DNA Casework
8 Department.

9 Q What are some of your duties as a forensic scientist
10 in DNA?

11 A As a DNA analyst, I will look at the requests for
12 different items of evidence. I can perform serology
13 testing if necessary or refer to the serologist results. I
14 will take the items of evidence as well as any known
15 standards through our standard laboratory procedures to
16 develop a DNA profile. The steps of that analysis are
17 extraction, which is where we are trying to isolate any DNA
18 present on that evidence item from the evidence item
19 itself, as well as --

20 Q Agent, if you could pull the microphone and speak up a
21 little bit.

22 A Sure, sorry. As well as from any other cellular
23 material present. The second step is quantitation where
24 we're trying to approximate how much DNA is present on that
25 sample so that we can target the appropriate amount of DNA

1 for the next step, which is amplification.

2 Amplification works kind of like a chemical copy
3 machine. We're targeting specific areas of the DNA that
4 have been shown through scientific studies to vary from
5 person to person. We're trying to make copies of that so
6 that they can be detected by our final instrument, which is
7 what actually separates the DNA into a profile.

8 And then I will interpret that profile, and calculate
9 any statistics, and prepare a report. I can also perform
10 technical and administrative reviews of other analysts'
11 work, as well as testify in court when necessary.

12 Q Okay, and can you tell us a little about your
13 educational background and training that qualified you for
14 this position?

15 A I have a Bachelor of Science in forensic science from
16 the Pennsylvania State University. Upon employment at
17 SLED, I underwent a training program for approximately a
18 year and a half under a qualified DNA analyst, and that
19 training included an observation period as well as a
20 practical period of the different steps in our DNA analysis
21 process, as well as a serology procedures.

22 Once I had received all of my training, I went through
23 a testing period where I had to demonstrate my competency
24 in using all of those different instruments and procedures
25 and interpretation. I had to successfully complete several

1 written exams, an oral exam, complete several mock cases,
2 and a mock court. And then was competency tested with
3 another case before finally being able to do a mock case,
4 before finally being able to do analysis on real casework.

5 THE COURT: All right, and you will need to speak into
6 the mic and increase your volume in order for us to hear
7 you better.

8 THE WITNESS: Okay.

9 THE COURT: You may proceed.

10 MS. GOUDE: Thank you, Your Honor.

11 Q Agent Zapata, how many cases have you -- do you think
12 you've participated in?

13 A Approximately 500.

14 Q And have you testified in trial before?

15 A Yes, I have.

16 Q How many times?

17 A Nineteen.

18 Q And in those trials, were you qualified as an expert
19 witness?

20 A Yes, I was.

21 Q And what were you qualified as an expert witness in?

22 A In DNA analysis.

23 MS. GOUDE: Your Honor, at this time the State would
24 move to qualify Agent Zapata as an expert in DNA analysis.

25 MR. BARBER: No objection, Your Honor.

1 THE COURT: She is so qualified.

2 DIRECT EXAMINATION

3 BY MS. GOUDE:

4 Q All right, you had mentioned in some of the duties of
5 your job kind of what you do. I guess if we could kind of
6 scale it back a little bit more basic, but briefly, just
7 what is DNA?

8 A DNA is a chemical that is found throughout your body
9 with the exception of red blood cells. You can get half of
10 your DNA from your mom and half from your dad, and it's
11 unique to individuals, with the exception of identical
12 twins.

13 Q And so if you had a case where there are family
14 members involved, what does that mean as far as DNA
15 analysis?

16 A Based upon the evidence DNA profile, sometimes it
17 might not be possible to make comparisons to some family
18 members because there may not be enough DNA present there
19 to distinguish between the family members. Because the
20 family members will share DNA, that will affect what the
21 DNA profile looks like.

22 Q Can you tell us about some different sources of DNA
23 from a person's body?

24 A Some sources from your body would be your hair, blood,
25 semen, saliva, bones, as well as DNA from your skin cells,

1 which is what we call touch DNA.

2 Q And what are some variables that can affect touch DNA?

3 A So, some people just naturally shed more skin cells
4 throughout the day than other people, and so you would
5 expect to recover more DNA from an object that a person who
6 sheds a lot of DNA has handled than a person who sheds
7 less. There are also factors such as the surface that is
8 being touched. If the surface is rough, then you would
9 leave more skin cells behind. If you are holding the item
10 for a longer period of time or with a lot of pressure, then
11 you would expect to leave more skin cells behind.

12 Environmental factors such as rain, moisture, UV light,
13 that can all lessen the amount of DNA that's recovered.
14 And also personal hygiene habits can affect how much DNA
15 you leave behind. So, if you just washed your hands, there
16 may not be as much skin cells left behind.

17 Q So, do you leave touch DNA behind kind of like you
18 would leave fingerprints behind? Is that a fair
19 comparison?

20 A Kind of. If you touch it -- you touch an object, you
21 may leave some behind.

22 Q All right. Now, you mentioned different sources such
23 as body fluids. Are you able to confirm, like, 100 percent
24 which body fluid a DNA profile comes from?

25 A So, the test that we perform to try to identify a body

1 fluid is different from the DNA testing that is being
2 performed. Especially in cases where the evidence profile
3 is a mixture, there is no way for us to tell did all of
4 this DNA come from blood. Did it come from saliva and
5 blood mixed together. There's no way for us to identify
6 100 percent the source of the DNA profile. We can indicate
7 that a body fluid may be present, but we cannot say the
8 blood on this item is from this individual.

9 Q So, if I had a drop of blood on my shirt up here,
10 could you ever say this was my blood?

11 A I could test it for the indication of a body fluid. I
12 could see if your DNA profile is recovered from that stain,
13 if the evidentiary DNA profile, if you're included as a
14 contributor to that profile. But I can never 100 percent
15 say that is your blood.

16 Q So, you could say my DNA is here but not my blood.

17 A I could say that you're included as a contributor to
18 the DNA profile.

19 Q All right, and I think you've kind of already
20 explained your process of DNA analysis when you explained
21 your duties. Can you tell us about some of the, you know,
22 standard lab procedures and protocol?

23 A How specifically do you mean?

24 Q I mean, I guess just basically how you analyze a DNA
25 sample.

1 A So, I will take the DNA sample. If it has been
2 previously cut by a serologist or an evidence processor, I
3 will add the agents to the tube and proceed with my
4 analysis that way. If it has not previously been cut, then
5 I can prepare the sample for DNA and then take it through
6 those steps that I explained earlier. So, extraction,
7 quantitation, amplification, and separation into a profile,
8 and then I will interpret the DNA profile that was
9 developed. So, I will determine if there's enough DNA
10 present there for the profile to be used for comparison. I
11 will determine the number of contributors to that profile.

12 So, a profile can be single source, which is DNA from
13 just one individual; or a mixture, DNA from multiple
14 individuals are present in the profile. I will determine,
15 if it's a mixture, how many people are in that mixture, or
16 how many I'm interpreting that mixture as. And then I can
17 calculate statistics to compare --

18 Q So first of all, let's take for a minute --

19 A Sorry.

20 Q -- with these determinations, how are you making the
21 determinations?

22 A So, I'm looking at the DNA profile and using our
23 protocol, our procedures, my training and experience as a
24 DNA analyst to determine the number of contributors to the
25 profile.

1 Q And are you -- how are you looking at it? Are you
2 visually looking at it, or is a computer program looking at
3 it, or what's going on?

4 A So, I visually examine the profile myself as the
5 analyst. I determine the number of contributors to the
6 profile. And then we also use a software program called
7 STRmix to help in our interpretation, and what STRmix does
8 is look at the evidence profile and attempt to break it
9 down into the potential contributors to that profile. So,
10 if you think about the evidence profile as like grandma's
11 chocolate chip cookies, you know exactly what that cookie
12 is supposed to taste like. You know what the final product
13 is supposed to be, and you're trying to recreate that
14 recipe and get it as close to grandma's cookie as what you
15 know it's supposed to be. So, you're testing different
16 ingredients at different proportions to see what can make
17 up that cookie, and that is a kind of what STRmix does when
18 it's looking at the profile. And then I will evaluate the
19 STRmix output, make sure that what STRmix is telling me
20 makes sense based upon what the profile looks like, and
21 then if everything worked properly I can use STRmix also to
22 calculate our statistics.

23 Q Okay, and how do you calculate that statistic?

24 A So, the statistic that STRmix calculates is called
25 likelihood ratio. It's a comparison of two possible

1 scenarios to see which is a better explanation of the DNA
2 profile that was developed. It works kind of like a
3 seesaw. So, if you have one scenario on one side and
4 another scenario on the other side, and STRmix is going to
5 put more weight on the scenario that is a better
6 explanation of the DNA profile.

7 You do these kinds of comparisons subconsciously in
8 your mind all day long. If the DNA profile, for example,
9 is the fact that someone ran a marathon, that's your
10 result. The two scenarios that could explain that result
11 are, one, the person trained every day for months leading
12 up to the marathon. They ran many, many miles. The second
13 scenario is that they sat on the couch and watched TV and
14 never ran at all. Which one is a more likely explanation
15 of the fact that they finished the marathon? It would be
16 the first one, that they trained really hard. And so that
17 was the kind of comparison that STRmix is making.

18 Q And where do these scenarios come from, I guess?

19 A So, based upon what the DNA profile looks like, we
20 will set up the two opposing scenarios to make the
21 comparison. And the first scenario is always you're going
22 to include the person whose standard is being compared to
23 that profile, so the person's whose statistic you are
24 calculating. And the second scenario is always going to
25 include an unidentified, unrelated individual because you

1 need something that opposes that comparison. So, for a
2 single source profile, your two scenarios will be the
3 person being compared is contributing to the mixture versus
4 an unidentified, unrelated individual is contributing to
5 the mixture. If it -- or sorry, to the profile for single
6 source. If it is a mixture, then you need to account for
7 the other potential individuals present in that profile.

8 So for a two person mixture, for example, the first
9 scenario will be the person being compared and an
10 unidentified, unrelated individual contributing to the
11 mixture versus two unidentified, unrelated individuals
12 contributed to the mixture. And so we'll make that same
13 comparison for each person based upon what the DNA profile
14 looks like.

15 Q And so this unidentified, unrelated individual, where
16 does that really come from?

17 A That's just the way that the statistic is calculated.
18 It's not saying that it's not possible for related
19 individuals to be in the mixture, but because we are
20 focusing only on the comparison to that one person, we need
21 something to contrast that to, and we account for that by
22 using that unidentified, unrelated individual wording.

23 Q So, is that just kind of built into this formula in
24 the STRmix program?

25 A Correct.

1 Q So, what are some results that you can obtain from
2 your comparisons?

3 A So, a result in support of the first scenario, which
4 is that the person being compared to the profile is
5 contributing to the profile, the seesaw will tilt in that
6 direction, and we call that an inclusion. If it is tilted
7 far enough in the other direction, we call that an
8 exclusion, saying that the person being compared is not a
9 contributor to the profile under those two scenarios that
10 are being compared. It's possible for the seesaw to just
11 tilt a little bit in either direction. If the DNA in the
12 profile is very low level or very partial, there's just not
13 that much information there to make the comparison, and so
14 it's not tilting in one way or the other very strongly. It
15 is also possible if it's very partial or very little
16 information for the seesaw to just not move at all. It's
17 saying that neither explanation is a better explanation for
18 the DNA profile, and we'll call that uninformative.

19 Q And do you set up propositions the same way for each
20 comparison to an item?

21 A Yes. So, first we will say if the item is suitable
22 for comparison, then we will say the number of contributors
23 that we interpret in that profile as, and then we will set
24 up those two scenarios each time. In the cases of items
25 that are being taken off of someone's body, or swabs from

1 their body, we'll call that an intimate item, and so we
2 want to account for the presence of the individual whose
3 body the item was taken off of in that profile.

4 Because it's being removed from their body, we're
5 expecting that profile to be there, and so we can do that
6 in two ways. We'll look at the DNA profile. If their DNA
7 is clearly present in the profile, we will assume them as a
8 contributor. And what that does is put that person on both
9 sides of the seesaw, and so we're only making comparisons
10 now to the DNA that is not that person who we already know
11 is there. It's like someone telling you I know there are
12 two cups of flour in grandma's cookie recipe, so now you're
13 just adjusting the other potential ingredients to see what
14 else is making up that recipe.

15 If their DNA profile is maybe more partial or low
16 level, then we'll run the statistic for that individual
17 first to make sure that it meets our threshold to put them
18 on both sides of the seesaw, and we'll call that a
19 conditioned contributor. It treats it the same way once
20 we've run that standard comparison, and so the propositions
21 will list any individual that has been assumed or
22 conditioned on as a contributor, and then it will have the
23 two opposing scenarios for the other individuals that are
24 being compared to the profile, and then finally the result
25 of that comparison.

1 Q So if you had my shirt for testing, you would assume
2 my DNA was on this shirt because you knew I was wearing
3 this shirt.

4 A Right. I would look at your profile first and
5 visually compare that to the item of evidence. If you are
6 clearly contributing to the mixture, then I will assume
7 you. If maybe you are a lower level contributor but it
8 looks like your DNA profile could be there, then in order
9 to confirm that, I will run your statistic first and then
10 continue on with you on both sides of the seesaw.

11 Q All right, and now are there sometimes where you are
12 unable to make comparisons to specific individuals?

13 A Yes. Like we mentioned earlier, if there are
14 individuals that are related and maybe the DNA profile that
15 we're comparing them to is lower level, or there's just not
16 a lot of information there for a lower level contributor,
17 we can't distinguish between them, and so we won't make
18 comparisons in those cases to those individuals.

19 Q And I guess before we get started, just kind of going
20 back to DNA in general, what are alleles?

21 A So, alleles are the results of our testing at a
22 specific location. Like I explained earlier, the final
23 step of the laboratory portion of our analysis is a
24 separation of the DNA into a profile, and the separation is
25 what generates those allele results.

1 Q Okay, and how many alleles are we dealing with when
2 you're making an analysis with DNA, I guess, if there are
3 more or less, what that can tell you, if that makes sense?

4 A I'm not sure I know what you're asking.

5 Q All right. Well, sometimes there are DNA samples.
6 You mentioned lower or higher levels of DNA there.

7 A Uh-huh.

8 Q Would that affect the alleles that are there?

9 A Yes. So, the alleles are the actual result that we're
10 looking at, the DNA profile that we're looking at. We are
11 evaluating the profile based upon the heights of those
12 alleles. So, the higher the allele, the potential greater
13 contribution of that individual's DNA. The lower level the
14 allele, the less DNA potentially from that individual in
15 that profile.

16 Q And if you only have a few alleles to look at, is that
17 very informative in your analysis?

18 A No. The fewer number of alleles that you have to make
19 comparisons, the less informative the statistic is going to
20 be. So, that's where we have it in that range where it's
21 not tilting greatly in one direction over the other. It's
22 kind of like trying to identify something based off of an
23 eye witness description. If it's very vague, like it was a
24 red sedan, there are many red sedans that could fit that
25 description, so that would be an example of having few

1 alleles. But if you have a more specific description, like
2 it was a red sedan with five bumper stickers and a
3 bedazzled license plate, that's very specific, and so you
4 have more information to make a comparison to that vehicle.

5 Q And can unrelated people share the same alleles?

6 A Yes.

7 Q All right. So, before we get to the results, some of
8 these statistical results are very large numbers. Is that
9 right?

10 A Yes.

11 Q Do you think these two charts here, State's Exhibit
12 475 and 474, would help demonstrate to the jury what we're
13 talking about?

14 A Yes.

15 MS. GOUDE: State's Exhibit 474 and 475 for
16 demonstrative purposes.

17 MR. BARBER: No objection, Your Honor.

18 THE COURT: They're admitted.

19 (CHART MARKED AS STATE'S EXHIBIT NUMBER 474 FOR
20 IDENTIFICATION.)

21 (CHART MARKED AS STATE'S EXHIBIT NUMBER 475 FOR
22 IDENTIFICATION.)

23 Q All right, did you receive a number of buccal swabs to
24 analyze in this case?

25 A Yes, I did.

1 Q Do you remember how many buccal swabs you may have
2 received?

3 A I believe there were twenty-four buccal swabs total
4 for -- that I used for comparison.

5 Q Maybe twenty-five?

6 A I would have to count.

7 (Break in proceedings.)

8 A There was one that I received but I did not perform
9 analysis on. Maybe that's one that you're --

10 Q I'll have you take a look at State's 463. Do you
11 recognize that buccal swab?

12 A Yes.

13 Q And who was that a buccal swab from?

14 A It's labeled as buccal swabs from Melvin Tuten. There
15 is our laboratory case number, and item number on the
16 packaging.

17 Q And you performed analysis on this buccal swab?

18 A Yes.

19 MS. GOUDE: The State would move 463 into evidence.

20 MR. BARBER: No objection.

21 THE COURT: It's admitted.

22 (BUCCAL SWAB MARKED AS STATE'S EXHIBIT NUMBER 463 WAS
23 RECEIVED INTO EVIDENCE.)

24 Q Now, you compare standards from these buccal swabs to
25 swabs from items of evidence, or how -- what do we do to

1 analyze all of the stuff?

2 A So, first we do our interpretation of the evidence.
3 We look at the evidence like I described earlier, make sure
4 that's suitable for comparison, determine the number of
5 contributors to the items. And then if it's an intimate
6 item, we'll make that visual comparison to the individual
7 whose body that item came from first. Then we will use
8 STRmix to calculate the statistics for other individuals
9 for comparison, and then it will be a result in support of
10 one proposition over the other.

11 Q And the other individuals for comparison will be any
12 number of the individuals whose buccal swabs were submitted
13 in this case?

14 A Yes.

15 Q All right. I'm going to have you take a look at
16 State's Exhibit 459. What is -- is State's Exhibit 459 an
17 item that you analyzed?

18 A 459 are our laboratory Items 7.1 and 10.1.

19 Q Okay, and what -- can you tell us what that actually
20 is?

21 A 7.1 were -- was the end back collection from cartridge
22 cases two through seven. And 10.1 were the swabs from the
23 exterior of Items 9 and 10, which were shotgun shells.

24 Q And you performed analysis on both of those items?

25 A Yes, I did.

1 Q Can you tell us the results of your analysis on the
2 end back collection from the 300 Blackout cases, your Item
3 7.1? And I guess instead of just blanketly asking for the
4 results, I'll ask. Based on the comparisons you made when
5 analyzing that item, were any individuals included?

6 A Yes. For Item 7.1, the DNA profile was interpreted as
7 single source. And for the comparison to Margaret
8 Murdaugh, the two scenarios were Margaret Murdaugh
9 contributed the DNA profile versus an unidentified,
10 unrelated individual contributed the DNA profile. And the
11 result of that comparison is the DNA profile is
12 approximately 510 billion times more likely if Margaret
13 Murdaugh contributed the profile than if an unidentified,
14 unrelated individual contributed the profile.

15 Q And what does that mean?

16 A It means that the likelihood ratio is in support of
17 that first scenario of Margaret Murdaugh contributed the
18 profile versus an unidentified, unrelated individual
19 contributed the profile.

20 Q Okay. Let's move on to the next item in that exhibit,
21 State's Exhibit 459, the swabs from the exterior of Items 9
22 and 10, which were these shotgun shells from the feed room.

23 A Okay.

24 Q Based on the comparisons you made, were any
25 individuals included?

1 A This item was also interpreted as single source, and
2 so the scenarios were set up the same way. The person
3 being compared contributed the profile versus an
4 unidentified, unrelated individual contributed the profile.

5 Q And that means there's one person contributing.

6 A Correct. For Paul Murdaugh, the result of the
7 comparison is the DNA profile is approximately 15 octillion
8 times more likely if Paul Murdaugh contributed the profile
9 than if an unidentified, unrelated individual contributed
10 the profile.

11 Q And what does that mean?

12 A Just like earlier, it's in support of that first
13 proposition set. The DNA profile is approximately 15
14 octillion times more likely if Paul Murdaugh contributed
15 the profile than if an unidentified, unrelated individual
16 contributed the profile.

17 Q Let's move on to Exhibit 18, which are swabs from the
18 feed room door. Did you analyze those items, State's
19 Exhibit 18?

20 A Yes, I did. Item 17, you can see our laboratory
21 number, and then my initials on the seal, and the date.

22 Q And those are swabs from the feed room door.

23 A It's labeled as swabs from exterior doorknob of
24 storage room door.

25 Q All right, and based on the comparisons you made, were

1 any individuals included?

2 A For Item 17, the comparison with Paul Murdaugh. The
3 DNA profile was again interpreted as single source, so
4 we're setting up the propositions in that same way. The
5 result is the DNA profile is approximately 15 octillion
6 times more likely if Paul Murdaugh contributed the profile
7 than if an unidentified, unrelated individual contributed
8 the profile.

9 Q Fifteen octillion times more likely. And octillion
10 has twenty-seven zeros.

11 A Yes.

12 Q So, that's a pretty high statistical number there.

13 A Yes.

14 Q Let's move on to Exhibit 256, which I cannot seem to
15 locate.

16 MS. GOUDE: Beg the Court's indulgence.

17 (Break in proceedings.)

18 Q Did you analyze Item 256, which would be your Items 15
19 and 16, swabs of blood from the camo Benelli?

20 A Yes. Item 15 --

21 MR. BARBER: Objection, Your Honor.

22 THE COURT: The nature of the objection?

23 MR. BARBER: Foundation. She described in her
24 question of swabs of the blood. That was never
25 established.

1 THE COURT: All right. Response?

2 MS. GOUDE: Your Honor, item -- Exhibit 256, Items 15
3 and 16, have been admitted into evidence, even though I
4 can't put my hands on them at the moment, and they were
5 described as two swabs of suspected blood from the receiver
6 forward of the loading port from camo Benelli Super Black
7 Eagle 3, 12 gauge shotgun.

8 MR. BARBER: Your Honor, there will be no objection if
9 it -- the question is rephrased to say suspected blood.

10 THE COURT: All right. If you'll restate the
11 question, please.

12 Q Agent Zapata, I believe I misspoke, and this would be
13 State's Exhibit 259.

14 THE COURT: And what is the question?

15 Q And what is that item?

16 A 259 contains SLED Items 15 and 16, which were swabs
17 from the camo Benelli 12 gauge shotgun.

18 Q Did you analyze those items?

19 A Yes, I did.

20 Q Based on your comparisons that you made, were any
21 individuals included?

22 A For which item?

23 Q Let's start with Item 15.

24 A Item 15 was interpreted as a mixture originating from
25 two individuals. So, for this comparison we have the

1 person being compared to the DNA profile and an
2 unidentified, unrelated individual as the first scenario.
3 And then the second scenario is two unidentified, unrelated
4 individuals contributed to the mixture.

5 For the comparison to Maggie Murdaugh, the result is
6 the DNA profile is approximately 670 octillion times more
7 likely if Margaret Murdaugh and an unidentified, unrelated
8 individual contributed to the mixture than if two
9 unidentified, unrelated individuals contributed to the
10 mixture. For the comparison to Richard Alexander Murdaugh,
11 the result is -- I'm sorry -- the DNA profile is
12 approximately 10 quintillion times more likely if Richard
13 Alexander Murdaugh and an unidentified, unrelated
14 individual contributed to the mixture than if two
15 unidentified, unrelated individuals contributed to the
16 mixture.

17 And so now because we have a mixture where more than
18 one person has been included as a contributor, we ran the
19 statistic for those individuals together to make sure that
20 the DNA profile can be explained by a contribution of DNA
21 from all of those individuals together. So, the
22 comparisons would now be Margaret Murdaugh and Richard
23 Alexander Murdaugh contributed to the mixture versus two
24 unidentified, unrelated individuals contributed to the
25 mixture. And the result of that comparison is the DNA

1 profile is approximately 48 quindeccillion times more likely
2 if Margaret Murdaugh and Richard Alexander Murdaugh
3 contributed to the profile than if two unidentified,
4 unrelated individuals contributed to the profile.

5 Q Okay. So, we have three different, I guess, scenarios
6 there?

7 A Three different comparisons being made.

8 Q And is any one of those comparisons more likely than
9 the other?

10 A How do you mean?

11 Q Well, can you pick out one of those comparisons as
12 being more likely than the other comparisons?

13 A Each of those comparisons the individuals who were
14 being compared were included as contributors to the
15 mixture.

16 Q All right. Let's talk about Item 16, which is also a
17 swab of suspected blood from the camo Benelli.

18 A For Item 16, the partial DNA profile developed was
19 insufficient for interpretation.

20 Q All right. Let's move on to Exhibit 398. If you'll
21 take a look at 398.

22 A 398 contains our SLED lab numbers 22.4 and 22.5.

23 Q So, Item 22.4 is a reddish/brown debris swabbed from
24 the right side of the receiver belonging to Item 22?

25 A Correct.

1 Q This is State's 22. Based on the comparisons you
2 made, were any individuals included on that Item 22.4?

3 A 22.4, the DNA profile was interpreted as a mixture
4 originating from two individuals. For the comparison with
5 Margaret Murdaugh, the result was the DNA profile is
6 approximately 480 octillion times more likely if Margaret
7 Murdaugh and an unidentified, unrelated individual
8 contributed to the mixture than if two unidentified,
9 unrelated individuals contributed to the mixture.

10 Q And what does that mean?

11 A The result is in support of that first scenario of
12 Margaret Murdaugh being included as a contributor to the
13 mixture. The likelihood ratio is 480 octillion times more
14 -- the DNA profile is approximately 480 octillion times
15 more likely if Margaret Murdaugh and an unidentified,
16 unrelated individual contributed to the mixture than if two
17 unidentified, unrelated individuals contributed to the
18 mixture.

19 Q And then the next item, 22.5, is also a swab from that
20 same shotgun from the left side?

21 A Yes.

22 Q Okay. Based on the comparisons you made, were any
23 individuals included?

24 A Item 22.5, the DNA profile, was also entered as a
25 mixture of two individuals. For the comparison with

1 Margaret Murdaugh, the DNA profile is approximately 570
2 octillion times more likely if Margaret Murdaugh and an
3 unidentified, unrelated individual contributed to the
4 mixture than if two unidentified, unrelated individuals
5 contributed to the mixture.

6 Q 570 octillion times more likely that Margaret Murdaugh
7 contributed to that mixture.

8 A The DNA profile is approximately 570 octillion times
9 more likely if Margaret Murdaugh and an unidentified,
10 unrelated individual contributed to the mixture than if two
11 unidentified, unrelated individuals contributed to the
12 mixture.

13 Q And now this unidentified, unrelated individual is
14 popping up. And what does that mean again?

15 A It's just the way that we make our calculation. We
16 have to account for an opposing scenario to the person
17 being compared. And then when there is a mixture, we need
18 to account for the other individuals in that mixture when
19 we're making our comparison, and so we use an unidentified,
20 unrelated individual.

21 Q Did you analyze some swabs from Paul Murdaugh's cell
22 phone? I believe that would be your Item 25.1.

23 A Yes.

24 Q Okay, and what were the results of your analysis
25 there?

1 A A partial DNA profile was developed. Due to the
2 limited information obtained and the inability to determine
3 the number of contributors, no further interpretation will
4 be offered.

5 Q Then State's Exhibit 83 is some swabs from a Chevy
6 Suburban. If you could focus on your Item 56, the two
7 swabs of suspected blood collected from the steering wheel.

8 (Break in proceedings.)

9 A You said 56?

10 Q Yes.

11 A Okay. I have 56.

12 Q Okay, and you analyzed Item 56?

13 A Yes, I did.

14 Q Swabs of blood collected from the steering wheel.

15 A They were submitted as two swabs of suspected blood
16 collected from the steering wheel of the Chevy Suburban.

17 Q And based on the comparisons you made, were any
18 individuals included?

19 A For Item 56, the DNA profile was interpreted as a
20 mixture originating from two individuals. For the
21 comparison to Margaret Murdaugh, the result is the DNA
22 profile is approximately 35 times more likely if Margaret
23 Murdaugh and an unidentified, unrelated individual
24 contributed to the mixture than if two unidentified,
25 unrelated individuals contributed to the mixture.

1 For the comparison to Richard Alexander Murdaugh, the
2 result is the DNA profile is approximately 100 quadrillion
3 times more likely if Richard Alexander Murdaugh and an
4 unidentified, unrelated individual contributed to the
5 mixture than if two unidentified, unrelated individuals
6 contributed to the mixture.

7 And then just like before, because we have two
8 individuals who were included individually as contributors
9 to the mixture, we have to run the comparison of them
10 together to make sure that the DNA profile can be explained
11 by a contribution of DNA from all of those individuals. So
12 for that comparison, the DNA profile is approximately
13 240 quintillion times more likely if Margaret Murdaugh and
14 Richard Alexander Murdaugh contributed to the mixture than
15 if two unidentified, unrelated individuals contributed to
16 the mixture.

17 There's also a statement that because that first
18 comparison to Margaret Murdaugh had a likelihood ratio
19 result that is on the lower end of our scale, we want to
20 put more emphasis on that result when comparing her as a
21 contributor to the mixture. So, the likelihood ratio for
22 proposition set three, which was that comparison together,
23 was calculated to confirm that the mixture could be
24 explained by the contribution of DNA from all individuals
25 listed under HP, which is that first scenario. Due to the

1 disparity and the individual likelihood ratios between the
2 contributors for this item, it is recommended to put more
3 weight with on the results, or proposition set one, which
4 was that comparison of Margaret Murdaugh individually,
5 rather than the results, or proposition set three, which is
6 the comparison of them together when considering Margaret
7 Murdaugh as a possible contributor to the mixture.

8 Q Okay. Agent Zapata, this stuff is kind of confusing
9 already, but I think that just got worse. So, I guess if
10 you could kind of simplify that a little bit for us.

11 A Yes. So, think about like two people singing the same
12 song. If one person is singing really quietly and another
13 person is singing loudly, when they're singing together it
14 will sound really loud because that one person is already
15 singing loudly by themselves, but that doesn't mean that
16 the person who was singing quietly is suddenly singing very
17 loudly, so we're trying to account for the difference in
18 the weight of the result. And so it's just more accurate
19 when considering that person who is a lower level, or has a
20 lower likelihood ratio, to consider their individual
21 likelihood ratio rather than combined ratio.

22 Q So, what -- based on all of that, what is the most
23 likely?

24 A It's not really that it's like a more likely scenario
25 over another. It's just the result of that comparison

1 that's being made.

2 Q So, just take into all of that interaction.

3 A Yes.

4 Q Let's move on to Exhibit 251, which was the left and
5 right fingernails from Maggie Murdaugh. If you would, take
6 a look at Exhibit 251. Did you analyze those items? I
7 believe Item 70 is the left fingernail clippings from
8 Maggie Murdaugh.

9 A Yes, and 71 is the right fingernail clippings from
10 Margaret Murdaugh.

11 Q Well, let's talk about the left fingernail clippings
12 first. What were the results of your analysis?

13 A Are you looking for all of the individuals who were --
14 who were compared?

15 Q Yes, the results, the entire results.

16 A Okay. For Item 70, a DNA profile suitable for
17 comparison was developed. Several individuals were
18 visually excluded from the profile first. Paul Murdaugh,
19 Anthony Cook, Roger Davis, Rogan Gibson, Connor Cook,
20 Phillip Beach, Renee Beach, Robin Beach, John Murdaugh,
21 Richard Alexander Murdaugh, Jr., or Buster, Richard
22 Alexander Murdaugh, Randy Murdaugh, Miley Altman, and
23 Morgan Dowdy are excluded as contributors.

24 Q Excluded.

25 A Excluded as contributors. For the proposition set,

1 the DNA profile was interpreted as a mixture originating
2 from two individuals. Because these are Margaret
3 Murdaugh's own fingernail clippings, she is assumed as a
4 contributor. So, the two scenarios are Margaret Murdaugh,
5 and in this case the comparison was made to Claude C.B.
6 Rowe using the STRmix software. So, that first scenario is
7 Margaret Murdaugh and Claude C.B. Rowe contributed to the
8 mixture. And the second scenario is Margaret Murdaugh and
9 an unidentified, unrelated individual contributed to the
10 mixture.

11 Q Now, why was Claude C.B. Rowe included in this
12 comparison?

13 A So, the other individuals I was able to visually
14 exclude, which just means by looking at the DNA profile and
15 comparing it to their standard, I could exclude them as a
16 contributor. If an individual happens to have the alleles
17 that -- or if an individual cannot be visually excluded --
18 so, I cannot say from looking at their DNA profile and
19 comparing it to the evidence that they're excluded, then I
20 will run the statistic to compare them to that profile, and
21 so that's why that comparison was made.

22 The result of the comparison is the DNA profile is
23 approximately 11 times more likely if Margaret Murdaugh and
24 an unidentified, unrelated individual contributed to
25 mixture than if Margaret Murdaugh and Claude C.B. Rowe

1 contributed to the mixture. So, this is a result in
2 support of that second scenario. It was not the first
3 scenario like the others that we've been discussing.

4 Q So, how much DNA were you looking at in this sample?

5 A Are you asking, like, DNA that was not attributable to
6 Margaret?

7 Q Well, I guess -- was there a small amount of DNA or a
8 large amount of DNA under those left fingernail clippings?

9 A There was not a lot -- there were not many alleles
10 that were not attributable to Margaret in the profile.

11 Q So, let's talk a little bit and explain about those
12 alleles there when you were doing your testing.

13 A Yeah. Like I explained earlier, the alleles are the
14 results of our test, and they will appear on -- in the
15 profile that we're looking at, and they will be different
16 at proportions based upon roughly how much DNA is present
17 from the different possible contributors. So in this case,
18 because they were Margaret Murdaugh's own fingernail
19 clippings, her DNA is present in the profile at a higher
20 level. And then we are looking at only a few alleles that
21 were not her own alleles to make the comparison to the
22 other individuals.

23 Q So, was it three alleles?

24 A Yes, that were not Margaret Murdaugh's alleles.

25 Q And those three alleles could be C.B. Rowe's alleles?

1 A I could not visually exclude him, which just means
2 when looking at his profile and comparing it to those other
3 alleles, he did have those alleles but at a very low level
4 of DNA that's being compared to, to him. And the result
5 was in support of that second scenario, which was Margaret
6 Murdaugh and an unidentified, unrelated individual
7 contributed to the mixture.

8 Q And this courtroom here is full of people. Could
9 anybody in this courtroom have those same three alleles
10 present in that testing?

11 A It's possible.

12 Q All right. Let's move on.

13 MS. GOUDE: Court's indulgence.

14 (Break in proceedings.)

15 Q And let's put this other chart we have here on the
16 screen. And the results concerning C.B. Rowe, was that
17 moderate support for exclusion on his results?

18 A So, what you're looking at is a scale. It's
19 representative of a verbal scale that we have on our
20 reports, and it's showing the different ranges for the
21 likelihood ratio results we can obtain. So, on one side
22 you have the likelihood ratios that are in support of that
23 first proposition, or that first scenario. And you -- on
24 the other side you have the scale for the results that are
25 in support of that second proposition. So, here it -- the

1 range is 2 to 99 for moderate support for that second
2 proposition, and his result is an 11 --

3 Q Okay.

4 A -- which falls within that 2 to 99 range.

5 Q Okay, and then the other result with just Margaret
6 Murdaugh?

7 A For Margaret Murdaugh, because it's her own fingernail
8 clippings, we're not calculating a statistic. We're
9 assuming her as a contributor.

10 Q And you also analyzed the fingernail clippings from
11 her right hand.

12 A Yes.

13 Q And those are there as well. What were the results of
14 your analysis there?

15 A The DNA profile developed is attributable to Margaret
16 Murdaugh.

17 Q And then State's Exhibit 252 is fingernail clippings
18 from right and left hands of Paul Murdaugh. If you could,
19 tell us any results from your analysis of Paul's fingernail
20 clippings.

21 A For both Items 72 and 73, the result was the DNA
22 profile developed is attributable to Paul Murdaugh.

23 Q Now, you also analyzed Alex Murdaugh's shirt, which is
24 State's Exhibit 418, your Item 9. And did you analyze Paul
25 Murdaugh -- or excuse me, the defendant, Alex Murdaugh's,

1 pants as well?

2 A Yes. I received cuttings from both Item 19, which was
3 the white shirt from Richard Murdaugh, and then Item 20,
4 which was a pair of green shorts from the Richard Murdaugh.

5 Q And are the cuttings from the shirt and the shorts in
6 those two exhibits up there, State's 460 and 461?

7 A This appears to be all of them. I can take them out
8 and check if you would like for me to.

9 Q I believe that should be all. And there were quite a
10 few cuttings that you analyzed.

11 A Yes.

12 Q So, unfortunately we're going to have to go through
13 all of those -- the analysis of all of those cuttings. So,
14 let's start with the shirt and Exhibit 460, Item 19.2, a
15 cutting from the exterior front edge of Alex Murdaugh's
16 shirt, the defendant. Based on the comparisons you made,
17 were any individuals included?

18 A For 19.2, the DNA profile was interpreted as a mixture
19 originating from two individuals. For the comparison with
20 Margaret Murdaugh, the DNA profile is approximately 460
21 octillion times more likely if Margaret Murdaugh and an
22 unidentified, unrelated individual contributed to the
23 mixture than if two unidentified, unrelated individuals
24 contributed to the mixture.

25 Q Item 19.3, the cutting from the exterior back bottom

1 center of the defendant's shirt.

2 A For 19.3, the DNA profile was interpreted as a mixture
3 originating from two individuals. For this item, I was
4 able to assume Richard Alexander Murdaugh as a contributor.
5 So, the propositions, or the scenarios that we're comparing
6 are Richard Alexander Murdaugh and the person being
7 compared versus Richard Alexander and an unidentified,
8 unrelated individual contributed to the mixture. For the
9 comparison to Margaret Murdaugh, the DNA profile is
10 approximately 360 quadrillion times more likely if Richard
11 Alexander Murdaugh and Maggie Murdaugh contributed to the
12 mixture than if Richard Alexander Murdaugh and an
13 unidentified, unrelated individual contributed to the
14 mixture.

15 Q Item 19.4?

16 A For 19.4, the DNA profile was interpreted as a mixture
17 originating from two individuals. And this was a situation
18 where I had to first calculate the statistic for Richard
19 Alexander Murdaugh to see if there was enough DNA to
20 condition on him as the contributor. So, for that
21 comparison, the DNA profile is approximately 120
22 quadrillion times more likely if Richard Alexander Murdaugh
23 and an unidentified, unrelated individual contributed to
24 the mixture than if two unidentified, unrelated individuals
25 contributed to the mixture. And then moving forward with

1 the other comparisons, I can say that Richard Alexander
2 Murdaugh is contributing to the mixture, and just like
3 before, we have Richard Alexander Murdaugh and the person
4 being compared contributing to the mixture versus Richard
5 Alexander Murdaugh and an unidentified, unrelated
6 individual contributed to the mixture.

7 For the comparison to Paul Murdaugh, the DNA profile
8 is approximately 7 octillion times more likely if Richard
9 Alexander Murdaugh and Paul Murdaugh contributed to the
10 mixture than if Richard Alexander Murdaugh and an
11 unidentified, unrelated individual contributed to the
12 mixture.

13 Q And does that complete your analysis of that item?

14 A On 19.4?

15 Q Yes.

16 A I think that was the only one where there was
17 inclusionary likelihood ratios, yes.

18 Q Let's move on to the 19.5, the cutting from Stain B on
19 the shirt. If you could, tell us about any inclusions.

20 A This item was also interpreted. The DNA profile was
21 interpreted as a mixture originating from two individuals,
22 and I was able to assume Richard Alexander Murdaugh as a
23 contributor. For the comparison to Maggie Murdaugh, the
24 result is the DNA profile is approximately 3,800 times more
25 likely if Richard Alexander Murdaugh and Margaret Murdaugh

1 contributed to the mixture than if Richard Alexander
2 Murdaugh and an unidentified, unrelated individual
3 contributed to the mixture.

4 Q Moving on to item 19.6, Stain C on the shirt.

5 A Okay.

6 Q If you could, tell us about any individuals that were
7 included there.

8 A For Item 19.6, the DNA profile was interpreted as a
9 mixture originating from three individuals. I was able to
10 assume Richard Alexander Murdaugh as a contributor to the
11 mixture. And so now we are comparing Richard Alexander
12 Murdaugh, the individual being compared to the mixture, and
13 an unidentified, unrelated individual contributed to the
14 mixture versus Richard Alexander Murdaugh and two
15 unidentified, unrelated individuals contributed to the
16 mixture. For the comparison to Maggie Murdaugh, the DNA
17 profile is approximately 570 octillion times more likely if
18 Richard Alexander Murdaugh, Maggie Murdaugh, and an
19 unidentified, unrelated individual contributed to the
20 mixture than if Richard Alexander Murdaugh and two
21 unidentified, unrelated individuals contributed to the
22 mixture.

23 Q And does that include your -- the results of inclusion
24 for that item?

25 A Yes. Item 19.7, cutting from Stain D. For Item 19.7,

1 the DNA profile was interpreted as a mixture originating
2 from four individuals. Richard Alexander Murdaugh is
3 contributing to the mixture, so I was able to assume him.
4 And so the comparison in this case will be Richard
5 Alexander Murdaugh, the person being compared to the
6 mixture, and two unidentified, unrelated individuals
7 contributed to the mixture versus Richard Alexander
8 Murdaugh and three unidentified, unrelated individuals
9 contributed to the mixture. For the comparison to Maggie
10 Murdaugh, the DNA profile is approximately 1.9 quadrillion
11 times more likely if Richard Alexander Murdaugh, Maggie
12 Murdaugh, and two unidentified, unrelated individuals
13 contributed to the mixture than if Richard Alexander
14 Murdaugh and three unidentified, unrelated individuals
15 contributed to the mixture. I also made a comparison to
16 Nolen Tuten. The DNA profile is approximately 480
17 septillion times more likely if Richard Alexander Murdaugh,
18 Nolen Tuten, and two unidentified, unrelated individuals
19 contributed to the mixture than if Richard Alexander
20 Murdaugh and three unidentified, unrelated individuals
21 contributed to the mixture.

22 Q And, again, why was Nolen Tuten included in the
23 comparison?

24 A When looking at the evidence DNA profile, I was not
25 able to visually exclude Nolen Tuten as a potential

1 contributor to the mixture, and so I ran his likelihood
2 ratio for comparison to that item. And then similarly to
3 the other items where if an individual is included when you
4 run their likelihood ratio on their own, I also had to do
5 the calculation for all of those individuals together to
6 make sure that the DNA profile can be explained by a
7 contribution of all of those individuals. So, for that
8 comparison, the DNA profile is approximately 450
9 duodecillion times more likely if Richard Alexander
10 Murdaugh, Margaret Murdaugh, Nolen Tuten, and an
11 unidentified, unrelated individual contributed to the
12 mixture than if Richard Alexander Murdaugh and three
13 unidentified, unrelated individuals contributed to the
14 mixture.

15 Q Okay. Item 19.8, a cutting from another stain on the
16 shirt, Stain E. And if you could, just give us any
17 individuals that were included in your results, please.

18 A The DNA profile was interpreted as a mixture
19 originating from three individuals. Richard Alexander
20 Murdaugh is contributing to the mixture. For the
21 comparison to Maggie Murdaugh, the result is the DNA
22 profile is approximately 590 million times more likely if
23 Richard Alexander Murdaugh, Maggie Murdaugh, and an
24 unidentified, unrelated individual contributed to the
25 mixture than if Richard Alexander Murdaugh and two

1 unidentified related individuals contributed to the
2 mixture.

3 Q 19.9, Stain F.

4 A For item 19.9, a DNA profile was developed. Due to
5 the inability to determine the number of contributors, no
6 further interpretation will be offered.

7 Q Item 19.10?

8 A For item 19.10, the DNA profile was interpreted as a
9 mixture originating from three individuals. Richard
10 Alexander Murdaugh is contributing to the mixture. For the
11 comparison to Margaret Murdaugh, the DNA profile is
12 approximately 430 octillion times more likely if Richard
13 Alexander Murdaugh, Margaret Murdaugh, and an unidentified,
14 unrelated individual contributed to the mixture than if
15 Richard Alexander Murdaugh and two unidentified, unrelated
16 individuals contributed to the mixture.

17 Q Item 19.11, which is the cutting from Stain H. If you
18 could explain any individuals who were included in your
19 analysis.

20 A So for Item 19.11, the only individual who had an
21 inclusionary likelihood ratio -- well, first the DNA
22 profile was interpreted as a mixture originating from two
23 individuals. Richard Alexander Murdaugh is contributing to
24 the mixture. For the comparison to Hipolito Torres, the
25 DNA profile is approximately 10 times more likely if

1 Richard Alexander Murdaugh and Hipolito Torres contributed
2 to the mixture than if Richard Alexander Murdaugh and an
3 unidentified, unrelated individual contributed to the
4 mixture.

5 Q So with Mr. Torres, I guess if we could look back at
6 this chart -- and tell us where he would fall along there.

7 A The likelihood ratio for his comparison under those
8 propositions was 10, which falls under our weak support for
9 that first scenario.

10 Q So, would that be trending towards exclusion?

11 A It's on -- it's in support of that first scenario on
12 this side, the green side of the scale. But it's 10,
13 the -- so, that very first arrow indicates weak support for
14 that scenario. The range is 2 to 99.

15 Q Okay. So --

16 A And his likelihood ratio when compared to the DNA
17 profile. The DNA profile is approximately 10 times more
18 likely if Richard Alexander Murdaugh and Hipolito Torres
19 contributed to the mixture than if Richard Alexander
20 Murdaugh and an unidentified, unrelated individual
21 contributed to the mixture.

22 Q And I don't want you to repeat -- to repeat that same
23 thing again, but could you kind of, I guess, clarify what
24 that means?

25 A When making my comparison to the evidence DNA profile,

1 I was not able to visually exclude Hipolito Torres as a
2 possible contributor to the mixture, and so I ran the
3 statistic for his comparison, and the result of that
4 comparison is in support of the first scenario. The DNA
5 profile is approximately 10 times more likely if Richard
6 Alexander Murdaugh and Hipolito Torres contributed to the
7 mixture than if Richard Alexander Murdaugh and an
8 unidentified, unrelated individual contributed to the
9 mixture. So, it's just tilting that seesaw 10 in that
10 direction.

11 Q Okay. We have two cuttings left from the shirt. Item
12 19.12 is a cutting from Stain I. Based on the comparisons
13 you made, were any individuals included?

14 A 19.12, the DNA profile was interpreted as a mixture
15 originating from two individuals. Richard Alexander
16 Murdaugh is contributing to the mixture. For the
17 comparison to Margaret Murdaugh, the DNA profile is
18 approximately 1.3 nonillion times more likely if Richard
19 Alexander Murdaugh and Margaret Murdaugh contributed to the
20 mixture than if Richard Alexander Murdaugh and an
21 unidentified, unrelated individual contributed to the
22 mixture.

23 Q And then Item 19.13, a cutting from Stain J of the
24 defendant's shirt.

25 A For Item 19.13, the DNA profile was interpreted as a

1 mixture originating from three individuals. For the
2 comparison to Margaret Murdaugh, the DNA profile is
3 approximately 1.5 sextillion times more likely if Maggie
4 Murdaugh and two unidentified, unrelated individuals
5 contributed to the mixture than if three unidentified,
6 unrelated individuals contributed to the mixture. So, this
7 is one where I was not able to assume Richard Alexander
8 Murdaugh as a contributor, so I am comparing each person
9 individually.

10 For the comparison to Paul Murdaugh, the DNA profile
11 is approximately 24 quintillion times more likely if Paul
12 Murdaugh and two unidentified, unrelated individuals
13 contributed to the mixture than if three unidentified,
14 unrelated individuals contributed to the mixture. For the
15 comparison to Richard Alexander Murdaugh, the DNA profile
16 is approximately 29 times more likely if Richard Alexander
17 Murdaugh and two unidentified, unrelated individuals
18 contributed to the mixture than if three unidentified,
19 unrelated individuals contributed to the mixture.

20 And like before, because there are multiple
21 individuals who were included as contributors when compared
22 individually, I have to calculate the statistic for them
23 together. For that comparison, the DNA profile is
24 approximately 260 quindecillion times more likely if Maggie
25 Murdaugh, Paul Murdaugh, and Richard Alexander Murdaugh

1 contributed to the mixture than if three unidentified,
2 unrelated individuals contributed to the mixture. And
3 similarly to that other item where there was an individual
4 with a lower likelihood ratio, there is that statement
5 about the recommendation to put more weight on the results
6 of proposition set three, which was the comparison to
7 Richard Alexander Murdaugh, rather than the results of
8 proposition set four when considering Richard Alexander
9 Murdaugh as a possible contributor to the mixture.

10 Q So in addition to this shirt being analyzed for DNA,
11 Agent Nugyen told the jury a little bit about it being
12 tested for blood. Can you explain what you did to test
13 this shirt for the presence of blood?

14 A I was asked to perform a hematrace test on the
15 cuttings from the shirt. As Ms. Nugyen described, it's our
16 confirmatory test for blood, it works similarly to a
17 pregnancy test or a Covid test. One line in the control
18 area is a negative result. A line in the control area and
19 the test area would be a positive result.

20 Q And that is testing with hematrace?

21 A Yes.

22 Q And what were the results of the hematrace testing on
23 all of the items that you just discussed to the jury?

24 A For items 19.2 through 19.13, the result was no human
25 blood identified.

1 Q And what could -- what could -- could you explain that
2 to us? We had presumptive testing for blood and then some
3 other testing and then the hematrace, which says there was
4 no blood. So, what does that mean?

5 A So, presumptive tests are sensitive but not very
6 specific. Like discussed earlier, there are possible false
7 positives for presumptive tests. If we're requested to, we
8 can perform a confirmatory test, which is more specific but
9 is less sensitive.

10 Q So in your opinion, if there was blood on that shirt,
11 could testing such as with LCV have diluted any blood on
12 the shirt?

13 A I am aware of some studies that have been performed on
14 hematrace testing after LCV that suggests that there is a
15 possible interaction with the LCV and the hematrace test,
16 and it is possible for there to be amounts of hemoglobin
17 that would not be detected by the test that would give a
18 negative result. But the results of my testing were
19 negative.

20 Q And as we've discussed, testing for blood and testing
21 for DNA is different.

22 A Yes.

23 Q All right. You also tested the defendant's pants.

24 A Yes.

25 Q Did you test those in a similar manner to the way you

1 would test the cuttings from the shirt?

2 A You mean for DNA?

3 Q Yes.

4 A Yes.

5 Q That was State's Exhibit 418, the defendant's pants,
6 and the cuttings, items -- or excuse me, Exhibits 460 and
7 461. Your Item 20.2.

8 A Okay.

9 Q So, I guess as briefly as we can, let's discuss some
10 of the results from the cuttings from those pants. Item
11 20.2 is a cutting from the front left interior pocket of
12 the defendant's pants. Were any individuals included?

13 A So for item 20.2, the DNA profile was interpreted as a
14 mixture originating from three individuals. This was one
15 where I calculated his likelihood ratio to see if I could
16 condition on him as a contributor. So, the result of that
17 comparison is the DNA profile is approximately 140
18 quadrillion times more likely if Richard Alexander Murdaugh
19 and two unidentified, unrelated individuals contributed to
20 the mixture than if three unidentified, unrelated
21 individuals contributed to the mixture. And so then for
22 the comparisons to the other individuals, Richard Alexander
23 Murdaugh is contributing to the mixture. And the scenarios
24 are Richard Alexander Murdaugh, the person being compared,
25 and an unidentified, unrelated individual contributed to

1 the mixture versus Richard Alexander Murdaugh and two
2 unidentified, unrelated individuals contributed to the
3 mixture.

4 For the comparison to Maggie Murdaugh, the DNA profile
5 is approximately 5.1 sextillion times more likely if
6 Richard Alexander Murdaugh, Margaret Murdaugh, and an
7 unidentified, unrelated individual contributed to the
8 mixture than if Richard Alexander Murdaugh and two
9 unidentified, unrelated individuals contributed to the
10 mixture. For the comparison to Paul Murdaugh, the DNA
11 profile is approximately 25 quintillion times more likely
12 if Richard Alexander Murdaugh, Paul Murdaugh, and an
13 unidentified, unrelated individual contributed to the
14 mixture than if Richard Alexander Murdaugh and two
15 unidentified, unrelated individuals contributed to the
16 mixture. And for the comparison of all of those
17 individuals together, the DNA profile is approximately 2
18 quindecillion times more likely in Richard Alexander
19 Murdaugh, Margaret Murdaugh, and Paul Murdaugh contributed
20 to the mixture than if Richard Alexander Murdaugh and two
21 unidentified, unrelated individuals contributed to the
22 mixture.

23 Q The next cutting is Item 20.3, a cutting from Stain A
24 on the defendant's pants.

25 A For 20.3, the DNA profile was interpreted as a mixture

1 originating from three individuals. Richard Alexander
2 Murdaugh is contributing to the mixture. For the
3 comparison to Margaret Murdaugh, the DNA profile is
4 approximately 94 septillion times more likely if Richard
5 Alexander Murdaugh, Margaret Murdaugh, and an unidentified,
6 unrelated individual contributed to the mixture than if
7 Richard Alexander Murdaugh and two unidentified, unrelated
8 individuals contributed to the mixture.

9 Q All right. 20.4, cutting from Stain G from the
10 defendant's pants, if you could tell us if any individuals
11 were included in that analysis.

12 A For 20.4, the DNA profile was interpreted as a mixture
13 originating from three individuals. Richard Alexander
14 Murdaugh is contributing to the mixture. For the
15 comparison to Margaret Murdaugh, the DNA profile is
16 approximately 24 sextillion times more likely if Richard
17 Alexander Murdaugh, Margaret Murdaugh, and an unidentified,
18 unrelated individual contributed to the mixture than if
19 Richard Alexander Murdaugh and two unidentified, unrelated
20 individuals contributed to the mixture.

21 Q Was that the only comparison for that item?

22 A That was the only --

23 Q Inclusion?

24 A Yes, for that item.

25 Q Let's move to the next one. I think that will be

1 20.5, the cutting from Stain C from the defendant's pants.
2 If you would, please tell us if any individuals were
3 included.

4 A For 20.5, the DNA profile was interpreted as a mixture
5 originating from two individuals. Richard Alexander
6 Murdaugh is contributing to the mixture. For the
7 comparison to Paul Murdaugh, the DNA profile is
8 approximately 4.1 septillion times more likely if Richard
9 Alexander Murdaugh and Paul Murdaugh contributed to the
10 mixture than if Richard Alexander Murdaugh and an
11 unidentified, unrelated individual contributed to the
12 mixture.

13 Q And I think we have three left. Item 20.6, cutting
14 from Stain D in the defendant's pants.

15 A The DNA profile was interpreted as a mixture
16 originating from three individuals. This was one where I
17 was not able to assume Richard Alexander Murdaugh as a
18 contributor, so I'm making the comparisons to each person
19 individually.

20 Q And you can't assume him why?

21 A When making that comparison, it seems that his DNA may
22 be present but at a low level, so I cannot assume him as a
23 contributor. So, I would run his likelihood ratio to see
24 if I could condition, but in this case it was not high
25 enough to meet our threshold to condition. So, I'm just

1 comparing him to the profile like every other individual.

2 For the comparison to Margaret Murdaugh, the DNA
3 profile is approximately 930 quintillion times more likely
4 if Margaret Murdaugh and an unidentified, unrelated
5 individual -- I'm sorry. The DNA profile is approximately
6 930 quintillion times more likely if Margaret Murdaugh and
7 two unidentified, unrelated individuals contributed to the
8 mixture than if three unidentified, unrelated individuals
9 contributed to the mixture. For the comparison to Paul
10 Murdaugh, the DNA profile is approximately 38 quintillion
11 times more likely if Paul Murdaugh and two unidentified,
12 unrelated individuals contributed to the mixture than if
13 three unidentified, unrelated individuals contributed to
14 the mixture. For the comparison to Richard Alexander
15 Murdaugh, the DNA profile is approximately 190 times more
16 likely if Richard Alexander Murdaugh and two unidentified,
17 unrelated individuals contributed to the mixture than if
18 three unidentified, unrelated individuals contributed to
19 the mixture. And then we're calculating the statistic for
20 all of those individuals together. The DNA profile is
21 approximately 8.7 quindecillion times more likely if
22 Margaret Murdaugh, Paul Murdaugh, and Richard Alexander
23 Murdaugh contributed to the mixture than if three
24 unidentified, unrelated individuals contributed to the
25 mixture. And there is that same statement about putting

1 more weight on the individual likelihood ratio for Richard
2 Alexander Murdaugh when considering him as a contributor
3 rather than the combined.

4 Q Item 20.7. Hopefully that should be an easy one.

5 A For 20.7, a DNA was developed. Due to the inability
6 to determine the number of contributors, no further
7 interpretation will be offered.

8 Q And then lastly Item 20.8, a cutting from Stain F of
9 defendant's pants.

10 A For 20.8, the DNA profile was interpreted as a mixture
11 originating from three individuals. I calculated the
12 likelihood ratio for Richard Alexander Murdaugh to see if
13 it met our threshold to condition on him as a contributor.
14 The result for his comparison is the DNA profile is
15 approximately 320 million times more likely if Richard
16 Alexander Murdaugh and two unidentified, unrelated
17 individuals contributed to the mixture than if three
18 unidentified, unrelated individuals contributed to the
19 mixture. And then we're making comparisons to the other
20 individuals. I'm including him as a contributor.

21 So, Richard Alexander Murdaugh is contributing to the
22 mixture. For the comparisons -- comparison to Margaret
23 Murdaugh, the DNA profile is approximately 2.6 sextillion
24 times more likely if Richard Alexander Murdaugh, Margaret
25 Murdaugh, and an unidentified, unrelated individual

1 contributed to the mixture than if Richard Alexander
2 Murdaugh and two unidentified, unrelated individuals
3 contributed to the mixture. For the comparison to Paul
4 Murdaugh, the DNA profile is approximately 17 quintillion
5 times more likely if Richard Alexander Murdaugh, Paul
6 Murdaugh, and an unidentified, unrelated individual
7 contributed to the mixture than if Richard Alexander
8 Murdaugh and two unidentified, unrelated individuals
9 contributed to the mixture. And then once again, we're
10 calculating the likelihood of all of those individuals
11 contributing to the mixture together. The DNA profile is
12 approximately 93 quattuordecillion times more likely if
13 Richard Alexander Murdaugh, Margaret Murdaugh, and Paul
14 Murdaugh contributed to the mixture than if Richard
15 Alexander Murdaugh and two unidentified, unrelated
16 individuals contributed to the mixture.

17 Q All right. Now, as far as the shorts or the
18 defendant's pants go, did you do any confirmatory testing
19 on those with hematrace?

20 A No, I did not.

21 Q Exhibit 419 is the defendant's shoes, which is Item
22 21. And Exhibit 460, I believe, is up here in some of this
23 -- it's Exhibit 460. Can you tell us what is contained --
24 if a cutting from the left shoe lace of the defendant's
25 shoes is contained in that exhibit?

1 A Yes. 21.2 is part of this container.

2 Q And did you analyze a cutting from that shoe lace?

3 A Yes.

4 Q Okay, and were any individuals included in your
5 results there?

6 A The DNA profile was interpreted as single source. For
7 the comparison to Richard Alexander Murdaugh, the result is
8 the DNA profile is approximately 410 septillion times more
9 likely if Richard Alexander Murdaugh contributed the
10 profile than if an unidentified, unrelated individual
11 contributed to the profile.

12 Q And did you also get some swabs from a raincoat?

13 A Yes, I did.

14 Q That would be State's Exhibit 462, two swabs from a
15 blue raincoat, your Items 173.2 and 173.3?

16 A Yes.

17 Q Did you analyze those items?

18 A Yes, I did.

19 Q Item 173.2 from the raincoat appears to be swabs from
20 the interior cuffs, collar, hood, and interior zipper
21 areas, and zipper pull of the blue raincoat. Could you
22 tell us the results of your analysis of that item or swab?

23 A No -- sorry. No DNA profile was developed.

24 Q And then Item 173.3, swabs from the side opening
25 zipper area in both interior portions of exterior pocket of

1 blue raincoat.

2 A A partial DNA profile was developed. Due to the
3 limited information obtained and the inability to determine
4 the number of contributors, no further interpretation will
5 be offered.

6 MS. GOUDE: Okay, Agent Zapata, thank you so much for
7 going through all of that with us. We have no further
8 questions for you at this time.

9 THE COURT: All right, ladies and gentlemen, we'll
10 break for lunch now and resume at 2:30.

11 (The jury left the courtroom.)

12 THE COURT: All right, ma'am, you may step down.
13 Please do not discuss your testimony with anyone over
14 lunch.

15 THE WITNESS: Thank you.

16 THE COURT: And we're in recess until 2:30.

17 (A lunch break was taken.)

18 THE COURT: Are we ready for the jury?

19 MR. WATERS: Yes, sir. Very quickly, one thing before
20 we get started. I just wanted to alert the Court that
21 after this witness, our next witness will be the
22 pathologist. So, obviously I wanted to make the Court
23 aware and the defense aware, which they are aware, and the
24 gallery aware of the graphic and sensitive nature of that
25 testimony.

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1 Q We've gone through a pretty long list of things that
2 you did analysis on. Did you do any analysis on any
3 clothing or anything from the victims' bodies other than
4 Maggie Murdaugh's fingernail clippings?

5 A I analyzed Margaret Murdaugh's fingernail clippings,
6 Paul Murdaugh's fingernail clippings, as well as their
7 buccal swabs.

8 Q And when you say their buccal swabs, that was simply
9 to collect their DNA for analysis. Is that correct?

10 A That was the known standard that I used to make
11 comparisons, yes.

12 Q And under Maggie Murdaugh's left fingernail clippings,
13 did you -- you found unidentified male DNA?

14 A Foreign to Margaret Murdaugh. There were some alleles
15 present, yes.

16 Q Well, when we say some alleles present, was there DNA
17 from an unrelated male under her fingernails?

18 A For Item 70, yes. One of the alleles indicates a male
19 contributor.

20 Q And this was an unrelated male.

21 A For -- do you mean unrelated as in unrelated like --

22 Q Well, let me strike that and rephrase. Were Paul and
23 Alex Murdaugh excluded as contributors?

24 A Yes.

25 Q So, male DNA under her fingernails, not from Paul, not

1 from Alex Murdaugh.

2 A The foreign DNA to her, yes, they were excluded as
3 contributors.

4 Q Would it have been possible to perform any further
5 analysis on this, a Y chromosome profile?

6 A It is possible, but because there were so many male
7 individuals who were related to each other as standards
8 that were submitted, it was decided that that would not be
9 the best course of action to continue analysis because the
10 male -- the Y chromosome testing that you were discussing
11 is inherited along the males of the familial line, and so
12 there would be no way to distinguish between any related
13 people, any related males.

14 Q I guess making this determination, were you all aware
15 from previous testimony that Maggie Murdaugh had been to a
16 nail salon late that afternoon?

17 A I did not have any information about that, no.

18 Q So if her nails were quite clean coming to Moselle,
19 she doesn't have a lot of opportunity to have contact
20 with --

21 MS. GOUDE: Objection. Counsel is testifying.

22 THE COURT: Overrule the objection.

23 Q So if her nails were clean coming to Moselle, it
24 doesn't appear she has much opportunity to have that kind
25 contact with unrelated males, does it?

1 A It could be DNA -- you know, DNA under fingernails,
2 you're picking up DNA any time you touch an item
3 potentially. If she did get her nails done, it's possible
4 that somewhere at the nail salon there was DNA that she
5 picked up under her fingernails. We can't really tell you
6 how or when the DNA got there, but at any point in time
7 between getting her nails done and arriving home, she could
8 touch an object and potentially DNA from the object could
9 be under her fingernails, or she can touch an individual
10 and no DNA be under her fingernails in that way.

11 Q Are you familiar with something called CODIS?

12 A Yes.

13 Q And what is CODIS?

14 A CODIS is a database that we use to enter unknown
15 profiles from a crime to attempt to identify links between
16 different cases, and also between individuals who may have
17 been arrested or convicted of a crime.

18 Q So, it's a database that you can submit DNA samples to
19 and see if you get a hit and you can identify whose DNA it
20 is.

21 A Correct.

22 Q Was this unidentified, unknown male DNA found under
23 Maggie Murdaugh's fingernails submitted to CODIS?

24 A It was not. Because like we explained earlier, there
25 were only three alleles present that were foreign to her,

1 and that does not meet the threshold of information
2 necessary to enter a profile into CODIS.

3 Q And it was decided not to do this further Y chromosome
4 analysis on it?

5 A Correct.

6 Q Is it unusual in your experience to not test victim's
7 clothing for DNA?

8 A It depends on the situation of the case.

9 Q A situation where an unknown person has killed two
10 people in close -- in close, pointblank shootings?

11 A It would depend on the question that you're trying to
12 answer when you are processing the clothing. Typically
13 victims of gunshot wounds, their clothing will be saturated
14 in their blood, or there will be lots of their blood
15 present. And so the if you're looking for touch DNA from
16 maybe an individual, you would need to know the specific
17 area of interest to attempt to gather that touch DNA from
18 because the potential blood from the victims would be on
19 the clothing, so we need to be able to isolate a specific
20 area. If that information is not known, then there is not
21 very much that we can do with that clothing because there's
22 just no specified area for us to test.

23 Q What about their hands? Wouldn't their hands always
24 been an area of interest?

25 A Again, it depends. If there is evidence of a

1 struggle, then perhaps, which is why we would take the
2 fingernail clippings. If you don't know, then sometimes
3 you take the fingernail clippings just to see if we can get
4 some DNA from the fingernail clippings. But --

5 Q And the one time in that -- the one time something was
6 taken from them, it revealed unknown, unidentified -- or
7 male DNA.

8 A A very partial low level profile foreign to Margaret.

9 Q And you found Maggie Murdaugh's DNA on the 300
10 Blackout shell casings that were recovered. Is that
11 correct?

12 A Are you referring to Item 7.1?

13 Q Yes.

14 A She was included as a contributor to that item, yes.

15 Q And your report doesn't separate between individual
16 shell casings, does it?

17 A No.

18 Q Is your report consistent with one of those shell
19 casings being found in physical contact with her body?

20 A I believe there was information from the crime scene
21 that one of the shell casings was recovered from underneath
22 her body.

23 Q And is your report consistent with that, that DNA
24 could be transferred by physical contact?

25 A That's possible, yes.

1 Q And for the shotshells found in the feed room that had
2 a presumptive blood test positive, you found Paul's DNA on
3 those. Is that correct?

4 A Paul was included as a contributor to that item, yes,
5 10.1.

6 Q And is that consistent with those being found in a
7 room soaked with his blood?

8 A It would not be unexpected.

9 Q And for the steering wheel of the Chevy Suburban,
10 there was a positive human blood test, and I believe you
11 found Maggie and Alex Murdaugh's DNA on the steering wheel.

12 A For Item 56?

13 Q Yes.

14 A For Item 56, which was a mixture, was interpreted as a
15 mixture originating from two individuals. Both Margaret
16 and Richard Alexander Murdaugh were included as
17 contributors.

18 Q So, yes.

19 A They were included as contributors.

20 Q And is that consistent with someone who has handled
21 Margaret Murdaugh's deceased body, which is unfortunately
22 covered in blood, and then driving the vehicle?

23 A I can't ever tell you exactly how the DNA was
24 deposited onto an item. I can just tell you what the DNA
25 profile is --

1 Q And I'm not asking you to. I'm just asking is it
2 consistent. Is there anything in your report that would
3 exclude that explanation?

4 A It's a possibility.

5 Q And for the two shotguns, neither one of those had
6 Paul's DNA. Is that correct?

7 A Can you give me an item number, please?

8 Q I can. Sorry, just a second.

9 (Break in proceedings.)

10 Q The first one is Item 15.

11 A Item 15 were swabs from the camo Benelli 12 Gauge
12 Shotgun from receiver forward of the loading port, and Paul
13 Murdaugh was excluded as a contributor to that item.

14 Q And the other shotgun was Item 22?

15 A For 22.4, which was interpreted as a mixture
16 originating from two individuals, Paul Murdaugh was
17 excluded as a contributor. For Item 22.5, due to the
18 relatedness of the contributors, I was not able to offer a
19 conclusion regarding Paul Murdaugh. So, that's a situation
20 that we talked about earlier where sometimes if there's a
21 small amount of DNA present, we cannot distinguish between
22 related individuals, and so I was not able to make any
23 comparisons to Paul to that item.

24 Q So, you were not able to say for either one of those
25 shotguns that Paul's DNA was detected.

1 A He was excluded as a contributor for 22.4. For 22.5 I
2 couldn't make any comparisons to him either way.

3 Q And again, is there anything in your test results that
4 would be inconsistent with somebody who -- with Alex
5 Murdaugh having Maggie Murdaugh's bloods on his hands
6 having just visited the crime scene and handling those two
7 weapons?

8 A Again, I can't really say how the DNA was deposited
9 onto an item.

10 Q And then later you did some DNA testing on the white
11 t-shirt he was wearing, correct?

12 A Yes.

13 Q Did anyone ever tell you why you were being asked to
14 perform those tests?

15 A Which tests do you mean?

16 Q On his white t-shirt.

17 A The DNA analysis on the t-shirt?

18 Q The DNA. The DNA.

19 A It was submitted with a request to -- for DNA for
20 blood, and so when items come in with a request for DNA
21 blood, we will test it. If it is presumptive positive,
22 then we'll move forward with DNA analysis on that item.

23 Q So, did anyone say we believe he's wearing the shirt
24 that night? Is that why you're testing it for blood is to
25 see if that -- right? Someone is asking you to do this

1 work. Did anyone say we think he was wearing this shirt
2 that night during these murders, let's test it for DNA and
3 for blood?

4 A I know that the shirt was removed from his body when
5 it was collected. As far as when he was wearing the shirt,
6 I don't have any information about that.

7 MR. BARBER: Pull up what's been previously admitted
8 as Defense Exhibit 32.

9 (Break in proceedings.)

10 Q Okay. You recognize this, correct?

11 A Yes.

12 Q And this shows -- this shows where the cuttings were
13 made from the shirt, like the A, B, C, D, E.

14 A Yes.

15 Q Okay, and just kind of going through very quickly,
16 cutting A down here on the bottom, did you find Maggie or
17 Paul's DNA on cutting A?

18 A Cutting A. Is that Item 19.4?

19 Q Yes.

20 A For 19.4, Margaret Murdaugh was excluded as a
21 contributor and Paul Murdaugh -- Paul Murdaugh was included
22 as a contributor.

23 Q So we have Paul in A. In B, did you find Maggie or
24 Paul?

25 A For item 19.5, Paul was excluded as a contributor, and

1 Margaret Murdaugh was included as a contributor.

2 Q And for C, which is going up a bit -- so, now we're
3 off of the bottom of the shirt. Did you find Maggie or
4 Paul?

5 A For Item 19.6, again, I was not able to make any
6 comparisons to Paul due to the relatedness of the
7 contributors. But Margaret was included as a contributor
8 to that mixture.

9 Q Okay. For cutting D, now we're up at the right
10 shoulder, did you find Maggie or Paul there?

11 A For Item 19.7, I could not make any comparisons to
12 Paul due to the relatedness of the contributors. And
13 Margaret was included as a contributor to the mixture.

14 Q And did you also find Nolen Tuten in D?

15 A He was also included as a contributor to the mixture.

16 Q Going over to the other shoulder, did you find Maggie
17 or Paul in E?

18 A For 19.8, Paul Murdaugh was excluded as a contributor,
19 and Margaret Murdaugh was included as a contributor to the
20 mixture.

21 Q Okay. So, no Paul but Maggie there. Now, coming down
22 all of the way to the bottom, G, did you find Maggie or
23 Paul there?

24 A Paul was excluded as a contributor to the mixture.

25 Q Now, finally for both F and H up here, did you get any

1 results for either one of those?

2 A For 19.10, Margaret was also included as a
3 contributor -- sorry -- just to finish that result.

4 Q Sorry. Sorry.

5 A You were asking about --

6 Q F and H. Did you get any results for either one of
7 those?

8 A For F, which was our Item 19.9, a DNA profile was
9 developed, but due to the inability to determine the number
10 of contributors, no further interpretation will be offered.
11 For H, which is our Item 19.11, Paul was excluded as a
12 contributor. And for Margaret, the comparison to Margaret,
13 an uninformative statistical result was obtained. No
14 conclusion can be made regarding Margaret Murdaugh as a
15 possible contributor to the mixture under the list of
16 propositions, which in this case the propositions were
17 Richard Alexander Murdaugh and Margaret Murdaugh
18 contributed to the mixture versus Richard Alexander
19 Murdaugh and an unidentified, unrelated individual
20 contributed to the mixture. And that's a situation I
21 described earlier where the seesaw is balanced so it can't
22 tell me in either direction which scenario is a better
23 explanation of the DNA profile.

24 Q So, the only part of the mixture that we see right
25 here, the front, where you can say that you did find Paul's

1 DNA is down here at A, the bottom right part of the shirt,
2 correct?

3 (Break in proceedings.)

4 A For Item A, I did have an inclusionary likelihood
5 ratio for Paul. For several of the other stains, I could
6 not distinguish between him and other related individuals,
7 so I could not make comparisons to him.

8 Q But the only place you definitely did find Paul was A,
9 is that correct, on the front of the shirt?

10 A That was the only item where there was an inclusionary
11 likelihood ratio for Paul.

12 Q Do you remember when you did these -- when you
13 reported these DNA results? Do you know the date?

14 A Are you asking specifically for the --

15 Q Yeah. The date that you reported the results for the
16 shirt for DNA.

17 A For the shirt? There were two reports that had the
18 shirt because there were two times that it was processed
19 originally. The first report, which had the results for
20 item 19.2, was June 25, 2021. And then the second report
21 was originally issued July 25, 2021.

22 Q July 25, 2021. On July 26th, the day after, did you
23 attend a meeting with -- present was Major Huey -- I
24 apologize if I'm not saying their names correctly --
25 Captain Riley, Captain Reinhart, Lieutenant Wallace,

1 Lieutenant Schenk, Lieutenant Hash, yourself, and Mindy
2 Worley? Did you attend that meeting?

3 A Yes, I did.

4 Q And was the purpose of that meeting to discuss the DNA
5 report?

6 A Yes. It was to explain the results of my report.

7 Q Were you at that meeting asked to perform hematrace
8 tests?

9 A Not at that meeting, no.

10 Q Okay. When were you asked to perform hematrace tests
11 on the shirt?

12 A On August 10, 2021.

13 Q And is that the day that you performed them?

14 A Yes.

15 Q And I think you previously testified your test results
16 were negative.

17 A Correct.

18 Q Could you tell us a little more how you did -- well,
19 let me ask it this way. To perform the test, did you make
20 smaller cuttings from the larger shirt cuttings?

21 A Yes. So, I took the cuttings, opened them, and then
22 cut small portions of the larger cuttings to test for
23 hematrace, and then placed those cuttings into a solution,
24 and then that solution is added to each individual card for
25 that individual cutting. So, there's a test performed for

1 each item.

2 Q I'm going to show you a series of photos, if I may,
3 and I'm going to ask if you can identify them. This is
4 what's been previously marked, and the marks are on the
5 back -- it can be confusing -- as Defense Exhibit 96. Do
6 you recognize that?

7 MS. GOUDE: Objection, Your Honor. Can the State see
8 the pictures?

9 MR. BARBER: I apologize.

10 (Break in proceedings.)

11 MS. GOUDE: No objection.

12 Q I'm sorry, do you recognize the photograph?

13 A Yes.

14 Q And that's one of the cuttings after you made the
15 small cuttings?

16 A Can I see the other -- it's hard to tell which was
17 before and which was after without the other cuttings.
18 Because there's cuttings for DNA, and then I cut along the
19 cuttings for DNA or the hematrace test.

20 Q And I don't have the before and afters to show you.
21 Would it perhaps be helpful to look at some of the other
22 ones? Would that help you?

23 A Yes.

24 Q I'm going to show you what's been marked -- I'm going
25 to read these off and -- so I can give them all to you at

1 one time, if that's okay. That might help you.

2 A Yes.

3 Q They're marked as Defendant's Exhibits 97, 98, 99,
4 100, 101, 102, 103, 104, 105, I believe, is the last one.
5 And I'll go get the other one. It's over there. This is
6 the second copy. So, now that you have them all, do you
7 recognize them?

8 A Yes.

9 Q Okay, and these are the larger cuttings with the
10 smaller cuttings made for the hematrace test?

11 A I know that we took photos before the cutting was
12 taken for hematrace and after. It's hard to tell from
13 these pictures if it was before or after, but they were
14 taken during the hematrace processing of the shirt.

15 Q Okay.

16 (Break in proceedings.)

17 MR. BARBER: Your Honor, at this time I would offer
18 Defendant's Exhibits 96, 97, 98, 99, 100, 101, 102, 103,
19 104, and 105 as evidence.

20 THE COURT: What says the State?

21 MS. GOUDE: No objection, Your Honor.

22 THE COURT: They're admitted without objection.

23 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 96 WAS
24 RECEIVED INTO EVIDENCE.)

25 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 97 WAS

1 RECEIVED INTO EVIDENCE.)

2 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 98 WAS
3 RECEIVED INTO EVIDENCE.)

4 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 99 WAS
5 RECEIVED INTO EVIDENCE.)

6 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 100 WAS
7 RECEIVED INTO EVIDENCE.)

8 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 101 WAS
9 RECEIVED INTO EVIDENCE.)

10 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 102 WAS
11 RECEIVED INTO EVIDENCE.)

12 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 103 WAS
13 RECEIVED INTO EVIDENCE.)

14 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 104 WAS
15 RECEIVED INTO EVIDENCE.)

16 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 105 WAS
17 RECEIVED INTO EVIDENCE.)

18 MR. BARBER: Permission to publish? May I publish it?

19 THE COURT: You don't need my permission to publish
20 anything that's in evidence.

21 MR. BARBER: Can we bring up the first one? And go
22 get the white board, please.

23 (Break in proceedings.)

24 Q This will be quick. So, in this one it looks like you
25 made five cuttings. Is that correct?

1 A So, some of these cuttings were originally taken for
2 DNA. I tried, when I cut for hematrace, to also cut along
3 where the cuttings were taken for DNA.

4 Q Okay. So, there's five there, right?

5 A Yes.

6 Q Okay.

7 MR. BARBER: The next one.

8 Q And let's see if we can count how many are here. Are
9 you able to count how many are here?

10 (Break in proceedings.)

11 Q Were you able to count how many?

12 A It looks like fourteen. It's a little hard to see the
13 very small ones, and it's hard to tell on the small screen.

14 Q Okay. Well, be conservative. If you're not sure,
15 don't count it. So, fourteen?

16 MR. BARBER: No, don't do that.

17 A It looks like fourteen.

18 Q Okay.

19 MR. BARBER: Next exhibit.

20 Q And here?

21 A Eight.

22 Q Okay.

23 MR. BARBER: Next one.

24 A Seven.

25 Q Okay.

1 MR. BARBER: Next.

2 A Nine.

3 MR. BARBER: Next one.

4 A Seven.

5 Q Seven?

6 A Uh-huh.

7 MR. BARBER: Next exhibit.

8 A Looks like nine. Again, it's a little hard to see.

9 Q Again, be conservative. Don't count one if you're not
10 sure.

11 MR. BARBER: And the next exhibit.

12 A Four.

13 MR. BARBER: Next one.

14 A Nine.

15 MR. BARBER: Next one.

16 A Two.

17 MR. BARBER: That's it.

18 Q Those are all of them. So, now we'll just add these
19 numbers up. I have a calculator which might help. So, we
20 have five, plus fourteen, plus eight, plus two, plus seven,
21 plus nine, plus seven, and plus nine, plus four, plus nine.
22 So, what's the total?

23 A Seventy-four.

24 Q Seventy-four. And your tests, in none of these did
25 you detect human blood with hematrace. Is that correct?

1 A For all of those cuttings for the different items,
2 they were all put together into that tube for that item,
3 and for all of those tests the result was negative.

4 Q So we're zero for seventy-four in detecting human
5 blood here.

6 A The result was negative.

7 Q Moving on then. On August 16th, did you attend a
8 meeting to discuss DNA results, or outstanding DNA reports?

9 A Yes.

10 Q Were these results discussed at that meeting?

11 A For that meeting, we were discussing the items that
12 were -- that still had pending DNA assignments so -- that
13 they had submitted for DNA analysis, and we were waiting to
14 see if that analysis was still required. There's nothing
15 in the discussion about those results being discussed. I
16 don't remember anything else about that meeting.

17 Q Let me ask you this. Who asked you to perform the
18 hematrace test on August 10th?

19 A There was -- the request for the hematrace result was
20 relayed to me by my supervisor.

21 Q And who is your supervisor?

22 A Lieutenant Laura Hash.

23 Q And on August 10th, did you relay to Lieutenant Hash
24 the results of your tests?

25 A She was actually the reviewer of my hematrace test.

1 So, when we perform card tests, there needs to be a second
2 analyst to review the card test and sign off on the review
3 of the test. So, she was present when the test was
4 performed.

5 Q In 2021, were you ever informed that SLED was seeking
6 a blood spatter analysis of the shirt?

7 A I was told after the shirt had been sent that it was
8 going to be sent for blood spatter analysis, but I don't
9 know anything about how that came about or where it was
10 being sent to. That was -- I was done with my analysis.

11 Q When you said after the shirt was sent, what do you
12 mean by that?

13 A Or however they did the blood spatter analysis. I
14 know that there is documentation that the shirt was being
15 taken for that in the narrative, but I don't know how that
16 came about.

17 Q And at that time -- I guess I'm a little confused,
18 were you aware at that time that it was being sent for
19 blood spatter analysis?

20 A Not until it was already sent.

21 Q And by sent you mean that somebody had asked for the
22 report to be made, or the shirt had physically been sent
23 somewhere?

24 A I don't know anything about how it -- how the blood
25 spatter analysis came to be. I don't know what they

1 required for that analysis.

2 Q Can you just tell me a date the first time you learned
3 that there was going to be a blood spatter analysis? Even
4 a month if you don't know the exact date.

5 A I really don't know because I didn't have anything to
6 do with any online analysis.

7 Q When was the first time your hematrace tests appeared
8 on a report that you issued?

9 A The report with the hematrace results was issued on
10 November 10, 2021.

11 Q Were the results for the blue raincoat also on that
12 report?

13 A Yes, they were.

14 Q Okay. Did you discuss the hematrace test results with
15 anyone working on this case?

16 A I don't think that I discussed it with anybody else.
17 I don't think so. I would have discussed it with the
18 person who reviewed the results.

19 Q Did you discuss the blue raincoat results with anyone
20 investigating the case agents on the investigative side?

21 A I know for the raincoat I was asked to give an update
22 on when the results would be issued. Once I developed the
23 DNA profiles for those items, the DNA profiles were
24 technically reviewed, and then I was able to make a phone
25 call to relay those results, and I was able to speak to

1 Agent Ghent and just give him the preliminary results for
2 the items from the raincoat.

3 Q But you did not discuss the hematrace results that
4 were on the same report?

5 A According to my notes, I only updated him on the
6 findings from the raincoat.

7 Q Let's move ahead then to March 22nd of 2022. You just
8 said that you were aware at some point that a blood spatter
9 report had been requested. Were you aware in March that
10 one had been received claiming that there was high velocity
11 impact blood spatter on the shirt? Were you aware of that
12 report?

13 A I didn't really know anything about the report or the
14 results of the report.

15 Q So, you weren't aware of it in March of '22. Is that
16 correct?

17 A I don't know when -- I really do not remember when I
18 was told or what -- I know that I didn't really get much
19 information about the report or when.

20 Q Okay. Well, moving then -- a little further then, on
21 April 11, 2022, the Attorney General requested a meeting
22 that occurred on April 20th, nine days later, to discuss
23 reports.

24 A Yes.

25 Q And in preparing for that meeting on the 20th, did you

1 access your November 10th report on April 18th and
2 April 19th, a couple of days before that meeting?

3 A You mean did I look at the report in preparation for
4 the meeting?

5 Q Yes.

6 A I would have reviewed the reports in preparation for
7 the meeting, yes.

8 Q At that meeting, was any -- there any discussion of
9 blood spatter?

10 A I do not remember.

11 Q Okay. This is the first meeting with the AG's office
12 after the report is received saying that there's blood
13 spatter. Was it discussed?

14 A But that had nothing to do with my testing, so I don't
15 really know.

16 Q Did you notice that six days after that meeting there
17 were media reports that high velocity impact spatter had
18 been found on Mr. Murdaugh's t-shirt?

19 A I tried very hard to not look at any media reports
20 involving this case at all, so I tried to avoid that
21 information.

22 Q Well, at some point, did someone come to you and ask
23 about the hematrace test results that you performed that
24 said no human blood over seventy-four, in relation to this
25 report, saying that there was blood spatter that had to

1 come from a gunshot on the t-shirt?

2 A At some point, I know that we discussed the hematrache
3 results on the shirt.

4 Q And when was that?

5 A It probably would have been in the meeting where we
6 went over all of the results of my reports. I know that we
7 had several meetings to discuss the results of my reports.

8 Q Any idea when that was?

9 A It does appear that that April was the first meeting
10 after that report was issued where we had a discussion
11 about the reports.

12 Q So, it would have been that meeting that it had been
13 discussed. Were your hematrache test results and the blood
14 spatter report discussed in the same meeting?

15 A Possibly, but I don't know that. I also wasn't
16 present for all of the meetings all of the time. I know
17 there were some times when there were meetings with
18 specific individuals first and then I would come later, so
19 I don't remember if there was specific discussion of blood
20 spatter there when I was present.

21 Q I'm handing you what's been marked as Defendant's
22 Exhibit 95. Do you recognize that?

23 A Yes.

24 Q And what is it?

25 A It is a memorandum to the file for this case.

1 Q And you're the author of this memorandum?

2 A Yes.

3 Q And it concerns hematrace and it relates to this case?

4 A Yes. I was asked to do some research into the
5 scientific literature to see if there was information about
6 hematrace and potential affects of other kinds of testing
7 prior to hematrace, as well as list some reasons for
8 possible negative hematrace results.

9 MR. BARBER: Your Honor, I would offer Defendant's
10 Exhibit 95 into evidence.

11 THE WITNESS: What says the State?

12 MS. GOUDE: No objection, Your Honor.

13 THE COURT: It's admitted without objection.

14 (REPORT MARKED AS DEFENDANT'S EXHIBIT NUMBER 95
15 WAS RECEIVED INTO EVIDENCE.)

16 Q Were you asked to write this memo?

17 A Yes.

18 Q Who asked you to do this?

19 A Creighton Waters asked for me to do this research and
20 then summarize my findings in the form of memos.

21 Q Did he tell you why he was asking you to do this?

22 A Because there were negative hematrace results in this
23 case from the shirt. He wanted just some more information
24 on negative hematrace results.

25 Q Was it specifically because of the report saying high

1 velocity impact spatter?

2 A I don't know that.

3 Q Was that discussed when he asked you to do this?

4 A We discussed the negative hematrace results on the
5 shirt.

6 Q Did you discuss a report by a man named Tom Bevel?

7 A I don't think we specifically discussed the results of
8 that report because I don't know -- I'm not a blood spatter
9 expert. I don't know anything about what that report would
10 say or what the findings in that report would mean. I just
11 know that there was a report, and then I was asked to give
12 some more information on hematrace.

13 Q Were you aware of a report by Tom Bevel specifically
14 regarding use of hematrace on things that had been
15 previously tested with LCV?

16 A I was made aware of a report like that after I had
17 already -- obviously was after my analysis had been
18 complete. I don't remember specifically if it was before
19 or after I was asked to write this memo.

20 Q And you attached some articles to this memo, correct?

21 A Yes. I attached the articles that I found regarding
22 hematrace so all of that information would be present in
23 the memo.

24 Q And this first article from the *Australian Journal of*
25 *Forensic Sciences*, am I characterizing it correctly to say

1 that it reports that hematrace tests are generally
2 effective after treatment with LCV?

3 (Break in proceedings.)

4 A For that article, there were many tests performed
5 comparing testing hematrace after the use of several other
6 kinds of tests beforehand. Their results were positive
7 following LCV for seventeen out of seventeen tests, with a
8 blood dilution of one to ten, and for sixteen out of
9 eighteen tests with a blood dilution of 1 to 100.

10 Q So it usually works, hematrace, if you're testing
11 something that had a presumptive test of LCV, correct?

12 A Right. It shows that it does -- it did work the
13 majority of the time that they tested it, but they did
14 obtain two negative results as well.

15 Q Out of how many total?

16 A Out of seventeen plus eighteen.

17 Q Okay. So, it didn't work two out of eighteen times?

18 A Of the thirty-five times they tested it, they obtained
19 a positive result 38 percent of the time according to the
20 article.

21 Q I'm sorry?

22 A Thirty-three times, sorry, according to the article.

23 Q Since you have a calculator, what's the percentage of
24 that?

25 A It looks like 94 percent.

1 Q 94 percent.

2 A Uh-huh.

3 Q And here we're at zero for seventy-four.

4 A Uh-huh.

5 Q In the next article, on page 4 of the next article
6 there's a little chart. Do you see what I'm talking about?

7 A Which article?

8 Q In the exhibit, the second article, page 4.

9 A Okay.

10 Q Next one, next page.

11 A The next one.

12 Q Yeah.

13 A Okay.

14 Q Am I reading this chart correctly to understand it to
15 mean that hematrace detects blood at dilution levels at
16 which LCV would not detect blood?

17 A According to this study, which was performed by the
18 Michigan State Police, they were able to obtain positive
19 hematrace results for some samples that were negative LCV.

20 Q So, the hematrace test is more sensitive than LCV, at
21 least according to this study, correct?

22 A It appears to be. According to this study -- LCV is
23 not a chemical that I use in DNA Casework Department. It
24 is a test that's performed by the Crime Scene Unit, so they
25 would be the best people to answer questions about

1 sensitivity of that test.

2 Q But according to this, you would get a positive result
3 even if you couldn't see anything with LCV, according to
4 the previous study, after LCV 94 percent, and here we're
5 over seventy-four. Is it fair to say that there's no human
6 blood on the t-shirt?

7 A Like I said earlier, the test that I performed was
8 negative for the presence of human blood.

9 MR. BARBER: Could we pull up 32?

10 Q This will be very quick.

11 (Break in proceedings.)

12 MR. BARBER: Zoom in on the pocket.

13 Q I'm sorry, I don't have an image of the back of it. I
14 believe this is the name of a fishing boat, and there's a
15 fishing boat on the back of the t-shirt. Were you aware
16 when doing this that this is a fishing t-shirt?

17 A No.

18 Q Have you ever gashed a fish?

19 A I don't know even know what that word means, no.

20 Q Well, let me ask it this way then. If someone were
21 doing something while wearing this t-shirt that would cause
22 non-human blood to spray on to the shirt, could that be a
23 reason why something would have a misting pattern with LCV
24 and test negative for hematrace zero for seventy-four?

25 A I can't really answer anything about the misting

1 pattern because that is not my area of expertise. But one
2 possibility for a negative hematrace test is that the blood
3 present on the item is not human blood because hematrace is
4 a confirmatory test for the presence of human blood, but
5 also reacts to ferret blood and higher primate blood.

6 Q It doesn't react to fish blood, does it?

7 A No.

8 Q Did you attend an evidence viewing meeting on
9 January 5th of this year?

10 (Break in proceedings.)

11 A Yes, I did.

12 Q Was blood spatter discussed at that meeting?

13 A I know that we talked about the results of the shirt
14 as far as blood spatter. Again, I'm not a blood spatter
15 analyst, so I cannot give any information about blood
16 spatter on an item of clothing or on anything.

17 Q Specifically were reports by Tom Bevel -- excuse me,
18 Bevel, discussed at that meeting?

19 A I do not recall.

20 Q Even though it was just this month -- well, last
21 month. Time is flying.

22 A Yeah. It's hard to remember specifics.

23 Q Were reports by a Deputy Kinsey discussed regarding
24 blood spatter?

25 A I don't recall that name at all.

1 Q Was the t-shirt discussed?

2 A I don't remember the exact items that were discussed
3 specifically.

4 Q Has anyone -- I don't believe I asked this. It looks
5 like there's been a lot of work done on this t-shirt.

6 A Yes.

7 Q I mean, that's fair, right?

8 A Yes.

9 Q Put a lot into this t-shirt. There were the little
10 cuttings in the beginning, the small ones in the hem,
11 right? And then those are tested with pheno --

12 A Phenolphthalein.

13 Q Right, and then DNA tested all of these large
14 cuttings. We haven't even gone over -- there were a couple
15 in the back of the shirt as well, the small cuttings. Then
16 you went back and made more small cuttings for the
17 hematrace, right? Lots of work. And then you're doing
18 this big memo about hematrace because of the shirt, right?

19 A Uh-huh.

20 Q A lot of work. And this is going on for a period of
21 June '21, the month of the murders, it looks like, all the
22 way up until a month before trial. Is that fair?

23 A My --

24 Q Work on the shirt?

25 A My analysis was completed before that, but --

1 Q But, I mean, you're doing this memo to file because of
2 the shirt results, correct?

3 A Yes, correct.

4 Q Yeah. So, I mean, it's -- so for all of this -- all
5 this work on this shirt, it appears that the theory was
6 that he was wearing that shirt that night.

7 MS. GOUDE: Objection.

8 THE COURT: The objection is sustained.

9 Q Let me just ask maybe this. The meetings that you've
10 attended where the shirt was discussed and blood spatter
11 was perhaps discussed, was there ever any discussion of a
12 blue button down shirt?

13 A Not that I recall.

14 Q Never discussed? Okay.

15 MR. BARBER: Beg the Court's indulgence.

16 (Break in proceedings.)

17 Q I know you said it's not your area, but are you
18 familiar with the term high velocity impact spatter?

19 A Not really.

20 Q Do you even know what that is?

21 A No. I'm not a blood spatter expert.

22 Q Would you think you could have blood spatter without
23 blood?

24 MS. GOUDE: Objection.

25 THE COURT: Sustained.

1 MR. BARBER: No further questions, Your Honor.

2 THE COURT: Any redirect?

3 REDIRECT EXAMINATION

4 BY MS. GOUDE:

5 Q Agent Zapata, when you analyze something, do you try
6 to be thorough in your analysis?

7 A Yes, I do.

8 Q And are you aware that before you analyzed this shirt
9 that there were presumptive positives for blood?

10 A Yes.

11 Q Okay, and then from when you analyzed the shirt with
12 the hematrace, what were your findings?

13 A The hematrace results were negative.

14 Q All right. The defense also asked you about touch
15 DNA. When you analyze those cases and shotshells that were
16 found at the scene, what were you analyzing those items
17 for?

18 A For Item 7.1, the request was for touch DNA analysis.
19 For Items 9 and 10, the request was also for touch DNA
20 analysis, but because the -- there was staining on the
21 swabs when Rachel Nugyen did her processing, she
22 presumptively tested those swabs, and they were
23 presumptively positive for blood, and so they were
24 forwarded for DNA analysis.

25 Q For touch DNA on items like that, would you be looking

1 for possibly whoever loaded those items into a gun?

2 MR. BARBER: Objection. Leading.

3 THE COURT: You cannot lead the witness.

4 Q Whose other DNA could you be looking for when you were
5 analyzing those cases for DNA?

6 A Typically when cartridge cases or shotgun shells are
7 submitted for touch DNA, we are looking for DNA of an
8 individual who may have handled those cartridge cases or
9 shotgun shells.

10 Q And is it common to find touch DNA on fired cases or
11 shotshells?

12 A In my experience, there has not been a very good yield
13 of DNA on those items. From my understanding, when a
14 bullet is fired, it is being put through a lot of intense
15 heat as it's moving through the firearm. At least that's
16 how the firearms analysts seem to explain the process, and
17 so the heat can affect the recovery of DNA from that item.

18 Q And also with touch DNA, do you know when touch DNA
19 gets somewhere?

20 A No. I can never say how or when DNA was deposited on
21 an item.

22 Q So if I shook somebody's hand at some point in the
23 day, could I have their DNA on my hand?

24 A It's possible, yes.

25 Q And you wouldn't know when that got there.

1 A No.

2 Q Now, do you determine what evidence is analyzed in a
3 case? Do you look at all of the evidence and pick and
4 choose what you're going to analyze?

5 A No. We are requested to analyze items of evidence.

6 Q So, someone requests for to you analyze evidence.

7 A Correct.

8 Q Whoever requested for you to analyze the clothes of
9 Maggie and Paul Murdaugh?

10 A I was never requested to analyze those items.

11 Q And do you analyze items that you've not been
12 requested to analyze?

13 A No.

14 MS. GOUDE: Thank you.

15 THE COURT: Anything further?

16 MR. BARBER: Very briefly, Your Honor.

17 RECROSS-EXAMINATION

18 BY MR. BARBER:

19 Q You were asked about touch DNA. Is it common to find
20 touch DNA on an object when an object is discovered
21 touching a person?

22 A Can you repeat that question?

23 Q If an object is found actually touching a deceased
24 person, would it be uncommon to find that deceased person's
25 touch DNA on that object?

1 A No.

2 Q And would it be uncommon to find a wife's touch DNA on
3 a husband's shirt?

4 A It would not be uncommon, no.

5 MR. BARBER: No further questions.

6 THE COURT: You may step down.

7 THE WITNESS: Thank you.

8 (The witness exited the stand.)

9 THE COURT: Ladies and gentlemen, you can go to the
10 jury room for a break. Please do not discuss the case.

11 (The jury left the courtroom.)

12 THE COURT: We'll be in recess.

13 (A break was taken.)

14 MR. WATERS: Your Honor, we would like to run a brief
15 check and make sure that whatever we put on the ELMO or put
16 on the screen won't appear somewhere.

17 THE COURT: Yes, sir.

18 (Break in proceedings.)

19 MR. WATERS: The State is ready to proceed, Your
20 Honor.

21 THE COURT: You may bring the jury.

22 (The jury returned to the courtroom.)

23 THE BAILIFF: The jury is present, sir.

24 THE COURT: Thank you.

25 Your next witness.

1 MR. WATERS: Your Honor, the State calls Dr. Ellen
2 Riemer.

3 The witness, ELLEN RIEMER, was first duly sworn and
4 testified as follows:

5 THE CLERK: Take a seat in the witness stand. Adjust
6 the microphone if you have to. State your name again for
7 the record. Spell your last name.

8 THE WITNESS: Yes. Hi. My name is Dr. Ellen Riemer,
9 R-i-e-m-e-r.

10 VOIR DIRE EXAMINATION

11 BY MR. WATERS:

12 Q Dr. Riemer, how are you doing today?

13 A I'm doing fine, thank you.

14 Q I'm going to go ahead and get right to it. And, if
15 you would, just tell the jury a little bit about your
16 education that led up to you becoming a physician, please.

17 A Yes. Okay. I graduated from medical school in 1997
18 with a doctor of medicine degree. Following that I did a
19 residency in pathology at New York Presbyterian Hospital,
20 Columbia University Medical Center in the City of New York.
21 Following that I did a forensic pathology fellowship at the
22 Office of the Chief Medical Examiner of the State of
23 Maryland. Following that I did an additional fellowship
24 training year at Johns Hopkins Hospital, Johns Hopkins
25 University School of Medicine, also in Baltimore. And I am

1 board certified in forensic pathology and anatomic
2 pathology.

3 After I completed my -- all of my education and
4 fellowship training, I -- my -- I took my first job at --
5 as a forensic pathologist at Wake Forest University Baptist
6 Medical Center, Wake Forest School of Medicine in North
7 Carolina, where I remained for almost six years before
8 being recruited by the Medical University of South Carolina
9 in Charleston, where I've been for fourteen years as a
10 forensic pathologist.

11 Q All right, and at the Medical University of South
12 Carolina, you said you were a forensic pathologist. Do you
13 have any professorship or teaching responsibility there?

14 A Yes. So, I have also the title of Professor of
15 Pathology and Laboratory Medicine. And because Medical
16 University of South Carolina is a teaching institution, I
17 am responsible for educating physicians in training, as
18 well as medical students, and that's an integral part of my
19 job. So, a lot of the work I do is observed by students
20 and trainees.

21 Q And you mentioned you had some board certifications.
22 Can you tell those to the jury, please?

23 A Yes. So, you know, in order for somebody -- there
24 is -- the America Board of Pathology is the organization
25 that certifies specialties in different fields. And the

1 America Board of Pathology certifies specialists in
2 pathology and requires them to take very long examinations
3 and demonstrate and pass those examinations. You can't
4 just sit down and take them; you have to have achieved, you
5 know, gotten through your residency training and fellowship
6 training as well. So, I managed to do all of that, and I'm
7 board certified in forensic pathology.

8 Q All right, and do you have any membership or
9 involvement in any professional societies that are relevant
10 to what we're talking about here?

11 A Yes. Well, I'm a member of the America Academy of
12 Forensic Sciences. And I also am responsible for editing
13 journals. I have various academic responsibilities as
14 well.

15 Q All right, and you mentioned editing certain journals.
16 Have you published in the field of pathology over the
17 years, given your professorships and your educational
18 expertise?

19 A Yes. So, because I'm interested in, you know,
20 educating the medical community, I published close to, I
21 don't remember the exact number, but approximately thirty
22 publications in the field of pathology and forensic
23 pathology. And this is also something that's valued at an
24 academic institution, so you're not just practicing but
25 also contributing to the body of knowledge in your field.

1 Q Over the years with this experience, have you had
2 calls to conduct a number of autopsies?

3 A Yes. So, the principal responsibility of my work is
4 to perform autopsies on deceased individuals in order to
5 determine the cause and manner of death. And over the
6 course of my career I have -- I don't keep exact track, but
7 I estimate that I have done approximately 5,500 autopsies.

8 Q 5,500?

9 A Correct.

10 Q All right. We'll talk more about what an autopsy is
11 in a minute. Over that course of time doing 5,500
12 autopsies, have you been qualified as an expert and
13 testified in courts of record in the nation?

14 A Yes. So, again, I'm not keeping track of every single
15 one, but if I -- a conservative estimate would be
16 approximately once a month for more than twenty years,
17 which would put me in the mid-200. So, about 250, but
18 that's a probably a little bit more than that.

19 Q And that's times you've been qualified as an expert in
20 forensic pathology?

21 A Yes.

22 Q And is that just in South Carolina or have there been
23 other places?

24 A Yeah. The majority have been in South Carolina, but
25 also North Carolina where I practiced for six years prior

1 to moving to South Carolina. And I've also been admitted
2 as an expert witness in forensic pathology in federal court
3 a couple of times where I autopsied individuals who died on
4 tribal lands.

5 MR. WATERS: Your Honor, at this time the State would
6 move to qualify Dr. Riemer -- Professor Riemer as an expert
7 in forensic pathology.

8 MR. HARPOOTLIAN: No objection, Your Honor.

9 THE COURT: She is so qualified.

10 DIRECT EXAMINATION

11 BY MR. WATERS:

12 Q All right, Dr. Riemer, before we get to your specific
13 findings in this case, can you quickly describe to the jury
14 what is pathology and what is an autopsy? What is it that
15 your science and, and being a physician -- what are you
16 trying to do?

17 A Yes. So, the purpose of an autopsy is to obtain as
18 much information as I can from examination of the tissues
19 of the body and -- in order to come to a determination of
20 the cause and manner of death. And the autopsy examination
21 is basically a specialized surgical procedure. It starts
22 with an external examination. So, before any cuttings get
23 started, I look from head to toe; I look for anything
24 unusual. If there's injuries, I review them; I look at
25 them carefully and document those findings, as well as

1 establish an opinion on how injuries may have occurred.

2 Q And obviously -- because in the cases where you have
3 traumatic injury, there's no getting around the fact that
4 it's very graphic, the things that you have to look at, and
5 the things here today that you have to describe to the
6 jury.

7 A Yes, that's just part of it.

8 Q Did you have cause in this particular case to examine
9 the victims of these murders, Paul Murdaugh and Maggie
10 Murdaugh?

11 A Yes. I have the name as Margaret Murdaugh. I know
12 she goes by Maggie, but Margaret Murdaugh, as well as Paul
13 Murdaugh. I performed the autopsies on both of these
14 individuals.

15 Q All right, and do you recall what day that was?

16 A I will have to refer to my notes.

17 Q Please help yourself.

18 (Break in proceedings.)

19 A Both of the autopsies on both Paul and Maggie were
20 performed by me on June 10, 2021.

21 Q And is it typical when you're conducting an autopsy
22 that you have assistants there that assist you in
23 performing these procedures and that sort of thing?

24 A Yes. So, I have assistants to help me with whatever I
25 need. And the autopsies -- I do the autopsy and any

1 assistance I need is done under my direction.

2 Q Sure, and then is it common that photographs are taken
3 of the various injuries and your various findings as you do
4 the autopsies?

5 A Yes.

6 Q And is any physical evidence that is recovered during
7 that autopsy, is law enforcement present or some official
8 there to take custody of those physical things?

9 A Yes. They're not always present, but they -- if
10 they're not present at the day of the autopsy, they'll come
11 back, and I seal all of the evidence up and -- with -- you
12 know, in secure bags. And then those are transferred to
13 the appropriate investigator.

14 Q Well, let's go ahead and get to it. We're going to
15 talk about Paul Murdaugh first. Okay?

16 A Okay.

17 Q And we also -- do we have some poster boards behind
18 you? And the first one is marked as State's 500. And can
19 you explain very quickly what this is to the jury, please?

20 A Okay. So, you may have seen these kinds of diagrams
21 on this -- these are blank body diagrams. And so when I
22 autopsy man, or a male, I start with that diagram, and I --
23 it's basically a vehicle for me to take notes during the
24 autopsy, so I can incorporate findings into my final
25 autopsy report. But this is not, you know, something

1 that -- this is really for my edification and so I can
2 write things down, and it helps me when I write the autopsy
3 report to make sure I've covered everything.

4 Q All right, and will this assist you as we -- as you
5 explain to the jury the injuries that the two victims
6 suffered?

7 A Yes.

8 Q Dr. Riemer, let's -- again starting with Paul, if you
9 could very quickly, how many -- did you observe any gunshot
10 wounds to Paul?

11 A Well, actually there were two shotgun wounds. So,
12 that's a different than, you know, a handgun, or -- so, a
13 shotgun is where there -- you know, there's basically
14 pellets that are enclosed in a wadding, and the wadding,
15 after it's fired from the shotgun, kind of opens up and
16 allows all of these pellets to be released from the
17 wadding. And so the features of his injuries told me in no
18 uncertain terms that he was shot with a shotgun.

19 Q All right, and let's -- if I could ask you if, with
20 the Court's permission, if you could stand down. I'm going
21 to hold up this board, and if you could bring a marker with
22 you. I've got a red Sharpie right here if that helps you.
23 And let's talk about the injuries that you observed to Paul
24 Murdaugh. And then if you could, for the jury, if you
25 could illustrate and draw on this board that -- the first

1 gun -- shotgun wound that you observed on Paul.

2 A Okay. I'll use my marker, please.

3 Q All right. Let me put mine up real quick.

4 A Okay. So, in order to make things as clear to you as
5 possible, I'm going to use a black marker for entrance
6 wounds and red for exit, okay, so just arbitrarily. Okay.
7 So, Paul had two shotgun wounds. One of them was to the
8 left side of the chest, approximately this location. And
9 the wadding containing the pellets traveled beneath the
10 skin through, like, the soft tissue of the left side of the
11 chest. It didn't actually go into the chest cavity, but
12 traveled beneath the skin and into the muscle and fat
13 before exiting the left axillary. Okay. So, it's kind of
14 a straight kind of left to right -- I'm sorry, right to
15 left shot, and --

16 Q And just real quick, when you say right to left,
17 you're talking about Paul's right to left.

18 A Yeah, that's right. So, I'm always thinking about,
19 like, the patient's right to left. Okay. So, if you look
20 at it, it's from -- you know, would be from left to right,
21 but I'm always -- you always -- for consistency it's always
22 relative to his body.

23 Q Down here by the hands, could you put an R on one side
24 and an L on the other? Just because I know I get confused.

25 A Well, no, it is. And honestly we all do this during

1 autopsies as well because especially you have that and it's
2 very easy to make a mistake.

3 Q And also just real quick, could you write Paul up at
4 the top there?

5 A (Witness complies.)

6 Q Thank you. All right. All right. So, you were
7 talking about that first shotgun wound to the chest and
8 where it exited.

9 A Yes.

10 Q Were there any other injuries associated with that?
11 Please continue on.

12 A Yes. So, the -- remember, we have wadding enclosing
13 pellets. The wadding actually got stuck, you know, didn't
14 completely exit and continue to fly out. It bumps up right
15 underneath the skin of the left side of the chest, like,
16 close to the armpit area. And we have a photograph of that
17 pink wadding that remained in this skin, or the exit wound.
18 From there multiple shotgun pellets started going through,
19 like, the left arm, starting from the underside of the left
20 arm, so the, the, the wadding terminated in the skin, and
21 then pellets kind of went out and went through the left
22 arm. And -- okay. So, this is the left -- remember, this
23 is his left side, his left elbow, his left arm, and then
24 we've got a bunch of exit pellets wounds on the left side
25 of the arm and some a little bit on the back. So, that --

1 you can see this is going through, and then this is
2 actually on the inside of the arm and the exits are kind of
3 on the left side. So --

4 Q Was there any stippling associated with this
5 particular wound?

6 A Yes. Okay. So, there was stippling, and I'll draw
7 that over here. Okay. So, when the projectile comes out
8 of the barrel of a weapon, be it a shotgun, a handgun, an
9 assault rifle, what propels that projectile -- or we call
10 it, you know, a projectile -- out of the barrel of the gun,
11 it's gunpowder. And gunpowder is basically ignited through
12 the action of the shooter who is holding the gun. And so
13 gunpowder is basically booming and projects the projectile
14 out of the barrel of the gun. A projectile can potentially
15 travel very long distance like, you know, many -- like many
16 feet or, you know, large or long, depending on the
17 projectile, until it hits something, or if it doesn't hit
18 anything it can eventually lose power and hit -- go to the
19 ground. But the gunpowder that leaves the barrel of the
20 weapon can travel not too far, only travels about up to
21 three feet, depending on the weapon.

22 So, in this case we actually have some particles of,
23 like, abrasions from particles of gunpowder, and this is
24 called gunpowder stippling. Okay? So we have stippling,
25 which indicates that this wound was fired at a fairly close

1 range. We can't say exactly, but probably no more than 3
2 feet because that's our standard. You know, it could be
3 anywhere from 2 to 3 feet. And interestingly enough there
4 was some markings on the edge of this kind of cookie cutter
5 type of defect from the wadding going in that shows that
6 some of the petals of the wadding are beginning to weaken.
7 So, this is very classic for a shotgun entrance wound, and
8 at the autopsy shows that it went, after going through
9 the -- underneath the left side of the chest, it goes
10 through the left arm.

11 Q All right, and let me ask you this, and before we look
12 at some of the pictures -- which are very graphic. Is that
13 correct?

14 A Yes. It's just the nature of the beast.

15 Q If -- this particular injury, was it immediately
16 fatal?

17 A No. Amazingly enough this really -- if that is all he
18 sustained, he would have needed medical attention and some
19 stitches and irrigation of the wound to clean it out and
20 make sure it doesn't get infected, but it actually did not
21 pierce the chest or cause any internal bleeding. It did,
22 however, cause a bruise or contusion of the left arm, and
23 that's because, you know, the -- there's a lot of energy
24 associated with this. It didn't actually go through the
25 ribs but caused a contusion of the left arm. But he would

1 have been expected to be -- continue to be standing after
2 this. It would not have sent him to the ground.

3 Q All right. If you could, there's a dowel stick over
4 by your witness stand, and I'm going to make sure the
5 jurors down here can see what you're talking about. If you
6 could grab it for me real quick, and then we'll look at
7 some of the pictures here in just a second.

8 A Okay. What do you want me to do?

9 Q Well, I just wanted to show it to these jurors down
10 here, and just make sure they could see what you were
11 doing.

12 A Oh, sure, okay.

13 Q And then if you could just stay standing for me, I'm
14 going to get an exhibit. Just stand by for me real quick,
15 Dr. Riemer.

16 (Break in proceedings.)

17 MR. HARPOOTLIAN: No objection.

18 Q All right, Dr. Riemer, if you would be very careful to
19 keep these pointed this way, if you could. But I'm going
20 to have you just look through State's 478, 479, 480, 481,
21 and 482, and see if you recognize those images.

22 A Okay. So, these are photographs --

23 Q And just real quick, just tell me if you recognize
24 them.

25 A Yes. I recognize all of them.

1 Q All right, and are these images that were taken during
2 the autopsy you conducted of Paul Murdaugh?

3 A Yes.

4 Q And would they assist you in explaining the injuries
5 to the jury?

6 A Yes.

7 Q All right.

8 MR. WATERS: Your Honor, at this time I would move
9 State's 478, 479, 480, 481, and 482 into evidence.

10 MR. HARPOOTLIAN: No objection, Your Honor.

11 THE COURT: They're admitted without objection.

12 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 478 WAS
13 RECEIVED INTO EVIDENCE.)

14 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 479 WAS
15 RECEIVED INTO EVIDENCE.)

16 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 480 WAS
17 RECEIVED INTO EVIDENCE.)

18 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 481 WAS
19 RECEIVED INTO EVIDENCE.)

20 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 482 WAS
21 RECEIVED INTO EVIDENCE.)

22 Q All right. Now, Dr. Riemer, if you'll get the dowel
23 stick and come around here to the screen, I'm going to put
24 this first image up on the ELMO, and then if you could --
25 well, talk a little bit about these injuries and describe

1 them to the jury.

2 (Break in proceedings.)

3 A So, we can see -- it's not great focus here, but this
4 is the entrance of the shotgun wound on the left side of
5 the chest, his left nipple. His left nipple is over here,
6 so the left side of the chest. And there is some stippling
7 over here --

8 Q And, Dr. Riemer, I apologize, if you can come around
9 and work this way so that all our jurors who are that way
10 can see.

11 A Oh, absolutely. Okay. All right. So, the shotgun
12 wound is going in this direction. Remember, it exited that
13 left side of the chest and then continued through the left
14 arm. So, that is a photograph of that wound to -- the
15 shotgun to the chest.

16 Q All right, and we'll see some more close-up images
17 here in a minute, but this is the entrance wound right
18 here. Is that correct?

19 A Yes.

20 Q And then we have some injuries right here. Is that
21 where those pellets exited through his arm?

22 A Yes. That's where the -- yes. The wadding, which is
23 the plastic piece enclosing the pellets, terminated in the
24 skin. It just didn't manage to get out, but all of those
25 pellets kind of got released from the wadding and went

1 through the left -- the left arm.

2 Q All right. I'm going to move now to -- that was
3 State's 478 for the record. I'm going to move to State's
4 479, and what does it image represent?

5 A Okay. So, this is a more close-up view of the
6 entrance wound. And you can see it looks like there's
7 little -- like almost squares or pegs sticking out of the
8 edge. And that tells us that the wadding is starting to
9 open because it opens up. It kind of opens up. There's
10 petals, and this is a classic -- I could put it in a book
11 to say that this is consistent with a shotgun entrance
12 wound. Okay, and we can see the dots around here. Those
13 are from pieces of gunpowder that have basically impacted
14 the skin because it was within a distance of 3 feet or so.

15 Q All right. Moving now to State's 480.

16 A Okay. So, usually when I take a photo, I don't want
17 to go too close because then we won't be able to see where
18 it is on the body. But here, this is recognized. This is
19 the nipple, right, his left nipple, and we saw the entrance
20 wound over here. And so here we have the -- this is the --
21 an exit wound where this pink wadding is basically stuffed
22 right there, and you can see these are the petals on the
23 edge, and that's what gave that unique appearance to the
24 entrance wound. Now, this is basically a cylinder that
25 encloses lots of pellets, and then the pellets here -- we

1 start to actually have some of the pellets coming through
2 the surrounding skin, and then along the left side of the
3 lateral side of the chest.

4 Q All right. I'm going to show you what's been marked
5 as State's 111 already in evidence at this time. Do you
6 recognize that?

7 A Yes. So, that is the wadding that I recovered at
8 autopsy and took a picture of it before I recovered it, and
9 so that's the wadding that was from the Paul's chest.

10 Q And just, again, just point to where that is in that
11 image, please.

12 A Yeah. So, here it is. It's kind of peeking out
13 through this big fold in the left side of the chest.

14 Q All right. Let me move on to the next exhibit. I'm
15 going to put up on the screen now State's 481, and tell me
16 what this is right here.

17 A Okay. So, this is a photograph of the same wadding,
18 but I'm taking it from a different angle. Okay? So, he's
19 lying on an autopsy table, and I've moved his arm up to
20 show the relationship of this wadding. This -- the
21 entrance pellets wounds on the underside -- the underside
22 of the left arm. And interestingly enough, a lot of times
23 pellets just go through the skin but here we have some
24 abrasions around the skin, and it actually corresponds to
25 abrasions. We normally don't have abrasions with an exit

1 wound such as we have here, but the fact that we have
2 abrasions in -- on the underside of the left side of the
3 chest corresponding to the inside of the arm indicates that
4 his arm was down at the time of his injuries.

5 Q So, let me ask you about that. In your expert
6 opinion, having done 5,500 autopsies, is there any way that
7 Paul's hands were up when he suffered that shotgun wound to
8 the chest that you've been talking about?

9 A No. There -- the autopsy answers that question: that
10 his arm was down by his side at the time he sustained this
11 injury.

12 Q And, again, highlight the specific features that you
13 observed that cause you to come to that expert opinion.

14 A Okay. So, if -- let's just say hypothetically if his
15 arm was up, you see all of these abrasions around this exit
16 defect, and the abrasions around these pellet entrances?
17 We wouldn't see that because they -- those are caused by
18 when these pellets and the wadding is pressing up against
19 the skin. The skin is very elastic. So, this is just kind
20 of logic. I think we're all going to get this. It's kind
21 of going to push the skin before it actually exits. The
22 skin is going to stretch a lot, and if it hits up against
23 the other portion of the skin, we have kind of abrasions
24 which become scrapes on the skin around where it exited as
25 well as where it entered. So, these are sometimes

1 called -- like it's a shored exit wound. So, the skin
2 actually struck another area, and, in fact, it corresponds
3 exactly. It's like a reflection. We can see -- this is
4 reflected -- here is -- this is -- this one is reflected
5 over here. So, if -- we can only get that kind of a mark
6 if his arm is down.

7 Now, this is the kind of thing that, you know, it's
8 the logical conclusion, and I'm confident that that was the
9 position of his arm at the time he was shot. And this is
10 based on my training and more than twenty years of
11 experience doing these autopsies.

12 Q All right. Let me look at the next exhibit, which
13 will be 482 for the record. And tell us what you see here,
14 and also, if you could, how that also supports the
15 conclusions you were just talking about to the jury.

16 A Yes. Okay. So, these are exit pellets wounds on the
17 outside of the arm in this area, right, so this is kind of,
18 like, his arm pit here. And we can see these are kind of
19 just -- these pellets -- exit wounds don't have the kind of
20 abrasions around it. This is just kind of finding its way
21 through the skin. And then this one is over here, so --
22 and the further the pellets travel, it kind of splays out,
23 so after the pellets leave the wadding, the openings,
24 they're spread. So, these are, you know, exit pellet
25 wounds, and we don't have the kind of abrasions to suggest

1 that his arm was pressed up against anything at the time
2 that those pellets exited.

3 Q All right. One other thing as well as we were talking
4 about his arm being down. Of course, the wadding stopped
5 in that wound and was still in his chest, correct?

6 A Yes.

7 Q Okay. All right. Let me -- let's move on. Just give
8 my one second here to get some other exhibits and show them
9 to defense counsel.

10 (Break in proceedings.)

11 Q All right, Dr. Riemer, if I can get you to maybe stand
12 that way just a little bit. I know we're in tight confines
13 and we're trying to be as respectful as we can with these
14 images. I'm going to show you now what's been marked as
15 483, State's 484, State's 485, 486, and 487. And just
16 quickly tell me if you recognize those, and then I want to
17 go back to the board before we talk about those pictures.

18 A Yes, I recognize these.

19 Q All right, and are those autopsy photographs that you
20 took of Paul Murdaugh?

21 A Yes. These are photographs that I took at the autopsy
22 of Paul Murdaugh.

23 Q And would they assist you in explaining to the jury
24 the injuries that he suffered?

25 A Yes.

1 MR. WATERS: Your Honor, at this time I would move
2 State's 483, 484, 485, 486, and 487 into evidence.

3 MR. HARPOOTLIAN: No objection, Your Honor.

4 THE COURT: They are admitted.

5 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 483 WAS
6 RECEIVED INTO EVIDENCE.)

7 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 484 WAS
8 RECEIVED INTO EVIDENCE.)

9 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 485 WAS
10 RECEIVED INTO EVIDENCE.)

11 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 486 WAS
12 RECEIVED INTO EVIDENCE.)

13 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 487 WAS
14 RECEIVED INTO EVIDENCE.)

15 MR. HARPOOTLIAN: And, Your Honor, I think all of
16 these exhibits, both he and I, 90 percent of them are
17 introduced will be under seal.

18 MR. WATERS: Yes, sir. And for the record, these are
19 under seal, and I provided the cover sheets to the court
20 reporter. Every exhibit, except for the poster board that
21 we're doing, the State would request to be under seal
22 because of the graphic nature.

23 THE COURT: Yes.

24 Q All right, Dr. Riemer, let's -- that was -- and we'll
25 come back a little bit more to that first injury, but there

1 was a second shotgun injury as well. Is that correct?

2 A Correct.

3 Q All right, and I'm going to go back to State's 500,
4 which is the poster board. And if you could, explain to
5 and draw on this diagram of that second injury, and then
6 we'll look at the pictures.

7 A Okay. So, there was a large shotgun wound defect to
8 the top of his left shoulder, and there were a lot of
9 pellets recovered in the left shoulder area. And from
10 there the -- it kind of just went across the top of the
11 left shoulder, and then went into the neck, side of the
12 neck and face. And from there -- his face actually was not
13 destroyed from this, but there is a big exit wound on the
14 top of the right side of the head. So, this wound went
15 from his left toward his right and upward, and made a
16 slight front to back deviation.

17 Now, what does that tell us? We don't really know.
18 It's kind of going toward -- it's sparing his face. It's
19 going behind the face. Now, one thing that makes sense to
20 me, how could that happen? If he was just stand -- not
21 everybody gets shot like standing on these diagrams, right?
22 But if he was shot and his face was forward, it would have
23 taken off a lot of his face. However, if he was turned
24 toward the shooter, then it's going to go into the face
25 here, and go out towards the right back of the head. So,

1 to me it makes sense that his head is turned to the left,
2 not necessarily completely but partially turned to the
3 left. And what happened here is an extremely severe,
4 immediately fatal injury because what it did was after it
5 went through the left side of the neck and face, it -- our
6 brain is basically held up through the skull, so we have a
7 bone at the top of the skull, but we also the bone that
8 kind of holds up in there. It went through the base of the
9 skull, which is kind of in this area. The brain is up
10 there, and this wound -- actually his brain was ejected out
11 of the top of the right side of his head and actually
12 arrived at the autopsy in a separate bucket. So, this --
13 the force of this wound actually pushed his brain out of
14 his head. There was only just a small piece of brain
15 remaining, and that's the brain stem that was attached to
16 the spine.

17 Q All right, and real quickly going back to the first
18 wound to the chest, if Paul was standing when he suffered
19 that, could he have remained standing after suffering that
20 wound?

21 A Yes.

22 Q The second wound, the one that starts in the shoulder
23 and goes in here and then out the top of his head, what
24 would have been the effect of that wound?

25 A That would have been immediately, he would not have

1 been standing. He would have just fallen to the ground.

2 Q All right, and would he have been capable at all of
3 bracing his fall or anything like that with a catastrophic
4 injury like that?

5 A No. That's instant, instantaneous death.

6 Q Did you notice any abrasions on his face or anything
7 like that?

8 A Yes. He did have -- and it's depicted in one of
9 photographs. He does have a scrape on his face. And very
10 frequently scrapes on the face that have -- they have a --
11 it has a slight directionality that's consistent with a
12 terminal collapse. So, if he's hitting the ground with
13 some movement, there's frequently kind of a linear pattern.
14 And, you know, all of this really makes sense when -- once
15 you've seen these things, you can understand that if
16 somebody is going to fall with, like, you know, with force
17 of their body and not their neck, hit their face on the
18 ground, and we get some abrasions that correspond to that.

19 Q All right, and let me do this real quick. If you can
20 grab my dowel stick for me, and I want to make sure the
21 jurors down here had a chance to see what you've been
22 drawing.

23 A Okay.

24 Q So, that's the shoulder right there, and then --

25 A Yeah. I should have made a red mark here to be

1 consistent. This is the exit wound on the right side of
2 the head, and the brain came out of that exit.

3 Q All right, and you mentioned a little bit about it
4 being consistent with Paul kind of having his head tilted
5 to one side. If you could use the dowel stick and maybe
6 use me as an example, and show me kind of what you're
7 talking about. You can position me however you want to.
8 So, let's go out here just a little bit if we can.

9 A So, to start with, like, a different idea, okay, in
10 order to understand how that's the case -- so, if a shotgun
11 wound is entering the top of the left shoulder, and let's
12 say his head is turned like that. It's going to go right
13 through the face, right? But if his head is turned like
14 that, it's going to spare the face and be able to go behind
15 the face. So, if somebody is just standing, looking
16 straight ahead, this most likely would have done a lot of
17 damage to his face. But the fact that the face has
18 remained intact tells me that his head was, I don't know,
19 up or down, but his head was facing in the direction to
20 where the shotgun was being fired.

21 Q All right, and then the injury to the shoulder would
22 have been where? If you would just point for the jury.

23 A Yes. So, it was kind of on the top of the shoulder.
24 This also did not injure his chest cavity, but it went
25 through a lot of the skin and muscle and the fat of the

1 left shoulder. And there were a lot of pellets that were
2 recovered from the left shoulder area, as well as the head.

3 Q And I'm going to show you very quickly what's been
4 marked as State's 110. And do you recognize this item
5 already in evidence?

6 A Yes. These are the pellets that I recovered from the
7 left shoulder and head area.

8 Q All right. I'm going to go ahead, and if you could
9 stay on that side so the jurors can see, and I'm going
10 to --

11 A This side?

12 Q Yeah. If we can work on this side so it goes down
13 that end and you can see, and I'm going to bring some of
14 these to the witness.

15 (Break in proceedings.)

16 Q All right, and I'm going to show you first what's been
17 marked as State's 483. And can you tell me what is on this
18 particular image, particularly as to some of the things you
19 were just describing as to the abrasion and things like
20 that?

21 A Yes. So, we can see, this is basically -- an abrasion
22 is a fancy word for a scrape, so there are scrapes on the
23 right side of his face. And you can see they kind of
24 had -- you can kind of see that there's a little bit of a
25 linearity. So, if he just fell completely flat, we might

1 just get, like, you know, dots, but if there's some
2 movement, we get -- it's kind of he's hitting the ground
3 and then moving a little bit as his face hits, so we get
4 this kind of vertical direction. And this is a very
5 typical type of injury to the face that somebody might
6 suffer from a terminal collapse. So, after they sustain
7 the fatal injury, what they're going to do, they're going
8 to fall to the ground. Now, depending on the surface of,
9 you know, the concrete or, you know, the grass or anything
10 like that -- but this is very typical of -- I don't know
11 what kind of surface it was, but a terminal collapse.

12 Q Okay. All right. If you would with this image, and
13 this would be State's 484, please explain to the jury using
14 this image some of the concepts you've been describing to
15 them.

16 A Okay. So, this is the top of his left shoulder, and
17 this is the continuation of the ammunition through the left
18 side of the lower face, and from there it proceeded behind
19 the face through the base of the skull and exited the right
20 side of the top of the head and shoulder toward the back of
21 the other side of the top.

22 Q And those two sort of together, they are -- that's
23 kind of what you're describing before when you had
24 positioned my head --

25 A Yes.

1 Q -- in a manner in which you did.

2 A Yeah, that's right. So, my feet turned to the left
3 like that. I think that makes the most logical sense, as a
4 forensic pathologist is really logical. So, when we look
5 at these things, we think, well, how could this have
6 happened. And, you know, after the -- it's not always
7 immediately obvious, but, you know, with some thought we
8 can come to these conclusions with confidence.

9 Q Turning now to State's 485, is this is just another
10 perspective?

11 A Yes. So, this is the same entry. This is -- it's
12 formed by a single piece -- a single piece of ammunition
13 here that went through the top of the left shoulder toward
14 -- up, all right, and then went into the left side of his
15 face and neck. And some of these pellets also damaged --
16 did a lot of damage in the neck because they kind of splay
17 out as they go further. And it went -- some of that went
18 actually through his airway and other structures of the
19 neck, as well as continuing through the base of the skull
20 and propelling the majority of the brain out the right side
21 of the back of the head.

22 Q All right, and now going to the -- sort of the end of
23 that particular wound, tell us what this image is
24 referencing.

25 A So, you know, you can kind of see. It looks like this

1 piece of his head. We're not really seeing the entire
2 thing because his forehead is basically still intact. But
3 you can appreciate at this point that, you know, the
4 contours of his skull are disrupted, and that's because
5 there's a defect at the top of the skull but not involving
6 the forehead, so it's kind of in the back. So, we know it
7 is going -- it started at the shoulder, it's exited the
8 back, so his head may have been like that facing toward the
9 left.

10 MR. WATERS: For the record that was State's 486.

11 Q And then finally, State's 487.

12 A Okay. Now this is a so this is --

13 Q And again, it's hard for me to see what I'm doing,
14 but --

15 A That's okay. Yeah. So, this is actually a photograph
16 of the right side of -- this is his -- the face area.

17 Okay, and I know that because I'm usually -- when I take a
18 photograph of the number, I usually have it, like, right
19 side up. Okay? So this is the top of his head and --

20 Q Dr. Riemer, I apologize.

21 A No. Yeah.

22 Q Let me do it like that.

23 A Yeah, that's better --

24 Q It might be a little bit better.

25 A -- right. So, now you can sort of see. This is the

1 right side of his head, and it's horrible, I know, and
2 there's a big defect there and we can see the inside of the
3 skull. And, like, you know, the face was spared, so --

4 Q All right. Dr. Riemer, if you would -- I'm sorry.

5 (Break in proceedings.)

6 THE COURT: Ladies and gentlemen, I'll have you go to
7 the jury room for a few moments. Please do not discuss the
8 case.

9 (The jury left the courtroom.)

10 THE COURT: We'll take a few minutes break.

11 MR. WATERS: Thank you, Your Honor.

12 (A break was taken.)

13 THE COURT: You may bring the jury.

14 (The jury returned to the courtroom.)

15 THE BAILIFF: The jury is present, sir.

16 THE COURT: Thank you.

17 You may proceed.

18 MR. WATERS: Yes, sir, Your Honor. May it please the
19 Court?

20 THE COURT: Yes.

21 CONTINUED DIRECT EXAMINATION

22 BY MR. WATERS:

23 Q Dr. Riemer, before we took a break, we were obviously
24 discussing the very catastrophic injuries from that second
25 shotgun wound to Paul, and that would have been immediately

1 fatal. Is that correct?

2 A Yes.

3 Q Let me ask you this very quickly. Do you see any
4 evidence of any defensive wounds on Paul?

5 A No, I did not.

6 Q And can you describe quickly what a defensive wound
7 is, and then explain why you see none in this particular
8 instance for this?

9 A Yes. So, a defensive wound is -- you know, sometimes
10 somebody might sustain injuries that suggest that they had
11 their hands or arms up while trying to defend themselves
12 from the -- from what is about to happen. And I don't see
13 anything on his hands that would indicate, you know, he had
14 his hands up to his face in anticipation of the injury that
15 was about to happen, so --

16 Q And in your expert opinion, and as you described it to
17 the jury, before his arm was down for that first shot,
18 right?

19 A Yes. So, that first shot his arm was down, and I
20 don't see any evidence of injury to his hands from the
21 second wound.

22 Q And then that abrasion on his face is consistent with
23 that second shot and then just having a terminal collapse?

24 A Right. So, falling to the ground, hitting his -- the
25 right side of his face on the ground with a little bit of

1 forward movement, so we've got that kind of linearity. And
2 that would be consistent with collapsing to the ground
3 after -- it's very frequently, you know, after sustaining
4 any kinds of disabling injuries, if they're standing up
5 they're going to fall. Just gravity. And so he fell, and
6 he was face down at the time, so he had a scrape on the
7 cheek, which is the surface of his body that impacted the
8 ground.

9 Q What were the toxicology results on Paul, if any,
10 or --

11 A Yeah. So --

12 Q -- anything that he might have had in his system? Go
13 ahead.

14 A Oh, yes. So, every person that has an autopsy at MUSC
15 and -- everybody gets a full toxicology testing done. And
16 MUSC does not actually perform toxicology, but
17 toxicology -- we send to a toxicology lab that tests for
18 any possible substances that may be in the blood. And the
19 only thing he had in the blood at the time of his death was
20 caffeine.

21 Q No alcohol or drugs.

22 A No alcohol or drugs, was negative.

23 Q Were you able to reach any conclusion about the order
24 in which Paul suffered these shotgun blasts?

25 A Well, in my opinion, based on my education and

1 experience, the first shotgun wound, the initial shot was
2 to the chest, following which he remained standing and
3 sustained the other gunshot wound to the top of the left
4 shoulder and head.

5 If the -- if we think about, well, is it possible that
6 the other wound was first, it just kind of defies logic,
7 right? So, if he got that one first on the left shoulder
8 and through his head, we know that one sent him to the
9 ground. So, he fell to the ground, hit the right side of
10 the face. How is he possibly going to get that one to the
11 front of the chest? So, it's just hard to imagine the
12 scenario in which the shotgun wound to the head was first.

13 Q Let's move now, if we can, to Maggie Murdaugh. And
14 you did her autopsy as well, as you described to this jury.
15 Is that correct?

16 A Yes, I did.

17 Q All right, and how many gunshot wounds, just very
18 quickly, did you observe on Maggie?

19 A So, she sustained a total of five gunshot wounds from
20 a minimum of four shots, so it could have been from four
21 shots with five wounds, or five separate shots, and I will
22 explain once we do that.

23 Q All right, and I have what's been marked as State's
24 501. And, again, this is another diagram that would assist
25 you in explaining these injuries to the jury?

1 A Yes. So, this is the female, the woman diagram, and
2 so -- and this is what I used to take notes while I perform
3 the autopsy.

4 Q All right. If you would step down, please, and walk
5 over here, and we'll do the same procedure with Maggie.
6 Start out by writing her name at the top, and then put the
7 left and right on there, too, to aid us in understanding.

8 A Okay.

9 Q All right. Let me do this just very quickly, I
10 apologize. Going back to State's 500, and this is Paul.
11 Is that correct?

12 A Yes.

13 Q And you had an arrow right here kind of showing the
14 direction of shot number one. Is that right?

15 A Yes.

16 Q Can you do an arrow for shot number two, please?

17 A (Witness complies.)

18 MR. WATERS: And, Your Honor, at this time I would
19 move State's 500 into evidence for demonstrative purposes.
20 Or move it into evidence.

21 MR. HARPOOTLIAN: Is he going to just use it for
22 demonstrative purposes, or is he moving it into evidence?

23 MR. WATERS: I'll move it into evidence, Your Honor.

24 MR. HARPOOTLIAN: No objection.

25 THE COURT: It's admitted without objection.

1 (DIAGRAM MARKED AS STATE'S EXHIBIT NUMBER 500 WAS
2 RECEIVED INTO EVIDENCE.)

3 Q All right, going back to 501, this would be Maggie.
4 Is that correct?

5 A Yes.

6 Q All right. If you could, start to detail the injuries
7 that you observed to Maggie in -- and what is the most
8 probable order based on your review of the evidence.

9 A Okay. Well, first of all this was a different weapon.
10 It's not a shotgun with wadding and pellets. These
11 injuries that Maggie sustained were consistent with an
12 assault rifle, which is a different weapon. And I'm going
13 to go through the five wounds, and then we'll think
14 about -- or I'll try to explain my opinion as to the likely
15 order sort of like we figured out Paul's shotgun wound to
16 the chest came first. I will do the same with her. But
17 she's got a few more wounds so it can be a little bit
18 more -- require a little bit more logical thinking.

19 Okay. So, she had an entrance wound that was right
20 over there. Okay? Kind of right below the rib cage, not
21 far from the middle of her -- midline of her body. And
22 that wound -- okay. Now, we can remember, you know, this
23 is right and left. It's very easy to get the right/left
24 situation confused, but that's going from front to back and
25 downward, and there was an exit wound kind of like that.

1 Okay. So, it entered here. Okay? So we're in a kind of
2 downward direction. It was actually 10 inches below where
3 it entered, so it's pretty low, you know. Down here was
4 the exit wound. And on the way that projectile, that
5 bullet, went through the abdominal wall. That's like a
6 muscle in the back, and then once it got inside the body it
7 went through mesentery, which is the supportive tissues of
8 our intestines. So, it went through mesentery. It has all
9 the blood vessels and fat, has all that that supports or
10 intestines. The intestines take up a lot of food in there.
11 Now, it's continuing to go toward the back of her body, and
12 through the pancreas, okay, which is kind of toward the
13 back. And then as it's traveling left, it went through the
14 left kidney and left iliac artery, which is a blood vessel
15 that is -- leads off the aorta before exiting the left side
16 of the back.

17 Q All right, and let's go ahead -- can we do the second
18 wound, and then we'll talk about both of those together in
19 a second, if we could.

20 A Okay. So, we've got two that are basically completely
21 to the front of the body, directly to the front. And the
22 other, there's another wound that is kind of on the front
23 inside of the left thigh, like kind of like over there.
24 Okay? And this one is also going from front to back, and
25 toward the left, and downward. So, they -- these two shots

1 follow parallel paths. They're both such -- this is the
2 left, okay, left leg, right? Left thigh. And the exit
3 wound was in the back of the left thigh. And it's -- it
4 actually -- this is a little bit too high. That actually,
5 you know -- but it was lower --

6 Q Put a X through the wrong one.

7 A I'm sorry.

8 Q All right.

9 A Yeah. So, it's traveling in a downward direction, and
10 also we've got kind of a slight right to left. So, I'm
11 going to draw an arrow to indicate the direction. Okay?
12 So, that one is going like that, and then this one is also
13 going in the same direction, downward toward the back.

14 Q And those you said follow kind of a parallel
15 trajectory.

16 A Yes. They had a relatively parallel trajectory.
17 Another feature of each of these wounds is that -- remember
18 we talked about gunpowder stippling when somebody is shot
19 at a relatively close range. Well, both of these wounds
20 had gunpowder stippling around them. Okay?

21 Q And re -- go ahead. And remind the jury what
22 stippling indicates about probable distance from a firearm.

23 A Yes. So, within 3 feet. We don't usually see it any
24 more than 3 feet. Sometimes it's within 2 feet, but
25 depending on the firearm -- I can't say exactly. But it's

1 somewhere in that range.

2 Q So, fairly close range are parallel trajectories for
3 these two wounds.

4 A Right.

5 Q Is that correct?

6 A Yes.

7 Q All right.

8 A And they both exited the left side of the body. One
9 was on the -- this is her left. Like, it's really easy to
10 get turned around here. Okay? Left, left thigh. Again,
11 that's on the left side of the lower back. And the one to
12 the left leg actually just went through. It went through
13 the muscle and soft tissue. It didn't actually break a
14 bone.

15 Q All right. If those two wounds -- let's go ahead and
16 do all of the wounds. Can we go to the next wound that we
17 have? And before we do that, was there a wound to the
18 wrist in this particular instance?

19 A Yes. There was a wound to the wrist, and it was on
20 the left wrist. The entrance wound was somewhere around
21 here. And -- okay. So, this is her left rib, and then the
22 exit wound was a little bit higher on the inside of the
23 arm. So, this is the -- kind of the hairy part, this part
24 of the inside of your -- it was an exit wound.

25 Q And using my left hand, can you kind of point

1 generally to the jury about the location of those?

2 A Yeah. So, kind of going in here and out there.

3 Q All right. So, that's three gunshot injuries at this
4 point. Is that correct?

5 A That's correct.

6 Q All right. Now, tell me about the fourth one, if you
7 would, please.

8 A Okay. So, the fourth one is somewhat unusual because
9 it's going in an upward direction through the body. Okay?
10 There was an entrance wound on the underside of the left
11 breast that exited, like, the top of the left breast.
12 Okay? And from there we have some marks on it like
13 bruising on the left side of the chest up here, left
14 clavicle, and that bullet continued through the underside
15 of the left side of the face. Okay? So, there's a wound
16 kind of like over there. Okay? And everything is kind of
17 going up.

18 So, this was an exit, and then we have, like, a
19 re-entrance, okay? So, we have a series of defects. We
20 have -- this is an entrance, an exit, and then the bullet
21 continued through the left side of the face and lower ear
22 area and into her head. Okay. Now, in addition to that --

23 Q And just real quick. Those first two wounds that you
24 described, the wounds to the abdomen and the wound to the
25 leg -- and those were both to the front of the body. Is

1 that correct?

2 A Correct.

3 Q And they both had a similar parallel trajectory. Is
4 that correct?

5 A Yes.

6 Q Could those -- either one of those wounds been
7 immediately fatal?

8 A No.

9 Q All right. The wound you just described -- how about
10 the wound to the wrist? Would that have been immediately
11 fatal?

12 A No.

13 Q What about the wound that you just described that went
14 in near the breast and then went into the head?

15 A Yes. That would have been immediately fatal because
16 when it entered the left side of the face, it basically
17 destroyed the brain.

18 Q And was there another gunshot injury, traumatic
19 gunshot injury aside from that one?

20 A Yes. But I'm going to -- before I continue, I did
21 want to mention that there was, like, scratch -- an
22 abrasion, kind of a scrape below that, below her left
23 breast. So, it indicates before it actually went through
24 the left breast. It kind of scraped along the abdomen as
25 it was going upward before it went into her head.

1 Q On the injury -- the gunshot wound, the rifle --
2 assault rifle wound to the abdomen and the assault rifle
3 wound to the legs, you said there was stippling there. Is
4 that correct?

5 A Yes.

6 Q Did you --

7 A The other wounds did not have any stippling.

8 Q So they --

9 A They were from further back.

10 Q The wrist wound had no stippling?

11 A Yes.

12 Q And that wound that you just described going up into
13 Maggie's head, that did not have any stippling either.

14 A Correct.

15 Q You mentioned there was one more as well to her head.
16 Is that correct?

17 A Yes.

18 Q All right. Describe that to the jury using this
19 chart, please, or this diagram.

20 A Okay. So, there was an entrance wound to the back of
21 the head, okay, that was kind of going right over there,
22 okay, and kind of near the base of her skull, and that was
23 going downward. Okay. Now, this is -- this is an
24 automatic rifle, you know. It's a rifle. So, it's a kind
25 of single, you know, cylindrical projectile that remains

1 intact. With these rifles, the projectiles fragment as
2 they go through the body. That's one of the mechanisms by
3 which they do, you know, enormous damage.

4 Okay. Now, this wound was going in a downward
5 direction, and then you have lots of exit wounds on the
6 right side of her upper back where all of those fragmented
7 projectile fragments exited. And this wound, it's in a
8 clearly downward direction. It was -- it entered the back
9 of her head, went through the back of the skull, and
10 through the brain stem, and so the -- so this is -- these
11 are vital portions of the very bottom of the brain. But it
12 did not enter into her chest. It continued just scraping
13 along the top of that. So, we know this is going downward.

14 So, how do we reconcile? How do we make sense of a
15 wound that's going upward and then another wound that's
16 going downward? Okay. You'll recall, this wound that went
17 through her left breast and into the left side of her face
18 injured her brain, right? She's not going to be standing
19 anymore. Now, how would this even go upward, okay? The --
20 those first two shots, right -- the one to her -- say the
21 one to the right side of her abdomen, that went, remember,
22 through her pancreas and the left kidney. Kidney pain is
23 some very -- it's usually very painful. We can imagine
24 this did not immediately cause death, but she may have been
25 bent over, bent over straight, and that puts her in a

1 position, if someone is bending over, leaning over, to get
2 a gunshot wound that goes along. So, when we look at the
3 body in an upright position and she's got a gunshot wound
4 going upward, we know it's going upward because it ended in
5 her head, probably her body was bent over, and it may have
6 been that she just sustained this very painful wound to her
7 abdomen, in addition to her thigh, and she was most likely,
8 in my opinion, bent over, or even possibly on the ground,
9 but not completely lying flat, you know, at the time,
10 because then it would never have been able to go through
11 the front -- the -- you know, have to, like, skip the areas
12 here. So, if she's bent over, we have some skin fold.
13 We're going to get a skip. Plus it went through the
14 underside of left breast, exited the top of the left
15 breast, so that would indicate that her breast may have
16 been sort of, you know, like, pointed downward.

17 Q So, do you have that dowel stick anywhere? And let's,
18 if you would, again, use me, and if you could just describe
19 some of the concepts you're talking about. And let's start
20 with those first two shots to the abdomen, and then just
21 kind of position me as we move on to the shots from there.

22 A All right. So, one wound --

23 Q Stand over here, if you would, so the jury can see.

24 A Absolutely.

25 Q Okay.

1 A Well, now I have to kind of -- I will have to -- yeah,
2 I can't show this -- yeah. The entrance would be about
3 there at the top of the abdomen, and it went through the
4 body exiting on the left side of the lower back. And while
5 it was in the body, it went through the pancreas and the
6 left kidney and the blood vessel nearby.

7 Q All right, and the wound to the thigh?

8 A Okay. The thigh was kind of on the front, but a
9 little bit toward the inside area, and that exited going
10 down on the left thigh in the back of the leg.

11 Q And the one to the abdomen, would that have been very
12 painful?

13 A Yes. I mean, you know, kidney -- if you ever knew
14 anybody who had a kidney stone, kidney stones are some of
15 the worst pain. And I understand people who are getting
16 kidney stones are on very high doses of morphine just to
17 control the pain. Well, she had a -- you know,
18 projectiles, ammunition going through her left kidney. You
19 can imagine that was a very painful wound and may have
20 caused her to, like, fold over in pain.

21 Q So, something like this?

22 A Yes.

23 Q All right, and could it even have been that she went
24 to the ground, and she's on her hands and knees, something
25 like this?

1 A Yes, that's also possible. And she could have had her
2 head bent down, like, sort of touching the ground at that
3 point as well.

4 Q This shot, this one right here that you described
5 right there, is there any way at that point in time she
6 could have been completely prone, flat on the ground like
7 this?

8 A No, because then how -- the bullet is going to go up.
9 So, she has to at least have been -- can't say for sure,
10 but it makes sense that after receiving those first two
11 shots, she's going to be bent over at least -- or possibly,
12 you know, even lower to the ground, enabling her to get a
13 wound of --

14 Q Now, again, bent over like this.

15 A That's perfect. Okay. Going through the front of the
16 left side of the chest. And if your head is bent over even
17 further, you can imagine it's going to go into the head.
18 Okay, and so when, you know, I first look at this, I'm,
19 like, what? It takes a little -- but in retrospect, now
20 that I've made sense of this, it all comes together. So --

21 Q So far at this point in time, we've talked about the
22 abdomen and the thigh wound. In your opinion, are those
23 two shots the first two shots she suffered?

24 A Yes. I think she was standing upright at the time,
25 and then she only could have gotten the wound to the left

1 side of -- you know, to the left side of the front into her
2 head if she's horizontal but not completely on the ground,
3 and -- but after sustaining that wound, okay --

4 Q She could have been down on her hands and knees, too.

5 A Yeah. Could have been down on her hands and knees or
6 just bent over. Like it went into her brain, she's going
7 to fall to the ground completely, and that puts her in a
8 position to get the gunshot wound to the back of the head.
9 I can't really -- you know, you might not -- you're too far
10 away.

11 Q All right. I'm going to go over here, but show me
12 that last wound, if you would.

13 A Okay. So, the last wound was going in a downward
14 direction, entered here. It's kind of, you know, enough to
15 fracture the skull and go through the back of the brain
16 just like a brain stem, and then have just a bunch of exit
17 wounds there. So, that's, you know, that's actually in
18 kind of a downward direction. So, we've got something
19 going upward, we have something going downward, and it only
20 makes sense that the one to the left side of the front
21 occurred first because if she -- let's see, the one to the
22 back of the head was -- she basically was already -- had
23 injury to the brain sufficient to have killed her. The one
24 to the back of the head that went down was, you know, an
25 additional wound. But the one to the -- that went into the

1 left side of the brain was more than sufficient to have
2 killed her.

3 Q If she had not suffered this wound right here, the one
4 where she's hunched over or on her hands and knees, if she
5 had not suffered that one, would this one to the back of
6 head also been immediately fatal to her?

7 A Yes. Either one of them would have been immediately
8 fatal. That one went through the brain stem and sort --
9 that -- those sections of the brain, their whole job is to
10 keep us alive, to keep us breathing, and set the cardiac
11 rhythm. Without that, none of us would be here.

12 Q But in your opinion, abdomen and thigh is first. This
13 one that went through her breast into her head is after
14 that?

15 A Right.

16 Q And then this one is when she's prone on the ground to
17 the back of the head.

18 A Yes.

19 Q This is the last one.

20 A So, I do think -- this isn't something that I, you
21 know, immediately, like, realized. But after thinking
22 about it, how -- you know, just gunshot wounds to one
23 person, how do I make sense of this? And this is the most
24 likely logical sequence of shots that she sustained.

25 I also want to mention, remember we had this wound to

1 the -- so, we had four we know about, right? We've got
2 right side of the abdomen, left thigh, like, left -- you
3 know, the left side of the head in the front, you have
4 breast first, and then we have this last wound while she
5 was prone on the ground, okay, to the back of the head. We
6 also have this additional wound to the left wrist that
7 exited a little bit higher. Now, is it possible that her
8 arm was just somewhere and got shot? Yes. But remember,
9 I -- we know that she must have been in a lot of pain in
10 her abdomen, from that shot that went through the abdomen,
11 and if she's bent over, where would her arm and hand likely
12 be? You know, it makes sense she was likely bent over with
13 her hand right there, and so if her hand -- if her hand is
14 bent, she's got her hand on her belly, the wound entering
15 the left wrist could exit there before actually going up.
16 So, she's got her hand on her belly. I don't know if
17 that's actually happened, but that's why I described five
18 individual gunshot wounds, but it could -- it could
19 cause -- the left wrist could have moved. It could have
20 happened before another one.

21 Q And what you just described there with her wrist kind
22 of close to her stomach after suffering that abdominal and
23 thigh wound, that is consistent with the evidence what you
24 just described, is that correct, that having her hand right
25 there --

1 A Yeah.

2 Q -- like next to the ground?

3 A That -- it would be consistent. I can't say
4 100 percent that that's how it happened. But, you know,
5 that is a gunshot wound to the left wrist, and it may have
6 been sustained while she had her hand on her abdomen
7 possibly.

8 Q All right. Give me one second.

9 (Break in proceedings.)

10 Q All right, Dr. Riemer, I'm going to show you some
11 images. If you could, just stand back that way just so we
12 can, again, try to protect these as much as we can. These,
13 again, are very graphic. Is that correct?

14 A Yes.

15 Q I'm going to show you, if we could, and I'm going to
16 kind of give them to you this way: State's 488, 489, 490,
17 491, 492, 493, 495, 498, and 499. And do you generally
18 recognize those images?

19 A Yes.

20 Q All right, and are those autopsy photos you took of
21 Maggie Murdaugh?

22 A Yes. These are photographs that I took of Maggie
23 Murdaugh's wounds.

24 Q All right, and would those assist you in explaining
25 these injuries to the jury?

1 A Yes.

2 MR. WATERS: All right, Your Honor, at this time I
3 would move into evidence State's 488, 489, 490, 491, 492,
4 493, 495, 498, and 499.

5 MR. HARPOOTLIAN: No objection, Your Honor.

6 MR. WATERS: They're admitted.

7 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 488 WAS
8 RECEIVED INTO EVIDENCE.)

9 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 489 WAS
10 RECEIVED INTO EVIDENCE.)

11 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 490 WAS
12 RECEIVED INTO EVIDENCE.)

13 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 491 WAS
14 RECEIVED INTO EVIDENCE.)

15 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 492 WAS
16 RECEIVED INTO EVIDENCE.)

17 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 493 WAS
18 RECEIVED INTO EVIDENCE.)

19 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 495 WAS
20 RECEIVED INTO EVIDENCE.)

21 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 498 WAS
22 RECEIVED INTO EVIDENCE.)

23 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 499 WAS
24 RECEIVED INTO EVIDENCE.)

25 Q All right. Dr. Riemer, if you could grab a dowel

1 stick and come on down here, and we'll try to move through
2 those as expeditiously as I can. Starting with 488. If
3 you could tell the jury --

4 A I'm just going to move this because I can't see.

5 THE COURT: Just a moment.

6 MR. HARPOOTLIAN: These folks can't see.

7 Q If you can stand on this side real quick so that --

8 A Yeah. Okay. That's good. All right. So, this is a
9 photo of her left thigh, and this is the knee area. And we
10 can see this is kind of on the inside area of the front of
11 the left thigh, and we do have the stippling around it,
12 which tells us it was shot within a relatively close range.

13 Q Okay, and we have the stippling, as you described.

14 Moving onto State's 489, what is this right here?

15 A All right. So, we can kind of appreciate, this is,
16 like, the curve of her knees. This is the back of the left
17 thigh where we have an exit wound.

18 Q All right. Going on now to State's 490, what is this?

19 A Okay. So, this is the entrance wound on the right
20 side of the front of the abdomen below the rib cage close
21 to the midline, and we do have stippling here. It's a
22 little sparser and a little further this way. So, that was
23 also close enough, within 3 or so feet, to deposit the
24 stippling probably a little further back than the one to
25 the left thigh because there's a closer -- there's more

1 tightness of the stippling on the thigh. So, if you think
2 of it as kind of going outward, it covers a wider area and
3 it's more sparse on the right side of the abdomen.

4 Q All right. Going down to the next one, what is this
5 right here?

6 A Okay. So, this is the exit wound to the left side of
7 the lower back.

8 Q Just very quickly, you mentioned that there's
9 stippling on both the abdomen and the thigh, but there is a
10 little bit of difference in distance between the two. Is
11 that correct?

12 A Yes, a small amount. You know, there is stippling on
13 both, but the wound to the thigh is a more tighter, more
14 closely packed bunch of stippling and doesn't appear as
15 further away from the actual defect. So, that is a little
16 bit closer than to -- the barrel of the gun was a little
17 closer to her body than the one to the right side of the
18 abdomen, but both of them were aimed within 3 feet.

19 Q All right, and those were the only two wounds that you
20 observed with stippling of the ones that you described. Is
21 that correct?

22 A Yes.

23 Q All right. Going on now to this next, 492, tell us
24 what this is, if you would, please.

25 A Okay. So, this is a wound to the left wrist. And we

1 can see this is her left thumb, so it's kind of right over
2 there. And it's going through the left wrist, exiting on
3 the soft side of her left forearm.

4 Q All right, and moving now to 493, what does that
5 reflect?

6 A Yes. So, there it is, that's the exit wound. So, she
7 had the entrance wound to the -- this -- the part of her
8 wrist near her thumb, and it's going through the left
9 forearm area exiting at an angle, right? That we know it's
10 kind of exiting as an angle because this is a -- this
11 defect is agonal, right? If it's going straight across, we
12 would just have a hole -- a hole, right? But if something
13 is exiting at an angle, we have more of an agonal exit.

14 Q All right. Moving on to the next one. And, again,
15 this is graphic, but --

16 A Yeah. I'm sorry, but --

17 Q -- tell me what this is. And I'm going to move the
18 picture down as you describe it, please.

19 A Okay. So, this -- here is belly button just to give
20 you a reference point. And this is that entrance wound on
21 the right side of the abdomen. This is another injury that
22 kind of grazed, kind of abraded the left side of the
23 abdomen before going to her left breast.

24 Q All right, and then moving down --

25 A Yeah.

1 Q Is that stippling? I can't really see.

2 A Yeah. So, this is -- it's fine, okay? This is a very
3 large, destructive hole on the left side of her face,
4 including parts of her left ear. And this makes sense to
5 be a continuation of the one through the left breast. I
6 was confident that this was all the result of a single
7 bullet, single fired shot. And what we see over here is
8 basically the bruise from the -- it didn't actually go into
9 the left shoulder, but as it's coursing upward through the
10 breast before it kind of go -- and if she's bent over, then
11 it's going to bruise this clavicle area, right -- that's
12 the bone right here -- before going into the left side of
13 her lower face.

14 Q All right. Moving on. Now I'm going to go out of
15 order just a bit. I'm at 499. And can you explain --

16 A All right. I'm having trouble seeing this -- oh,
17 yeah. Okay. Yeah. So, at the time I did the autopsy, and
18 I have a wound to the left wrist and through the forearm,
19 and a wound that's going along the left side of the
20 abdomen. I can't be certain, I can't say with an absolute
21 certainty that her hand was up against her abdomen at the
22 time that the gunshot wound to her torso was going upward.
23 But if her hand was on her abdomen, which she may have had
24 there after getting shot through the abdomen and bending
25 over, this would be a perfect line through the -- like,

1 through the wrist, coming out the left forearm, and, like,
2 continuing in an upward direction before fatally entering
3 the left side of her head.

4 Q Is there an explanation for how the wrist and that
5 gunshot could have been related?

6 A Yes. So, I took a photo of the wrist and the scrape
7 along the left side of her abdomen together because it
8 occurred to me, based on my experience over decades, that
9 this may have represented a single inflicted shot. Maybe
10 it was -- maybe the one to the wrist was a separate shot.
11 And in my autopsy report I described it as separate because
12 unless I'm absolutely certain that it's from the same shot,
13 I'm going to describe them separately. But I'm able to
14 tell you -- so, we have four wounds to the body, and it
15 may -- you know, five wounds but -- if we count the left
16 wrist as separate. But if the left wrist was connected to
17 the other one -- to one of the others, then it's a --
18 there's only four shots to her.

19 Q And then finally State's 498.

20 A Okay. So, this is also a very oblique shot, and this
21 is the back of her head. And what I -- as a routine
22 matter, she has -- she had hair there, but I shaved -- it
23 wasn't apparent what kind of a wound she had back there.
24 There was blood, but I'll shave -- cut away the hair and --
25 to display the entrance wound. And you can see how long it

1 is. It's long. It's not just a hole going from back to
2 front. It's going in a downward direction like that. And
3 this ammunition breaks up into fragments, and we have,
4 like, these fragments basically coursing along the top of
5 her back going to the skin and going -- like fatty tissue
6 being in her upper back. So -- and this one, before it
7 actually hit the back, it went through the skull, the right
8 side of the back of her head, as well as the brain stem and
9 cerebrum.

10 Q All right. Thank you, Dr. Riemer. We're almost done.
11 If you could, have a seat real quick and we'll conclude the
12 examination.

13 MR. WATERS: Your Honor, also at this time I would
14 move into evidence State's 501, which is the diagram that
15 Dr. Riemer did of the injuries to Maggie.

16 THE COURT: What says the defense?

17 MR. HARPOOTLIAN: No objection.

18 THE COURT: They're admitted.

19 (DIAGRAM MARKED AS STATE'S EXHIBIT NUMBER 501 WAS
20 RECEIVED INTO EVIDENCE.)

21 Q Dr. Riemer, you mentioned that there was a slight
22 difference, or a difference in the stippling between the
23 abdominal and the thigh wound. And which one had -- seemed
24 to be a little bit farther away according to your review of
25 the evidence?

1 A Yes. The gunshot wound to the abdomen was slightly
2 further away than the gunshot wound to the left thigh.

3 Q And that could be consistent with Maggie and the
4 shooter changing their positions in relation to one
5 another.

6 A Yeah. Nobody -- people aren't completely just
7 standing still. They're -- it could be that the shooter
8 was moving closer toward her or moving a little bit back at
9 the -- or she could have been moving, or a combination of
10 the two. So, I don't know what happened there. But I do
11 know that the barrel of the gun was closer at the time it
12 struck her left thigh because the stippling is more tight
13 concentrically and doesn't cover as wide an area as the one
14 to the right side of the abdomen.

15 Q You described the injuries to the front, and then the
16 injury to the breast and to the head, and then this final
17 injury to the back of the head. Could that be consistent
18 with the shooter circling his victim?

19 A Yeah. I think that only makes sense if there's some
20 movement on the part of the shooter. We know one -- the
21 gunshot wound to the front of the body that's going up, if
22 Maggie was bent over either in air or on the ground, the
23 shot would have been fired from behind her, right? From
24 behind her. That's the only way it's going to go up and
25 through the base of the -- like the chin area into her

1 head, right? She's bent over. That's the way that it
2 logically makes sense. Nobody is sitting on the floor and
3 you couldn't do that. And after that shot was sustained,
4 the wound that went through the front side, the vertical
5 one, okay, it's vertical through her body, but most likely
6 occurred while she was bent over, or -- then that's going
7 to be an incapacitating shot because it went through her
8 brain and caused her to fall to the ground. She's bent
9 over, she gets a shot, she's going to fall face down. And
10 then the last shot to the back of her head is going in the
11 other direction, so that's going downward. So, we have one
12 going -- so, that only can occur if the wound to the left
13 side of the front is somebody shooting from behind her, and
14 then the gunshot wound to the top -- to the back of the
15 head is going downward while she's on the ground,
16 indicating somebody is standing at, like, you know, at the
17 top of her.

18 Q Was there a lot of blood accumulated in Maggie's
19 abdomen?

20 A Not that much. The thing about these wounds is
21 there's so much tissue destruction that blood is just
22 basically in all of the tissues. So, it's not like --
23 sometimes with like a -- even like a small caliber bullet,
24 you know, there's a single, clearly defined wound path, and
25 there's -- I can take out blood from the abdomen. But in

1 this case there was so much tissue destruction, there was a
2 lot of blood in the soft tissues, but not necessarily
3 something I can scoop out and measure.

4 Q Did the lack of a lot of blood in the abdomen tell you
5 about how rapidly it all occurred together?

6 A Yeah. So, if the wound stopped there to the abdomen
7 and somebody walked away, you know, she had -- she would
8 have had more bleeding out of those tissues in the
9 abdominal cavity.

10 Q Did both Maggie and Paul, did you make any
11 observations about their stomach contents?

12 A Yes. So part of the autopsy, I'm not just looking at
13 the wounds. I'm examining all of the internal organs, and
14 when I -- this is how I knew it went through the pancreas
15 and the kidney. Because, remember, I'm not just looking
16 outside of the body. I have to -- I do everything, look at
17 all of the internal organs and dissect each one. And it --
18 when examining the stomach it's -- I will document the
19 contents of the stomach, and they each had a lot of
20 recently digested food fragments. So, you know, there
21 was a -- they had a full stomach of food.

22 Q And were those stomach contents consistent with one
23 another?

24 A Yeah, they looked identical to each other. They were
25 kind of gray/tan, you know. I couldn't tell exactly what

1 it was, but it may have included meat. I didn't see any
2 corn or, you know, green beans or anything like that. But
3 whatever it was, they were identical to each other. And I
4 believe she had 600 MLs, which is, like, it's -- 450 MLs is
5 a pound, so it's like almost one and a half pounds of food.
6 And he had 500 MLs, which is a little bit more than a
7 pound. But they looked similar like they may have shared a
8 meal together.

9 Q You testified that there was no defensive wounds on
10 Paul. Did you observe any defensive wounds on Maggie?

11 A Nothing that would indicate any kind of a defensive
12 wound.

13 Q Did you observe any damage to her fingernails or
14 anything that indicated that she had been in a fight with
15 her attacker?

16 A No. That's also part of the autopsy. In addition to
17 collecting clippings from the fingernails, I look carefully
18 to see -- sometimes there's a fingernail broken, sometimes
19 there is obvious tissue or blood underneath fingernails.
20 And she didn't have any evidence of, you know, material
21 visually evident underneath her fingernails.

22 Q What about her toxicology? Did she have anything in
23 her system, any drugs or alcohol?

24 A She had caffeine only, the same as Paul. And no other
25 alcohol -- no alcohol or other drugs other than caffeine.

1 Q Dr. Riemer, in your professional expert opinion, what
2 was the cause of death to a reasonable degree of medical
3 certainty for Paul Murdaugh?

4 A For Paul Murdaugh, shotgun wounds -- let me see what
5 exactly I said. I said shotgun wounds to head and chest.
6 Shotgun wounds of head and chest.

7 Q And what was the manner of death?

8 A Manner of death is homicide, which means death at the
9 hands of another.

10 Q And, Dr. Riemer, in your expert opinion, what was, to
11 a reasonable degree of medical certainty, the cause of
12 death for Maggie Murdaugh?

13 A Maggie Murdaugh died of multiple gunshot wounds.

14 Q And what was the manner of death?

15 A Manner of death is homicide, death at the hands of
16 another.

17 Q Death at the hands of another. One final question.
18 Did you recover any fragments from Maggie Murdaugh during
19 your autopsy?

20 A Yes. So, this kind of ammunition breaks up into
21 fragments. That's how it's -- that's the nature of that
22 ammunition, and so I recovered multiple fragments of
23 projectiles.

24 Q And I'm going to show you what's been admitted into
25 evidence as State's 112. And do you recognize that?

1 A Yes. So, those are fragments I've recovered from
2 Maggie's autopsy.

3 MR. WATERS: Thank you, Dr. Riemer.

4 Nothing further, Your Honor.

5 THE COURT: Cross-examination?

6 MR. HARPOOTLIAN: Your Honor, I'm going to have an
7 extensive cross-examination. Do you want to begin that
8 tonight or the first thing in the morning?

9 THE COURT: If -- you want to begin it in the morning?

10 MR. HARPOOTLIAN: I think -- I mean, it's quarter til
11 6:00. It could go easily to 7:00, and I don't think the
12 jury at this point would like to stay here. I don't,
13 but --

14 THE COURT: All right. Ladies and gentlemen, we will
15 recess for the evening and start at 9:30 tomorrow morning.
16 Please do not discuss the case.

17 (The jury left the courtroom.)

18 THE COURT: And, Doctor, you may step down. Please do
19 not discuss your testimony with anyone.

20 As we --

21 If everyone will be seated.

22 As we anticipate other witnesses tomorrow, are there
23 any matters that the Court needs to consider overnight
24 regarding any matters of controversy, or any controversy,
25 or outstanding issues regarding any witness?

1 MR. HARPOOTLIAN: Not that we know, Your Honor, not on
2 the part of the defense.

3 MR. WATERS: Not on the part of the State. The new
4 information from GM we addressed this morning, and
5 obviously the defense has that, and both sides are
6 analyzing that, but I'm not -- aside from that, right now
7 I'm not aware of any specific issues the Court needs to
8 address.

9 MR. HARPOOTLIAN: The only query I will have, because
10 we're, again, trying to arrange for people to fly in, and
11 Monday is not going to be a court day, is does the Attorney
12 General have any prognostication on when he might finish
13 this case? I think that the GM material is somewhat -- I
14 just don't know how much.

15 MR. WATERS: Your Honor, we're still on target for
16 Wednesday. That GM material is just confirmatory of the
17 timeline that both sides have had, and it's being
18 incorporated into testimony. We have a custodian coming,
19 which I don't imagine will be an extensive witness. We're
20 still on target for Wednesday, Your Honor.

21 THE COURT: Okay. We'll be in recess until 9:30.

22 (Whereupon, the case was at ease.)

23 *TUESDAY, FEBRUARY 14, 2023*

24 (Court resumed at 9:40 a.m.)

25 THE COURT: Good morning.

1 (Members of the audience responded good morning.)

2 THE COURT: Do we have our witness, back? Doctor?

3 You may bring the jury.

4 (The jury returned to the courtroom.)

5 THE BAILIFF: The jury is present, sir.

6 THE COURT: Thank you.

7 Good morning.

8 (All jurors responded good morning.)

9 THE COURT: Day number seventeen.

10 Cross-examination.

11 MR. HARPOOTLIAN: Please the Court, Your Honor?

12 THE COURT: Yes.

13 The witness, ELLEN RIEMER, remained under oath

14 and continued testifying as follows:

15 CROSS-EXAMINATION

16 BY MR. HARPOOTLIAN:

17 Q Good morning, Dr. Riemer.

18 A Good morning.

19 Q Let me at the outset say we're going to be just about
20 -- yesterday as you went through direct, we saw some very
21 graphic images, and I apologize but we're going to have to
22 do that again today. You, of course -- this is what you
23 see every day, but I'm sure you understand how other people
24 may, especially people related to the deceased, might react
25 to that.

1 A Of course.

2 Q Now, let me also explain at the outset until I read
3 your autopsy report, I had never really considered the
4 mechanics of a shotgun or an AR15 or Blackout, impact on a
5 human body. So, I'm learning even as we speak, and I hope
6 I can learn some things today to help me understand your
7 opinions, and also help me understand what may have
8 happened or didn't happen. Okay? So, if I ask you
9 questions that seem simplistic, understand my understanding
10 of this process is somewhat basic. So, I'm going to try to
11 walk through this in a way I can glean what the evidence is
12 and what your conclusions are. Okay?

13 A Absolutely.

14 Q So, tolerate my somewhat sophomoric approach to this,
15 if you would. Okay?

16 A Of course. I'm sure you'll be fine.

17 Q So, let me understand. First of all, let's talk about
18 Maggie for just a minute. And were you shown photographs
19 of the back of her thigh that were taken at the scene?

20 A No --

21 Q The back of her calf, I'm sorry.

22 A I did not.

23 Q Okay. So, let me see if I can find these.

24 (Break in proceedings.)

25 Q It will take just a second; I thought I had them

1 laying right out here.

2 (Break in proceedings.)

3 MR. HARPOOTLIAN: Beg the Court's indulgence one
4 moment.

5 (Break in proceedings.)

6 Q Okay. I apologize, I thought I had everything sitting
7 right here. Apparently I may.

8 THE COURT: Mr. Harpootlian, if there is an item in
9 evidence, you don't have to show it to opposing counsel --

10 MR. HARPOOTLIAN: I apologize, Your Honor.

11 THE COURT: -- to continue with the witness.

12 MR. HARPOOTLIAN: This is not in evidence. I
13 apologize.

14 (Break in proceedings.)

15 MR. HARPOOTLIAN: Your Honor, I will offer into
16 evidence, Defendant's Exhibit 115.

17 THE COURT: Any objection?

18 MR. WATERS: No objection from the State, Your Honor.

19 THE COURT: It's admitted.

20 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 115 WAS
21 RECEIVED INTO EVIDENCE.)

22 MR. HARPOOTLIAN: And could I get that, please, on the
23 screen?

24 Q Have you seen that photograph before?

25 A No, I have not.

1 Q Okay, and in your -- I notice in your autopsy report
2 you remark that there is a bruise on the back of the leg in
3 that similar position, correct?

4 A I don't recall, and I --

5 Q Could you look, please? Thank you.

6 (Break in proceedings.)

7 A I don't in my report where I've -- where I remarked of
8 a bruise on, on the left leg.

9 Q Okay. So, was there a bruise on the right leg?

10 A I don't have any -- I didn't make any comment about
11 that in my report.

12 Q So, no one asked you to opine about any issue on the
13 back of her left calf?

14 A No, and I did not observe that at autopsy.

15 Q And by the time it got to autopsy, had her body been
16 washed or --

17 A No.

18 Q Okay, but if there were -- if this is mud, you
19 wouldn't necessarily expect to see it --

20 A It could have fallen off, correct.

21 Q Correct. So, you were not asked to opine about
22 whether this was a -- whether there was bruising on the
23 back of the left calf which would have been consistent with
24 somebody stepping on her calf?

25 A No. I was not asked about that.

1 Q Okay, and you were not shown this photo.

2 A Correct.

3 Q Okay, and just to deal with Maggie a little bit
4 further, you testified yesterday that the shots were
5 consistent, I think, with someone circling her?

6 A Well, I didn't actually use that term. I said that
7 the project -- she was shot from -- at one point from
8 behind her and then one point from above her. So, that
9 could mean that there was -- it could mean that she was
10 turning before she got the first one and then fell because
11 she could have also been moving. So --

12 Q Well -- so, we know that the shooter was moving
13 because some wounds have stippling, which would -- and
14 stippling had soot? Am I saying that correctly?

15 A Well, there was no soot, just --

16 Q Now, what would soot indicate?

17 A Soot is a contact wound. So, she had stippling, which
18 is not quite contact. It's further back.

19 Q 3 to 4 feet?

20 A Well, it usually -- usually we don't see it more than
21 3 feet away.

22 Q Okay.

23 A So, we -- it's somewhere within 3 feet.

24 Q Okay, and so she may have been turning. The shooter
25 may have been moving straight on. I mean, is that as good

1 an explanation for what you saw as somebody circling her,
2 correct?

3 A Yes. I mean, from the -- from my perspective, based
4 on the autopsy, that is a reasonable explanation.

5 Q Okay. So, the reasonable explanation is she's moving,
6 trying to perhaps avoid being shot, turning around, trying
7 to run, whatever, right?

8 A Well, she could be turning around after getting the
9 initial shots.

10 Q Right.

11 A And then the -- if the shooter was still stationary,
12 then we -- she could have gotten that one. So, it doesn't
13 imply that the -- she could have been moving, not just the
14 shooter.

15 Q Okay, and the ones without stippling was more than --
16 were -- the barrel of the gun would have been more than 4
17 feet away from her.

18 A Well, you know, it's very -- it's kind of a rough
19 estimate, but I would say, you know, it would be more than
20 3 feet, possibly more than that.

21 Q But that would not be -- that would be the barrel --
22 the end of the barrel of the gun.

23 A That's right, because that's where the gunpowder
24 starts coming out.

25 Q But that doesn't mean the shooter was 3 feet away.

1 A Absolutely not, just the barrel of the gun.

2 Q Right, and you testified about why there was a wound
3 that would appear to be parallel to her, and your
4 indication is the shot would have hit her kidney or
5 pancreas or whatever. She might have been bent over.

6 A No. The -- no. The injury to the pancreas and kidney
7 was on the right side of the abdomen --

8 Q Right.

9 A -- and that went from front to back and exited the
10 left back. The one that was kind along parallel to her
11 body was on the left side of the body going up.

12 Q So, why did you testify that one of the shots would
13 have been so painful she would have bent over? What was
14 that consistent with?

15 A Yeah. That was the one to the right side of the
16 abdomen. And the reason I believe this is probable -- or,
17 you know, quite likely that that would have caused her to
18 bend over -- is because a subsequent shot was going sort of
19 upward in the body. And it's hard to imagine, you know,
20 that wound going upward and then into the head unless she
21 was bent over. So, it's a possible explanation of how she
22 was in a position to actually get that gunshot wound.

23 Q So, she's bent over and it would go upward why?

24 A Because if somebody is standing behind her and there's
25 no close range here, but at least a few feet away --

1 Q So she got shot, then turned around, bends over, and
2 then you're saying --

3 A She could have turned around or not turned around,
4 or -- I don't know if she turned around or the shooter is
5 moving.

6 Q Okay. Did anybody ask you to look at the pattern of
7 ejected shells of the Blackout?

8 A I, I wasn't asked to look at those.

9 Q Okay. Okay. So, your conjecture opinion is based on
10 purely the wounds and trying to figure out how that
11 happened.

12 A Yes. So, I basically -- my -- I do the autopsy. I
13 have everything to do with the body, and at the time I
14 never heard anything about -- I composed my autopsy
15 reports --

16 Q Right.

17 A -- without any reference to the scene.

18 Q Okay. Okay. So, let me -- let me move along to Paul
19 for the moment. Okay? And you indicate that the first
20 shot would have been buckshot to the chest.

21 A I believe that that was most likely the first shot.

22 Q Well, because the second shot is -- basically executes
23 him at --

24 A Would have fallen to the ground.

25 Q Right, and clearly he's upright when that first shot

1 was made.

2 A Yes.

3 Q Okay, and it goes in his chest. And was he -- would
4 he have to be turned diagonally to the shooter for it to
5 come out his left armpit?

6 A No, not necessarily.

7 Q Well, if he's shot straight on --

8 A Yeah.

9 Q -- with that buckshot, and if that wasn't --

10 A Yeah.

11 Q -- a contact wound or --

12 A No, it's a close range.

13 Q Close range.

14 A Right.

15 Q Closer than 3 feet?

16 A Yes.

17 Q Okay. You can't estimate how far.

18 A I can't. You would have to test fire the weapon.

19 Q Okay. So the chest shot, if it's straight on,
20 wouldn't it just go right through his lungs and his heart?

21 A Yes.

22 Q Okay.

23 A So, this was shot at an angle across. So, that might
24 indicate that his body was positioned perpendicular to the
25 shooter. Now, the shooter could also shoot from the side,

1 doesn't necessarily shoot from the front. So, we can't be
2 100 percent sure about these things.

3 Q So, if I -- if you're the shooter --

4 A Yes.

5 Q -- and I'm Paul and you shoot me with that buckshot,
6 if I'm faced to the side, would the results be consistent
7 with your autopsy examination?

8 A Yes.

9 Q Okay, and we know that some of those pellets -- you
10 think his arm was down by his side.

11 A I feel confident about that.

12 Q Okay, and the reason for that is there's pellet holes
13 in his arm, right?

14 A No, that's not the reason. The reason is because
15 there is bruising around the exit wounds that are kind of
16 shored exits, and then we have corresponding bruising on
17 the underside of the arm. So, it indicates that they were
18 in close proximity at the time the pellets exited and then
19 reentered because if there was a distance, we wouldn't have
20 the bruising around those wounds.

21 Q Okay, and do the pellets go through his arm?

22 A Yeah. There are pellets that exit through the arm
23 and --

24 Q Okay, and so there's little pellet holes --

25 A Correct.

1 Q -- on his arm exiting.

2 A Yes.

3 Q Can you -- did you see a corresponding entrance wound
4 with the pellets?

5 A Yes. The entrance pellet wounds were on the inside of
6 the arm.

7 Q Right, and then they go out, and I think they struck
8 things after that as far as you know.

9 A I don't know what happened to them after they left the
10 body.

11 Q So, either the shooter is to his right --

12 A Yes.

13 Q -- shooting across.

14 A Yes.

15 Q Okay, and you think he was -- that shooter would have
16 been closer than 3 feet but you can't say how close.

17 A Right. Right. He could have been to his right, or
18 Paul may have turned his body in that perpendicular manner,
19 so yes.

20 Q But either way, there would have been almost immediate
21 bleeding -- well, not a fatal wound, but there would have
22 been immediate bleeding from that wound, correct?

23 A There would have been bleeding. It's hard to say how
24 much, but certainly I would expect some bleeding.

25 Q But if there were footprints found halfway into that

1 feed room and those are Paul's footprints, would that
2 indicate to you that he had stepped in his own blood?

3 A Oh, that's certainly possible.

4 Q Okay. Not inconsistent with what you have.

5 A Correct.

6 Q And that second shot would have come -- I mean, as I
7 understand it --

8 MR. HARPOOTLIAN: Mr. Barber, will you take your coat
9 off and come here, please? I hate to do this to him, but I
10 can't really do it to myself.

11 Q So, if you would step down here.

12 MR. HARPOOTLIAN: With permission, Your Honor, may she
13 step down?

14 THE COURT: Yes.

15 Q Okay, and what I would like to have you do is, and you
16 need to not block these folks over here, or that gentleman
17 right there.

18 A You want me to stand back here?

19 Q That would be good. And he's fine, they're fine.
20 Well, unless I get in the way. Let me see if I can avoid
21 not falling over. Okay. So, we've already talked about
22 this wound, this wound, which goes in right about here.
23 Show the jury where the wound went in.

24 A Yeah. It was, like, between the sternum and the
25 left -- over there. So, it went in right over there.

1 Q Right over there. And Mr. Barber is a little taller.
2 He was, I think, 5 --

3 A Yeah. I measured his height. I don't recall.

4 Q We'll talk about that in a minute, but I believe
5 Mr. Barber is a little bit taller than he was. But we need
6 to know that because I'm going to ask you to sort of chart
7 things down. So, the entrance wound is here, and it's
8 consistent with him being -- all right, Mr. Barber, turn
9 just a little bit that way. So, the shot would have gone
10 like this?

11 A Yes. That's approximately correct, and it has a
12 slightly front to back.

13 Q Slightly front to back. About --

14 A Yeah. Mostly it's right to left. It's right to left.

15 MR. HARPOOTLIAN: How about raise your left arm for
16 me, please.

17 Q And his arm was not raised, but I want to point out it
18 comes out -- we're going to see some pictures in a minute.
19 Okay.

20 MR. HARPOOTLIAN: Turn a little bit this way.

21 Q So, it would come out right under the arm?

22 A Yes. We do have the exit pellet wound in his neck.

23 Q And we also have wadding, do we not?

24 A Yeah. We have wadding stuck in the underside of his
25 neck.

1 Q Okay, and then it goes through his arm.

2 A Yes.

3 Q Still coming front to back.

4 A Well, it's, it's left to front, but there's a slight
5 front to back because we don't have -- we have some exit
6 wounds on the back.

7 Q Okay. So, if I told you this is a narrow wound -- and
8 have you seen any crime scene photos?

9 A From here? No.

10 Q From --

11 A Oh, yeah, from this case. Crime scene photos in my
12 career? Yes.

13 Q In this case.

14 A I really didn't -- I may have been shown a very small
15 photo, like a couple of these ahead of trial, but I didn't
16 have any -- form any opinions based on that.

17 Q If I told you that small room, the gap between stacks
18 of dog feed here and the wall, and that little thing over
19 here, it may be 3 to 4 feet. And this buckshot goes
20 through the back window on this very narrow, very small, so
21 that would be consistent with what you're saying. Some of
22 the buckshot comes through -- and that was buckshot that he
23 was shot with in the chest.

24 A Yes. It was shot. I don't know the exact size.

25 Buckshot is usually bigger, but again --

1 Q Okay. Assume I'm not misleading you.

2 A Yeah.

3 Q Okay?

4 A Right. It was some shot.

5 Q Buckshot goes through and hits the back window.

6 A Uh-huh.

7 Q It actually leaves holes in the window and gets in the
8 door -- the window frame goes out and one of them embeds in
9 a tree back behind him.

10 A Uh-huh.

11 Q So, that is consistent with your findings, correct?

12 A Yes.

13 Q That first shot. I'm sort of intrigued. Is there
14 anything about the exterior of this shot -- what's
15 beveling? Do you know what a bevel is, beveling?

16 A Yes, of course. Beveling is a pattern of defect to a
17 bone. So, when there is a gunshot wound that, for
18 instance, goes through -- let's say we get an entrance
19 wound over here and an exit wound over here, we're talking
20 about hand bone being shattered.

21 Q Right.

22 A The way with -- when there is a basically a hole in
23 one side of the skull, I can tell which is an entrance and
24 which is an exit even without looking at the skin. Okay?
25 So, for instance, if I get skeletonized remains with a hole

1 through the head, I can see which is the entrance and which
2 is the exit because the bone bevels in a characteristic way
3 depending on the direction of the bullet.

4 Q What is a bevel?

5 A Yeah. Bevel is like a -- an angled chipping away of a
6 hard surface.

7 Q So if a bullet goes through and -- I guess the head is
8 a good solid bone, right?

9 A Well, it's like a solid bone, right.

10 Q So, you can tell -- this is the entrance because, I
11 mean, this is like --

12 A It's -- the entrance -- the outer table of the skull,
13 it's a smaller hole. On the inner table of the skull it's
14 a bigger hole. So, the bullet is beveling out -- outward
15 as the bullet goes in.

16 Q So, it would bevel in on the entrance and bevel out on
17 the exit?

18 A Yeah. Well, bevel in meaning -- sometimes people
19 don't always use these words consistently, even forensic
20 pathologists. But there is a inward beveling. That means
21 it's kind of beveled outward. So --

22 Q Beveled outward inside, inside would seem that
23 something that would indicate --

24 A Wider.

25 Q -- wider --

1 A Yes. It's wider on the inner table of the skull than
2 the outer table.

3 Q And when it exits, do you have a, a narrower bevel, if
4 you will, or defect on the inside than on the outside?

5 A Yes.

6 Q That was a lot. Okay. So, was there -- since this
7 didn't enter bone, is there beveling of the flesh?

8 A No. It doesn't bevel because there's too much
9 elasticity, and it's just shredding. Frequently you can't
10 see beveling on long bones either. The skull is kind of a
11 flat bone, so it has that characteristic.

12 Q Okay, and the second shot, as I understand it, you
13 indicate is -- well, first of all, assume that he is -- so,
14 maybe we should forget about the feed room for just a
15 minute. Okay? So, show the jury, please, where the
16 initial -- there is a shot being shot with a shotgun.

17 A Yes.

18 Q And it is more than -- there's no stippling or soot or
19 anything that would indicate it was a close shot, correct?

20 A Correct.

21 Q So, more than 3 or 4 feet away.

22 A More than 3, yeah.

23 Q More than 3. And where is the initial shot? Where
24 does it hit?

25 A On the top of the left shoulder.

1 Q When you say the top --

2 A The apex.

3 Q Okay. Are there pellets in here?

4 A Yes.

5 Q In the apex.

6 A Yes.

7 Q I'm going to show you an x-ray in just a minute and
8 have you demonstrate on Mr. Barber where that hit. And it
9 was shot in here?

10 A Yes.

11 Q And you indicated you thought his chin was bent a
12 little bit?

13 A Yeah. This is something that I believe -- not
14 necessarily have to be bent, but I do think it was at least
15 tilted in this direction, the reason being this a
16 horizontal direction, and then goes through his cheek.
17 Let's say he's just -- your head -- I'm sorry, your head
18 up, and let's say it's just going through here, and it
19 would just kind of hit, like, over this side of his head.
20 Okay? But, meanwhile, it's kind of over here, so -- and
21 then it's -- the exit wound is back there. So, at least we
22 have a little bit of directionality like this. I don't
23 know -- if he was completely turned to the left, it would
24 have gone through his face, but I think it makes the most
25 sense knowing that a bullet travels in a straight line

1 basically. Of course, this is pellets so there's going to
2 be a lot of destruction. But the fact that his face was
3 spared from damage indicates to me that he had his head
4 somewhat turned. I don't know exactly how much, but that
5 it kind of coursed over the top of the left shoulder into
6 this left, you know, neck/cheek area, and then exited the
7 back of the head on the top.

8 Q Let me find the x-ray pictures while he's standing up
9 there. Here we go. Okay.

10 (Break in proceedings.)

11 Q I'm going to show you where you're standing right
12 there these pictures and see if you can identify them, and
13 if so, we'll put them in evidence, and then I'll put them
14 up on the screen.

15 (Break in proceedings.)

16 Q So, I want you to look at these three photos and tell
17 me if you can identify these.

18 MR. HARPOOTLIAN: Am I speaking loud enough for the
19 court reporter?

20 COURT REPORTER: I'm sorry?

21 MR. HARPOOTLIAN: Am I speaking loud enough when I'm
22 facing that way?

23 COURT REPORTER: Yes.

24 MR. HARPOOTLIAN: Okay.

25 A Yes. These are x-rays that were taken at the

1 commencement of the autopsy.

2 Q All right.

3 MR. HARPOOTLIAN: Your Honor, I would offer
4 Defendant's Exhibits 111, 112, and 113.

5 MR. WATERS: No objection, Your Honor.

6 THE COURT: They're admitted.

7 (PHOTO OF X-RAY MARKED AS DEFENDANT'S EXHIBIT NUMBER
8 111 WAS RECEIVED INTO EVIDENCE.)

9 (PHOTO OF X-RAY MARKED AS DEFENDANT'S EXHIBIT NUMBER
10 112 WAS RECEIVED INTO EVIDENCE.)

11 (PHOTO OF X-RAY MARKED AS DEFENDANT'S EXHIBIT NUMBER
12 113 WAS RECEIVED INTO EVIDENCE.)

13 MR. HARPOOTLIAN: So, could I have please -- step over
14 here just that way.

15 (Break in proceedings.)

16 Q Okay. So, let's see -- okay.

17 MR. HARPOOTLIAN: Let's see 113, please.

18 Q Okay. So, this is his left arm, correct?

19 A Yes.

20 Q And this material up here, do you see these little
21 dots? What is that?

22 A Right. Those are the shotgun pellets.

23 Q Okay, and they are -- yeah, that's perfect. And so we
24 see one, two, three, four, five, six, seven, eight, nine,
25 ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen,

1 seventeen, eighteen, nineteen along that line of -- twenty
2 along this. These are the pellets that would be along
3 here, correct?

4 A Yes.

5 Q And they begin at just his shoulder, I mean, the
6 shoulder bone?

7 A Yes. It's -- notice the soft tissue of the shoulder.
8 The soft tissue of the shoulder.

9 Q Okay. I'll give you pointer. You know what you're
10 doing.

11 A Yeah. This is the humeral head.

12 Q Which is --

13 A Humeral head --

14 Q Just on Mr. Barber, where that is?

15 A Yeah. This is the bone of the humerus. So, a humerus
16 is that long bone on the shoulder joint to the elbow joint,
17 and we can see that this is basically -- it's not really
18 perforating the bone. There may be some defect at the edge
19 of the bone, but it's pretty much on top in the soft
20 issues.

21 Q Okay, and it goes on for aways.

22 MR. HARPOOTLIAN: And then if you would show me
23 Exhibit Number 112. Okay, and would you focus on the upper
24 right hand corner, please? There you go.

25 Q Now, that corresponds to this large picture, that

1 orientation.

2 A Yes.

3 Q Okay. So, what is this showing?

4 A There are significant numbers of pellets also in,
5 like, the left neck area.

6 Q Show us on Mr. Barber where that would be.

7 A Yeah. So, the entrance is here, and pellets are
8 basically spreading, so that they're not -- they're
9 excluding -- it's -- there are pellets in the right side of
10 the neck area over here, and then there's also some going
11 into the brain.

12 Q Okay, and let me see if I can count those. So, I
13 mean, are these part of what we looked at before?

14 A Yes.

15 Q Okay. How far down do they start?

16 A You know, it's a different view, so it may not include
17 all of them.

18 Q Okay. So -- but a number of them?

19 A Yeah. I mean the purpose of the x-rays is not to --
20 it's basically to show what kind of ammunition is --
21 remains in the body, if anything.

22 Q Did you remove the pellets?

23 A Not every single one. A representative number.

24 Q Okay. So, there's an exhibit that was shown to you by
25 Mr. Waters of some pellets that you recovered.

1 A Yes.

2 Q But that's not all the pellets you recovered.

3 A That's all the pellets I recovered. I did -- I don't
4 stay for days to recover each pellet. It's actually a lot
5 harder than it looks. You know, here they look like you
6 know exactly where they are, but, you know, you can fish
7 for, like, an hour to find one pellet. It's fairly small
8 and there's a lot of tissue and so --

9 Q So, you --

10 A I get a handful of them and that's sufficient.

11 Q Did you keep the buckshot separate from the birdshot?
12 Because this is birdshot.

13 A I don't -- I don't think any of it was actually
14 buckshot. Buckshot is very broad, so they were all -- I
15 believe they were all collected together.

16 Q Okay. So, you thought they were all birdshot --

17 A No. I didn't make that conclusion, what type shot; I
18 didn't make a determination.

19 Q So, you didn't determine --

20 A Yeah, that's really the firearms. I'm a pathologist.
21 It's the firearms expert to determine what kind of shot it
22 was.

23 Q So --

24 A I said shotgun pellets, and that is sufficient.

25 Q If previous expert testimony was that the chest was a

1 buckshot and the head was duck shot or turk -- some sort of
2 birdshot, you're not going to disagree with that.

3 A I really didn't -- it all looked similar to me.

4 Q Okay.

5 MR. HARPOOTLIAN: Now, let me see Exhibit 111, please.
6 Can you do, I guess, the lower left -- let's start with the
7 lower left of this, lower -- his left, lower -- right
8 there. Okay.

9 Q This is the total picture.

10 A Okay.

11 Q And so what does this represent?

12 A Yeah. There is -- we can see his upper and lower
13 teeth here, upper teeth and lower teeth. And so he
14 actually did not have any fractures of his teeth, so the
15 projectiles were going behind the teeth. His teeth were
16 not all fractured out.

17 Q So, if you show on Mr. Barber where these pellets
18 would have been.

19 A Yeah. This is just a two dimensional image. So,
20 they're anywhere between, like, you know, here and here.

21 Q Okay.

22 A It's hard to say based on a two dimensional.

23 Q Okay, and I think -- show us where you think the exit
24 wound was.

25 A On the right side of the top --

1 Q The back of his head.

2 A -- the top of his head --

3 Q The top of his head.

4 A -- toward the back.

5 Q Toward the back.

6 A Yes.

7 Q And if you were to extend out the shoulder wound, the
8 neck, the path of these pellets, and then the exit wound, I
9 mean, did you actually see an exit wound? Was there --

10 A Yes. It was a blown out exit wound of the skull. And
11 that was how the brain left the skull.

12 Q Well, actually the skull exploded basically, correct?

13 A Well, the skull -- and there was a defect there. I
14 could not reapproximate the skull, so there's a piece of
15 skull missing.

16 Q Was there a bevel around that piece of skull?

17 A We don't get beveling when there's shattering of the
18 bone.

19 Q Okay. We'll see that a little bit later.

20 A It's not a typical feature. You could potentially see
21 something that you can say, well, this looks like a little
22 beveling, but in my experience that's very difficult to
23 assess because there's so much damage and fragmentation of
24 the bone.

25 Q Take that pointer, please, and using Mr. Barber as a

1 mannequin -- and show us the path of that shotgun blast.

2 A So, it's going along here and into the left side. I
3 believe, you know, it makes most sense like this, and out
4 the top of the right side of the head.

5 Q So, if you -- and that was, you say, at least 3 feet
6 away.

7 A Yes.

8 Q Okay. Let me have that pointer, again, please. And
9 if you would, step over and come over this way. Okay. So,
10 your testimony is, and correct me -- if you need to step
11 over here and correct the angle.

12 A No, I don't like that.

13 Q Okay. Well, show me what you like.

14 A I made this straight.

15 Q Right.

16 A And then because this is basically not -- it doesn't
17 look like it's going upward. It's going straight and then
18 entering around there. So, we have two distinct defects, a
19 defect here and a defect there. So, I believe the head was
20 at least angled a little bit like that in order for the
21 corresponding continuation of that defect to go there. But
22 I do -- I don't think it's going upward. I think looking
23 at the left shoulder it looks like it's kind of a -- and if
24 it was going upward, you wouldn't have as much in the neck
25 as we do. So, I think it's more like straight on --

1 Q But that would still be coming upward at some angle,
2 right?

3 A No. I think it's more straight. I really, you know
4 --

5 Q Well, how does it come out the top of his head?

6 A Well, that's because if his head is like that --

7 Q Right.

8 A -- then it's almost going in that direction, yes.

9 Q If it's straight, it's going to go here and then out
10 the top of his head?

11 A Well, it absolutely could. You know, the thing about
12 the neck, heads can twist and turn, so it's not at all
13 inconsistent with that. It's most reliable that we can
14 look at the shoulder wound and see that it's kind of -- you
15 know, it's very difficult to assess the angle from where
16 you're standing, and that's only because the head can bend
17 and twist. And so we can only know where it entered and
18 where it exited, and it's possible that the head could have
19 been twisted or turned to correspond.

20 Q Would it be more consistent if he --

21 MR. HARPOOTLIAN: Turn your head the other way, Mr.
22 Barber.

23 Q -- like that to get it out the top of the head?

24 A You know, that could be. However, we have a defect
25 over here, so how did that happen?

1 MR. HARPOOTLIAN: Pull your head back and keep it over
2 in that direction.

3 Q In other words -- let me adjust him. Back and then
4 over that way?

5 A Yeah.

6 Q Is that consistent with it coming in here, going this
7 way, and then out the top of the head?

8 A Yes. I think that the head tilt to the right as you
9 just demonstrated --

10 Q Right.

11 A -- is perfectly consistent with that. However,
12 because the whole ear is here, I think his -- even if his
13 head is to the right, it could still be turned like that.
14 Okay? Now that makes sense to me. Right.

15 Q So, the shooter would be at least 3 feet away from
16 that right there, right?

17 A Yes.

18 Q And would his -- would he have it up or would he have
19 it down or --

20 A It's hard to say, and that's because the head can --
21 we only have one area of an entrance wound here. It seems
22 to be approximately horizontal, but it's impossible for me
23 to say whether it's -- that the entrance is kind of below
24 him or at his level or potentially all the way over. It's
25 hard to know. And that's because people aren't necessarily

1 standing up straight, and they also -- the thing about
2 injuries on the head and neck, there's so much twisting and
3 bending possible.

4 Q Okay.

5 MR. HARPOOTLIAN: Mr. Barber, stand up straight. Yeah
6 straight there. Sorry.

7 Q So, now what you tell us is basically from here back
8 on his skull --

9 MR. HARPOOTLIAN: I don't know if they can see. Why
10 don't you stand over there so you don't block them.

11 Q From here back on his skull -- and I've looked at your
12 autopsy pictures -- all of this is gone.

13 A On the right side, yes.

14 Q On the right side.

15 A And there were fractures on the left.

16 Q Okay.

17 A So, we know -- we know it's going in a left/right
18 direction there.

19 MR. HARPOOTLIAN: If you could have a seat for a
20 moment, please. Thank you. I may be done. Okay.

21 Q You can go ahead and take the stand again, please.
22 Okay. Let me ask you a couple of preparatory questions.
23 Are you familiar with this book?

24 A Yes.

25 Q Okay, and it is like a definitive -- I mean, I'm told

1 most pathologists have read this and used this.

2 A Yes. It's a -- it's a highly respected book on
3 gunshot wounds.

4 Q Okay. So, if you go to page 228 in this book. Sorry.
5 Can you identify this as page 228 in this book that was --

6 A Yes, 228.

7 Q Okay.

8 Mr. HARPOOTLIAN: I'm showing the State a copy of page
9 228.

10 (Break in proceedings.)

11 Q Defendant's Exhibit 116, is this a copy of what I just
12 showed you out of the book?

13 A Yes.

14 Q Okay.

15 MR. HARPOOTLIAN: Your Honor, we would offer this into
16 evidence.

17 THE COURT: What says the State?

18 MR. WATERS: Your Honor, no objection.

19 THE COURT: It's admitted.

20 MR. HARPOOTLIAN: Thank you.

21 (PHOTOCOPY OF PAGE FROM BOOK MARKED AS DEFENDANT'S
22 EXHIBIT NUMBER 116 WAS RECEIVED INTO EVIDENCE.)

23 MR. HARPOOTLIAN: Okay, could I have this on the
24 screen, please? Can you do this for me? Would you
25 start -- show me the first two slides up at the top along

1 with --

2 Q Okay. So, the caption on this will show:

3 The sequence of events that occur at the muzzle
4 on the firing of a shotgun. Note a large gas
5 cloud that's partially responsible for the severe
6 nature of wounds in the contact range.

7 So, the first A is the shotgun being fired, correct?

8 A That's what it looks like, yes. I didn't read the
9 captions.

10 Q What now?

11 A There's captions at the bottom. Oh, yeah, so --

12 Q Oh, captions at the bottom? Okay. No. I don't think
13 they are, but I'll show you the book.

14 A Okay. Okay. So, I imagine that's sequence, right.

15 Q I didn't write the book.

16 A No. Okay.

17 Q So, the sequence of a shotgun shell being fired are
18 the first one is it being fired. The second one notes: a
19 large gas cloud that's partially responsible for the severe
20 nature of the wounds on contact. And the third one is the
21 contact wounds. And then you see on the last one --

22 A I don't see them on my screen. Okay.

23 Q I'm sorry.

24 MR. HARPOOTLIAN: If you would go down to the last
25 two. There you go, C and .D.

1 Q You see the -- I guess at the front end would be the
2 pellets and the gas would be preceding the pellets. Is
3 that correct?

4 A No. I don't think that that's correct. This is
5 depicting contact range. It's specifically says a contact
6 range.

7 Q Right.

8 A So, pellets are not yet released from the wadding.

9 Q Okay. Well, we're going to go a little bit further on
10 that in a minute. Let me refer -- referring again to --
11 well, let me ask you this question. If this book says
12 contact shotgun wounds of the head are among the most
13 mutilating firearm wounds there are, you would agree with
14 that?

15 A Yes.

16 Q Extensive destruction of bone and soft tissue
17 structure with the bursting ruptures of the head are the
18 rule rather than the exception, right?

19 A Yes.

20 Q These are the wounds in which an individual is said to
21 have his head -- blown his head off, right?

22 A Yes.

23 Q In some cases, this is almost literally true. The
24 skull may be largely fragmented, with the brain pulpified.
25 Large fragments of the cranial ball and cerebral

1 hemispheres are often ejected from the head. The scalp is
2 extensively lacerated due to two factors: the charge of the
3 shot entering the skull, and the gas from combination of
4 the propellant.

5 MR. WATERS: Object to the form of the question, Your
6 Honor.

7 THE COURT: What is the question?

8 Q Does this -- one pathologist told me this is the bible
9 of gun wounds for pathologists. Is that correct?

10 A Well, there's a lot of literature, and this is a
11 highly respected primary source. It's not the only one,
12 but it -- what are you asking me about?

13 Q Does the shot -- are there two factors which
14 contribute this, this -- the thing we just talked about,
15 the shattering and perhaps even the ejection of the brain,
16 are there two factors, the charge of the shot entering the
17 skull, and the gas combustion of the propellant?

18 A Okay. He's actually discussing contact shotgun
19 wounds --

20 Q Yes, ma'am.

21 A -- and that's not what we have here, but we have
22 similar destruction.

23 Q Right, and we're going to talk about that in just a
24 minute. But let me -- this is about a contact wound, I
25 agree.

1 A Okay.

2 Q You have not indicated it was a contact wound.

3 A Correct.

4 Q We're going to talk about that in a minute.

5 A Okay.

6 Q The shot -- the shot directly -- is -- does the shot
7 on a contact wound from a shotgun directly fracture the
8 skull and shreds the brain while at the same time producing
9 pressure waves that increase the severity of these injuries
10 as well as ejecting the brain tissue?

11 A Yes, it frequently happens that way.

12 Q Okay. The gas entering the closed chamber of the head
13 expands rapidly, adding -- does -- I'm sorry, I'll make
14 this is question so I don't get objected to. Does the gas
15 entering the closed chamber of the head expand rapidly,
16 adding to the pressure waves acting on the bony framework
17 of the skull, the only way for the skull to relieve the
18 pressure produced is to shatter?

19 A I would agree with that.

20 Q Okay. So, it's your opinion that -- well, let me ask
21 you this. If the shotgun muzzle was 3 to 4 feet away,
22 would gas have entered the body?

23 A Well, it's still a very destructive wound. I mean, in
24 my experience there is still a huge amount of energy that
25 would enter the head from a shotgun wound even if it's not

1 contact.

2 Q Okay, and perhaps I misstated the question. Would
3 gas, just a yes or no response, from 4 feet away enter the
4 body and be destructive?

5 A Yeah. I don't know if it's gas that's causing the
6 destruction, but the -- there must be some amount of energy
7 that's causing this destruction because a shotgun wound to
8 the head, no matter what the distance, causes -- but
9 whether it's due to gas or not, I really can't answer that
10 question. This is not something I have, you know -- I've
11 done no experiments like this as in the book.

12 Q But this is a book you check for reference, correct?

13 A Well, it's good source. But, you know, I don't know
14 whether the gas would be responsible for the destruction of
15 the skull from a few feet away. There is destruction of
16 the skull. I don't know it's attributed specifically to
17 gas or to other factors, so I really can't answer that.
18 And if he says that, that's fine, but I, you know -- I
19 don't know. He's talking about a contact wound. I cannot
20 necessarily extend that conclusion to what would happen a
21 few feet away. But there is frequently destruction of the
22 head.

23 Q I understand. There was massive destruction of the
24 head. I'm just trying to get my arms around the definitive
25 work on -- one of the definitive works indicates that in

1 most instances, the vast majority, that kind of destruction
2 is caused by gas on a contact wound.

3 A Well, this is a mechanism that he's describing based
4 on experimental data. And I'm a forensic pathologist.
5 I've not performed this kind of experimental data, nor
6 would I extrapolate from his conclusions about a contact
7 gunshot wound to whether the same amount of gas is produced
8 at a distance.

9 Q Well, ma'am -- and, Dr. Riemer, we can walk through
10 this, but these are based on -- these are based not on some
11 experiment but actually on people that typically shot
12 themselves in the head, contact wound with the shotgun.
13 Would that surprise you?

14 A Well, these are depictions of shotguns being fired.
15 Yeah. Contact shotgun wounds to the head cause massive
16 destruction, and a lot of that is from gas build up.

17 Q Okay. Now we're on the same page. So, it's your
18 position there's a lot of energy when it's fired from 3 or
19 4 feet away, hits the shoulder, hits the neck, comes
20 through and hits the head, and the head explodes, correct?

21 A Yes.

22 Q And have you had a number of autopsies you've done of
23 victims whose heads have exploded as a result of shotguns?

24 A Yes.

25 Q And any of those -- many of those are contact suicide

1 wounds?

2 A Yes.

3 Q Have you ever had one, and we're going to talk about
4 the details of that, where someone was shot from 3 or 4
5 feet away, no initial contact to the head? You would agree
6 no initial contact with the head.

7 A Correct.

8 Q It goes through the shoulder, the neck, and then the
9 head explodes. Have you ever had one of those?

10 A Yes, these are very dynamic, and he still actually had
11 a lot of his head there. Sometimes with a shotgun wound
12 the entire head is basically -- you don't really see very
13 much above, like, the teeth. So, this was -- you know,
14 there was obviously horrible destruction of this skull, but
15 it was -- his face was intact, and frequently a contact
16 causes fractures of the face. So, you know, it's -- and I
17 don't see any evidence of contact range discharge on the
18 left side of the neck. So, it was not my conclusion, that
19 was not my opinion that this is a contact shotgun wound.

20 Q Okay. Well, let's talk a little bit about this. Your
21 position is the energy by a shotgun blast that went through
22 the arm, through the neck, and up to the brain still has
23 enough energy. Is it energy caused by -- is it pellets
24 going into the brain?

25 A Yes. Well, not just pellets, but there's also

1 fracturing of the base of the skull, which is a bone at
2 the -- that holds underneath the skull, and that fracturing
3 with sufficient force can actually push the brain out.

4 Q And --

5 A So, it's a variety of mechanisms that could contribute
6 to the destruction and the loss of brain tissue.

7 Q It not only pushes and fractures the skull. In this
8 case, the brain was brought to you in a separate bag
9 because it ended up laying at his feet. It went up in the
10 air and then plopped down at his feet, correct?

11 A Yes.

12 Q Okay. The entire brain.

13 A Most of it, yeah, except for the brain stem.

14 Q Exploded out of his head.

15 A Yes.

16 Q And the skull was at least almost destroyed around
17 where you say the exit wound is, correct?

18 A Yes.

19 Q Now, did -- you've indicated the State did not show
20 you any crime scene photos, correct?

21 A Yeah. I really didn't look at them. Yeah. I mean,
22 they might have said, okay, you know, this is a picture of
23 the wall, but I didn't look at that. And they were
24 thumbnail size, so -- this was a couple of weeks before
25 trial.

1 Q Okay. Now we --

2 MR. HARPOOTLIAN: If you would put back up Exhibit
3 Number -- Exhibit Number 112, please. Is that 112? That's
4 the chest. I apologize, 113. Can you focus on that area
5 where the pellets are, please? Yeah, right there.

6 Q So at his shoulder, how big a spread is that? How --
7 I mean, as it comes in, is it 2 inches? 3 inches? 4
8 inches? 5 inches? That wound?

9 A I didn't measure the spread of the pellets.

10 Q Okay. So, how about --

11 MR. HARPOOTLIAN: And I apologize to the jury. This
12 is pretty graphic.

13 How about pull up 109.

14 (Break in proceedings.)

15 Q Okay. So, this depicts a very big wound in the
16 shoulder, correct?

17 A Yeah. That's a typical appearing shotgun entrance
18 wound.

19 Q Okay, and can you come down here for just a second,
20 please? Hold on, just wait one second. I may be jumping
21 the gun here procedurally.

22 (Break in proceedings.)

23 MR. HARPOOTLIAN: You're right, I need to offer.

24 MR. WATERS: Your Honor, the State would request that
25 the defense move an exhibit into evidence before they show

1 it to the jury.

2 MR. HARPOOTLIAN: I apologize, Your Honor. And this
3 is Exhibit Number -- I've got multiple of these. What is
4 this exhibit number? I'm sorry.

5 SPEAKER: 109.

6 MR. HARPOOTLIAN: 109 yeah. I apologize, Your Honor,
7 I got ahead of myself. It won't take two seconds. 110.
8 110, 109. Here we go.

9 Q This is State -- State -- Defense Exhibit Number 109.
10 Have you seen that before?

11 A Yes. This is my autopsy photo.

12 MR. HARPOOTLIAN: Offer this into evidence, Your
13 Honor.

14 THE COURT: It's admitted.

15 (PHOTO MARKED AS DEFENDANT'S EXHIBIT NUMBER 109 WAS
16 RECEIVED INTO EVIDENCE.)

17 MR. HARPOOTLIAN: Would you put it up on the screen,
18 please?

19 Q Now if you look at this photo, we see this is the
20 entrance wound.

21 A Yes.

22 Q And then it goes in here, correct?

23 A That's correct.

24 Q So -- but this is a much larger wound than the next
25 one in line, is it not?

1 A Well, that's okay.

2 Q Well, let me ask you this in terms of understanding a
3 shotgun. A shotgun pattern, as we saw in the photo, starts
4 out basically the size of the shell, right?

5 A Um --

6 Q If you would just answer the question, and then you
7 can explain. Does it start out as the same size as the
8 shell?

9 A Yes.

10 Q Okay, and as it goes forward the pattern expands,
11 correct?

12 A Yes.

13 Q Okay, and it continues to expand even after it hits
14 something, correct?

15 A Yes.

16 Q Okay. So, now please explain to me why this wound --
17 and it looks like it's -- if you use me on my left
18 shoulder, what is the -- what is the --

19 A Yes. I would be delighted to tell you why this
20 entrance wound is larger than this one, even though what
21 you said is correct and that was spread. And that's
22 because the entrance wound to the left shoulder, it's not
23 straight on perpendicular. If it was straight on
24 perpendicular, then we would have a smaller hole. But this
25 is going in a tangential manner across. So, it's -- we're

1 not really looking at a perpendicular, you know, entrance
2 wound that's going to make a round hole. So, as it's
3 coursing along the top of the left shoulder, we get more of
4 an oblong. In contrast, its continuation into the left
5 side of the cheek is kind of straight on at a 90-degree
6 angle, so that's why that was smaller. So, there was
7 nothing about this that was inconsistent with what I would
8 expect from the shotgun.

9 Q So, tell me -- so you're saying this shot, this second
10 hole was made in this direction. Is that what you're
11 saying?

12 A I don't -- I just said that that was a continuation of
13 the logical sequence. It dents it here. It splits,
14 causing a lot of destruction, and then entered the left
15 side of the neck. So --

16 Q So, that big wound is because it's in a different
17 direction than the small wound is your explanation.

18 A At a different angle --

19 Q Right?

20 A -- along the surface of the skin.

21 Q Okay, and there's no pellets in his face, are there?

22 A There were some pellets that we saw on the x-rays.

23 Q But not in his face.

24 A Not in the front of his face.

25 Q Right. So, as it continues on, is there any evidence

1 that it expands even more?

2 A Well, it did cause -- you know, there's so much
3 destruction you can't exactly, you know, have a single, you
4 know, easily tracked path. Because when the skull is
5 involved, there is so much expansion either from gasses or
6 just from the blast of the projectiles that it caused -- we
7 can't really track. It caused an exit on the right side of
8 the back of the head with loss of the brain and lots of
9 skull fractures predominately on the right side.

10 Q Okay, but you would agree with me that wound appears
11 to be much larger than the next wound.

12 A Oh, absolutely.

13 Q Okay, and one explanation -- you have an explanation
14 for that. Could the other explanation be that that -- this
15 is an exit wound and that is an exit wound? Could that be
16 a reasonable explanation? I'm going to show you something
17 in a minute that may assist you in making that decision,
18 but could -- is it a possibility?

19 A That would not -- that is not -- I do not believe this
20 is consistent with an exit wound from a shotgun. There
21 would be a lot more destruction because, you know, there
22 would be -- it would come -- it had to come from somewhere,
23 right, somewhere else.

24 Q How about a contact wound on the head, on the right
25 back of the head?

1 A Well, I would not expect that.

2 Q What would you expect to see on the bone structure of
3 the back right of the head if that was a contact wound on
4 the head?

5 A Well, I would not expect the brain to -- we would have
6 an opening of a lot of stuff. We have had a path through
7 the brain, which is not at all what, what happened here.

8 Q So if there was a contact wound, and we saw a moment
9 ago, and you agree, that the gas would enter first, explode
10 the skull, the brain would pop out. Did you find any
11 pellets in the brain?

12 A I don't know if they were in the brain, but the brain
13 is basically intact. A contact gunshot wound to the top of
14 the head would cause, you know, a huge defect of the brain.

15 Q Right, because the gas going in on a contact wound
16 would create such a pressure, as we just read, that the
17 skull would explode and the brain would pop out.

18 A No. I don't think know that would happen from a gun
19 wound that was going toward the brain from the bottom. I
20 think we would have just certainly destruction of the
21 brain, but it wouldn't just pop out because it's in the
22 path of fire. There's going to be massive destruction of
23 the brain. It may end up on the floor, but it's going to
24 be in multiple fragments. So, in my experience in doing
25 this --

1 Q You can go ahead and take the stand.

2 A -- I do not think that the brain would have popped out
3 the way it did from an entrance wound on the top of the
4 head.

5 Q Okay. Now, let me ask you to look at -- this is
6 Defense Exhibit 59 put into evidence in the State's case.

7 MR. HARPOOTLIAN: Would you put -- and this is under
8 seal. And I would also, Your Honor, ask the other photos I
9 put in be put under seal.

10 THE COURT: They're under seal.

11 MR. HARPOOTLIAN: Thank you.

12 Would you put Defense Exhibit Number 59?

13 And I apologize to the jury for the graphic nature of
14 this.

15 Q Okay. I would like you -- do you recognize this?

16 A I have not seen this photograph, no.

17 Q Would you disagree with me that's a photograph of,
18 that's been testified, Paul Murdaugh at the scene?

19 A It does look -- yes.

20 Q And the way he was found.

21 A I don't know how he was found.

22 Q Okay, but this is a photograph you've never seen?

23 A I've never seen this photograph.

24 Q Okay. Let me get one thing before I ask you questions
25 about it. Okay. a couple of things.

1 MR. HARPOOTLIAN: If you would center on his head --
2 Okay, and I think --

3 (Break in proceedings.)

4 Q Okay. So, do you see a sort of semicircle defect in
5 the skull right here? Do you see where I'm looking?

6 A Do it again.

7 Q Right here.

8 A I do see a defect, yes.

9 Q All right. In the skull.

10 A Yes.

11 Q Semicircle.

12 A It does have a semicircular appearance.

13 Q Okay. Can you determine from looking at the
14 photograph any beveling?

15 A As I said earlier, beveling is not really too reliable
16 when we have so much destruction of the head. But if
17 you're asking me if that could have been a contact shotgun
18 wound to the top of the head with a kind of curved
19 entrance, I would expect to see soot. We always get soot
20 from contact wounds. And it would -- it's deposited on the
21 outer table of the skull. So, there is no burning, no soot
22 on the outer table of the skull to support that.

23 Q Did you take an autopsy photo of this area of the
24 skull?

25 A Well, when he came in I do believe I took an area of

1 the skull, but it may not have caught that curvature.

2 Q Okay. Did you shave his head?

3 A No, I did not.

4 Q You did shave Maggie's head for a head wound, correct?

5 A Yes.

6 Q Okay. Why didn't you shave his head to examine this?

7 You would agree with me had his head been shaved, you would
8 have had a better look at this wound.

9 A Well, I believe that my assessment of it was correct,
10 and without -- usually shaving is along an entrance wound,
11 not an exit wound. So, I determined this was an exit, and
12 shaving is not done on exit wounds. I shaved Maggie's
13 because that was an entrance wound, and it gives me an
14 opportunity to see the margins of the entrance defect.

15 Q I guess what I'm asking is, you decided that that was
16 an exit wound without shaving the head, without looking for
17 stippling, without looking for soot because you would agree
18 with me that to do that effectively, you would have to
19 shave the head.

20 A To observe marks on the skin, yes.

21 Q Okay.

22 A But also there would be soot on the outer table of the
23 skull.

24 Q Well, did you look for it? You apparently had already
25 decided --

1 A Well, I did look. I didn't necessarily -- I didn't
2 take a picture from this angle necessarily. I did take a
3 picture after I -- from the top of his head. But my
4 determination, based on my experience, was that the
5 entrance wound was over here. It doesn't mean somebody
6 else cannot disagree with me, but that's my opinion.

7 Q Somebody can disagree with you and that would be a
8 reasonable disagreement.

9 A Well, I would say that people can disagree, but that
10 doesn't mean that -- it doesn't change the truth.

11 Q You would also agree with me, though, that your notes
12 contain no mention of the lack of or presence of stippling
13 or soot on that part of his head. You never looked for it,
14 did you?

15 A Well, I looked for it. I look -- I look at all of the
16 wounds and if there was, I would have documented it. But I
17 don't document the absence of soot or stippling on what
18 I've determined to be an exit wound.

19 Q And I don't see any note of yours where you examined
20 that exit wound in detail. I mean, shaved his head, looked
21 for some distortion that would be inconsistent with the
22 conclusion you'd already come to, correct?

23 A Well, I came to the conclusion based on my examination
24 of the entire area.

25 Q Okay, and as this book -- this book indicates the vast

1 majority of this kind of damage, the vast majority, I mean,
2 they say most probably almost certainly is a contact wound
3 to the head that ejects the gas which explodes the head.

4 Is that not true? Do you want to read the book?

5 A No. I do think that you're kind of -- you're
6 extending his statement. He's describing -- he's
7 describing contact gunshot wounds to the head. Actually a
8 contact gunshot wound to the top of the head like that,
9 like I told you, it would have caused fragmentation of the
10 brain, not ejection of the brain, based on my experience.
11 And then there would be a lot more -- we would have a lot
12 more fragments. It would never have just left the rest of
13 the skull intact. We would have had fractures of the face.
14 There's massive amount. I don't believe that the, the, the
15 fractures of his skull are consistent with that being a
16 contact shotgun wound. I understand that that is massive
17 destruction of the head from shotgun wounds, but in this
18 case we do have -- the brain was basically left intact. We
19 don't have a path through the brain. It's a very
20 dynamic -- you know, there's gasses, there's pellets,
21 there's fractured bone. But in my opinion, based on my
22 experience, that was not an entrance wound and that -- this
23 was not an exit.

24 Q And you indicated, I looked at your autopsy report
25 that -- well, first of all, do you believe this was caused

1 by pellets entering the brain cavity?

2 A I think it's a combination of different things. I
3 don't think it's from pellets specifically.

4 Q What was it?

5 A I think it's from the gas built up in the brain and
6 fractures of the skull, and that -- just basically a lot of
7 gas build up in that.

8 Q So, that's -- where did those gasses come from?

9 A Yeah. There's -- it's a huge amount of energy from a
10 shotgun.

11 Q I'm sorry, if you would answer my question. Where did
12 the gasses you just testified that causes destruction come
13 from?

14 A From a -- from the -- the shotgun wound.

15 Q A shotgun wound, you testified, was created by a
16 weapon that was more than 3 feet, 4 feet away, that gasses
17 traveled through the air, traveled through that shoulder
18 wound, traveled through the neck, and then explode his
19 head.

20 A It's not just gasses, but it's a combination of gasses
21 and the pellets as well.

22 Q But there would have been a significant amount of gas
23 involved to explode his head.

24 A Yes.

25 Q And it would be pellets -- would they be present in

1 the brain after that brain exploded?

2 A Well, the brain -- the pellets may not have reached
3 the brain. The brain may have been ejected just by virtue
4 of the skull fragmenting, and the base of the skull pushing
5 it up. There's -- it's not possible for me to say exactly
6 why the brain came out here.

7 Q But you would agree with me, based on the literature,
8 it's much more common for a contact wound where the gas
9 goes in, contact, explode the head.

10 A Well, in my experience a contact shotgun wound could
11 cause this type of damage, but it would frequently cause
12 even more damage. Like, a lot of times there is just
13 massive destruction of the entire head. At least the front
14 of his head was -- the front of his face where the bones
15 were intact.

16 Q I hear what you're saying is that it would -- it would
17 have produced massive destruction, but it would have always
18 included massive destruction of the face?

19 A Okay. Well, let me tell you. There are other reasons
20 why I concluded that the entrance wounds were here. Okay?
21 We have a lot of -- basically a bunch of tightly -- tight
22 pellets over here.

23 Q Right.

24 A If -- they would be more spread out if the entrance
25 wound was here. By the time it got to here, there would be

1 a lot more pellets over a wider area.

2 Q How many more?

3 A Well, it would -- no, I'm not saying more pellets.

4 I'm saying there would be a wider spread of pellets. This
5 was still in a relatively narrow range. It was along the
6 top of the shoulder, so --

7 Q From my head to my shoulders on a direct route.

8 A Yes.

9 Q How far is that?

10 A Well, honestly the spread would not -- I don't believe
11 they would have been as tight along the shoulder. I think
12 we -- and we also would have had a lot more -- a larger
13 defect probably on the larger --

14 Q A larger defect --

15 A Yeah. Look --

16 Q -- between here and here?

17 A -- every single shotgun wound and gunshot wound,
18 they're each a little bit different. So, a lot of this is
19 judgment and assessment at the time of the autopsy. It's
20 not theoretical whether there's gas build up or not gas
21 build up. I can see this is a shotgun wound. We have
22 pellet entrance defects around this large defect.

23 Q What's -- okay. Pellet -- you just told me you
24 couldn't do a bevel assessment on skin. How do you know
25 they're entrance rather than exit on the skin?

1 A Well, I'll tell you.

2 Q Good.

3 A And the reason is if pellets are going through the
4 shoulder, we wouldn't have a big, large oblong defect. We
5 would have holes from the pellets, not an oblong ovoid
6 defect. So, you'll recall on his arm, Paul's arm, those
7 pellets, they came from -- and then along here, we just
8 basically have pellet exit wounds. And we don't have them
9 on the shoulder. We have basically a larger confluent
10 wound that was not caused by individual pellets.

11 Q Okay. Well, let me ask you this then.

12 MR. HARPOOTLIAN: You can take that picture down,
13 please.

14 A Yeah. It's not my opinion that that is -- the
15 entrance wound was to the top of the head.

16 Q And could you put -- no, we don't even need to do
17 that. I don't need to see the picture. The chest shot, it
18 goes through his chest, comes out under his arm, right?

19 A Yeah. On the left side, yes.

20 Q The left side. It comes out under his arm. And what
21 do we have -- what do we have on the inside and outside of
22 that arm?

23 A We have pellet --

24 Q Coming in and out we have a pattern of pellets.

25 A Yes.

1 Q Just like the pattern of pellets that you're talking
2 about, which you say the exit wound here, exit wound from
3 about the same distance, pellets from the same distance,
4 pellets, correct?

5 A Well, there are pellets in the shoulder. But we have
6 a, like, a ovoid defect at the top of the left shoulder.
7 They're not as much individual pellet wounds. We have
8 pellets embedded in the tissue but the actual defect -- we
9 don't have a defect like that on his arm, even though it
10 may be the same distance. And the reason is because the
11 pellets are exiting, but each one is going through the left
12 arm individually. Okay? Whereas at the -- if this was the
13 entrance at the right side of the top of the back of the
14 head -- it's a good thought, you know.

15 Let's think about this. And if it was coming through
16 the head, regardless of what happened to the brain, and
17 then exited here and then went along here, we would have a
18 lot more individual pellet wounds on the shoulder as
19 opposed to a large, like, huge, you know, big area of skin
20 and subcutaneous tissue loss. Pellets don't cause that
21 type of damage on their own.

22 Q So, you and I both counted something between thirty
23 and forty pellets in that shell pin in that shoulder wound
24 a little while ago, right?

25 A Yeah. There were something like that, about that.

1 Q Do you know how many pellets are in a duck shot or
2 birdshot 12 gauge shell?

3 A No, I don't remember. That would be --

4 Q So, you don't know whether that was 90 percent of the
5 pellets or 60 percent of the pellets or 50?

6 A No, I do not.

7 Q Would that make a difference to you, how many of the
8 pellets that were fired ended up there?

9 A No.

10 Q But you're saying just because the wound here is
11 bigger and the wound in his chin is smaller doesn't mean
12 the shotgun pellets spread out, right? They spread out.
13 And they don't contract, you would agree with me -- just --
14 please answer --

15 A I don't whether to --

16 Q Just answer --

17 A -- agree with you because I'm not understanding your
18 question.

19 Q Okay. Let me rephrase it. If you view that wound on
20 his shoulder as the entrance wound -- and I believe you
21 have.

22 A Yes.

23 Q You would agree with me that it is -- whether it's
24 coming across the top or whatever, it is a bigger wound
25 than the wound in his chin. In other words, the -- are you

1 saying that those were so focused that they -- as they went
2 through or across the top, they actually contracted?

3 A No.

4 Q Okay.

5 A I explained that this was larger because it was
6 tangential across the top of the shoulder, so that's the
7 kind of wound.

8 Q You would agree with me that reasonable people could
9 have a difference of opinion about these facts.

10 A Yes.

11 Q Okay.

12 MR. HARPOOTLIAN: Pardon me, excuse me.

13 (Break in proceedings.)

14 MR. HARPOOTLIAN: If you'll give me just 2 seconds to
15 make sure everything is in evidence that I wanted.

16 (Break in proceedings.)

17 MR. HARPOOTLIAN: I apologize, Your Honor, I spread
18 everything out over here. I'm going to leave the rest of
19 this until after his examination, if that's okay with the
20 Court?

21 THE COURT: All right.

22 Redirect?

23 MR. WATERS: Thank you, Your Honor. May it please the
24 Court?

25 REDIRECT EXAMINATION

1 BY MR. WATERS:

2 Q Your job is to do what? What do you do?

3 A I do autopsies in order to determine the cause and
4 manner of death.

5 Q And when you're asked to do an autopsy, are you told
6 any sort of conclusion to come to, or do you just look at
7 the evidence and the body before you and come to whatever
8 conclusions that body tells you?

9 A Yes, and I examine the body, and I come to a
10 conclusion based on reasonable medical certainty based on
11 my education and experience.

12 Q So, was it part of your job to look at crime scene
13 photos and that sort of thing, or are you relying on what
14 the body tells you?

15 A My job is to look at the body; that's my job. Crime
16 scene photos, crime scene evidence is somebody else's --
17 somebody else's project. That doesn't -- that's not
18 incorporated into my conclusion.

19 Q I want to talk about -- we've gone into a long
20 examination about the top of the head, and you talked about
21 soot and stippling, so I want to make sure the jury
22 understands the difference between the two. You saw
23 stippling on the chest wound to Paul. Is that correct?

24 A Yes.

25 Q All right. Explain to the jury the difference between

1 soot and stippling, and what that tells you, and what it
2 doesn't tell you.

3 A Okay. So, the stippling is like the pieces of
4 gunpowder that deposit on the skin when something is fired
5 within 2 to 3 feet from the barrel of the gun, not the
6 shooting but the barrel of the gun. Soot is like real
7 burning powder, burning marks from very hot gunpowder
8 that's still basically burning, and it causes, like, a
9 burning wound. That's the soot. And we don't see soot
10 except within a few inches, depending on the gun, but we
11 would like not expect to see soot further away from 6
12 inches. So, the fact that we have stippling but no soot,
13 we can fairly say it's between -- it's not closer than 6
14 inches, even though I know it's most likely within 3 feet.

15 Q Right. So, you observed stippling on the wound to the
16 chest for Paul, correct?

17 A Yes.

18 Q Did you observe stippling anywhere else?

19 A No.

20 Q All right. Did you observe any soot at all on Paul's
21 body?

22 A No.

23 Q And did you -- particularly on the top of the head,
24 did you observe any soot there?

25 A No.

1 Q And you were asked a little bit -- you had testified
2 yesterday about, you know, the tilting of the head and the
3 manner in which the shotgun blast went through the chest --
4 excuse me, went through the shoulder into the neck and then
5 out the top of the head, correct?

6 A Yeah. I think that that's a reasonable conclusion.

7 Q All right, and that still is your most likely
8 conclusion. Is that correct?

9 A That's my most likely conclusion to a reasonable
10 degree of medical certainty. It doesn't mean it's
11 100 percent the only thing, but that's my opinion based on
12 my experience.

13 Q All right, and how many autopsies have you done?

14 A Approximate 5500.

15 Q And how long have you been do doing this?

16 A Oh, twenty plus years.

17 Q Okay. Dr. Riemer and Professor Riemer, correct?

18 A Yes.

19 Q You were asked about the book. And all of that
20 discussion that the defense counsel was talking to you out
21 of the book, that was dealing with a contact wound,
22 correct?

23 A Yes. I mean, I'm not going to disagree with a book,
24 but that's -- the discussion is regarding a contact shotgun
25 wound.

1 Q All right, and in your expert opinion to a reasonable
2 degree of medical certainty, you saw no evidence of a
3 contact wound in this particular case with Paul. Is that
4 correct?

5 A Correct.

6 Q All right. Now, you were asked a lot -- let me ask
7 you this. A lot of what was in that book when they're
8 talking about those contact wounds, they were exploring
9 a -- someone using a shotgun to commit suicide, correct?

10 A Well, you know, frequently contact wounds do indicate
11 a suicide, but potentially people can be shot by another
12 also at contact range.

13 Q All right, and your manner of death that you
14 determined for Paul to a reasonable degree of medical
15 certainty was what?

16 A Homicide.

17 Q Homicide. Which means?

18 A Death at the hands of another.

19 Q All right, and did you see with this shot to the
20 chest, or the shot that went through the shoulder into his
21 head, any evidence whatsoever that this could potentially
22 be a suicidal wound?

23 A I did not believe that it was at all consistent with a
24 suicide wound.

25 Q To a reasonable degree of medical certainty.

1 A Yes.

2 Q In your expert opinion.

3 A Yes.

4 Q Let's talk a little bit more about the head wound.
5 And you've been asked a lot of questions about the
6 possibility that this was a contact wound from the top
7 of the head. Is that correct?

8 A Yes.

9 Q And your opinion to a reasonable degree of medical
10 certainty is that it is not.

11 A It is not.

12 Q Okay, and let's talk about just very quickly without
13 belaboring the point some of the reasons. First of all,
14 you saw no soot, correct?

15 A Correct.

16 Q And then also with the damage inside Paul's head, did
17 you see any evidence that would indicate --

18 MR. HARPOOTLIAN: Objection. Leading, Your Honor.

19 Q Did you see any evidence that would indicate to you
20 from the damage that was -- Paul suffered that the force of
21 the shot was going this way as opposed to that way? Going
22 down from the top of his head as opposing to going --

23 A Yeah. I don't believe that it was going from the top
24 of his head down. I don't think the damage to the head was
25 consistent with that.

1 Q Okay, and the -- was the brain -- you said that the
2 brain came to you in a separate container. Is that
3 correct?

4 A Yeah, most of it.

5 Q All right, and did you -- in examining the brain, did
6 you see any evidence whatsoever that would be consistent
7 with the force of the shot, including the pellets and
8 everything else, going into the top of the head and into
9 the brain that way?

10 A No. I did not see any evidence of that.

11 Q To a reasonable degree of medical certainty?

12 A Yes.

13 Q Did you find any wadding in Paul's head cavity?

14 A I don't think there was any wadding.

15 Q You were asked a lot about the shoulder and how it
16 was -- in the picture you were shown it was more -- in that
17 picture, at least, it was kind of a gaping sort of wound.
18 Is that fair to say?

19 A Yes.

20 Q Okay, and his shoulder, was it kind of squinched up in
21 that picture a little bit? I don't know if that's a
22 technical term, squinch, but --

23 A You mean the photograph?

24 Q The photograph that you were shown.

25 A Well, I took a picture of his -- the shoulder area,

1 yes.

2 Q Okay, and just so I understand, as opposed to a
3 direct-on wound and sort of the size of that, and then a
4 wound that goes along the side of the shoulder like you
5 identified in this case, explain to the jury again how
6 those were going to create different shapes of wounds.

7 A Yes.

8 MR. HARPOOTLIAN: Object, Your Honor. Not in
9 response. He's asking her to explain again. That would be
10 repetitive.

11 THE COURT: I sustain the objection.

12 Q Was the wound to the shoulder, was that straight on or
13 oblong to the side?

14 A It was a tangential type of shotgun wound.

15 Q With that shoulder wound that -- you've identified
16 that as the entrance wound, the initial wound?

17 A Yes.

18 Q Would you still expect to find the pellets in that
19 wound consistent with what you saw in Paul?

20 A Yes.

21 MR. WATERS: Thank you, Dr. Riemer.

22 THE COURT: Anything further?

23 MR. HARPOOTLIAN: Yes, sir, just a couple of
24 questions.

25 RE CROSS-EXAMINATION

1 BY MR. HARPOOTLIAN:

2 Q I want to make sure I understand a couple of the
3 answers you gave to the Attorney General. We previously
4 established you did not see any real crime scene photos in
5 this case.

6 A Correct.

7 Q In many crime cases, or some crime cases, do you look
8 at crime scene photos to help you or assist you in your
9 opinions concerning certain things on the autopsy?

10 A No, honestly I don't. It's my job to examine the
11 body, and I come to my conclusions, and I don't really, you
12 know, look at the crime scene photos. I could potentially
13 ask for them if I saw something very unusual, and I'll say,
14 wow, how did that happen? Or sometimes I'll see an
15 entrance gunshot wound that has, you know -- I mean, all
16 obsessive -- there may be a lot of, you know, glass around
17 it and I'll say, wow, did this go through a window first?
18 And I'll ask that question. I don't necessarily have to
19 look at the photos. So, there is information that I might
20 ask.

21 But, you know, looking at the crime scene photos is
22 really, you know, not something that I do to help me come
23 to a conclusion. I -- whatever is on the body, I will rely
24 on what I see on the body, and if it fits with the crime
25 scene photos, fine, but if not, I have my conclusions based

1 on the body.

2 Q But you just conceded you do occasionally ask to see
3 crime scene photos. Occasionally.

4 A No. I don't ask to see the crime scene photos. I
5 will ask to see -- ask if something -- but I just recently
6 had a victim of multiple gunshot wounds, and I thought she
7 may have been sitting in a car. Nobody told me anything
8 like that. Because there was a bunch of like glass
9 fragments kind of -- all the entrance wounds were to the
10 left side, and all of the exit wounds were to the right,
11 and then there were, like, fragments of glass and kind of
12 car parts, you know, banging into the skin, so I was, like,
13 was she in a car. But I don't ask to see the photos
14 really, I don't. It's not part of, you know, my evaluation
15 of the cause and manner of death doing an autopsy.

16 Q But like in this case, you had conversations with the
17 investigating officers, did you not?

18 A At their request.

19 Q At their request. Did you have a conversation with
20 SLED Agent Owens about the bruising on her calf?

21 A Well, I did not actually observe that at the autopsy,
22 so I really couldn't come to any conclusion. And it's very
23 possible that that was dirt from a shoe that was already
24 gone by the time it came to me. I'm not autopsying the
25 bodies at the scene. There's, you know, there's transport,

1 there's movement into a body bag. But, yeah, I -- it may
2 have been asked to me, but I don't -- I distinctly said I
3 didn't see that.

4 Q But you did have a meeting with -- after the autopsy
5 with -- and your report -- with, I believe it's Lieutenant
6 Owens with SLED, the chief investigating officer, and
7 discussed the, the -- did he show you the muddy print, a
8 picture of it?

9 MR. WATERS: Objection. Beyond the scope.

10 MR. HARPOOTLIAN: Your Honor, she --

11 THE COURT: The objection is sustained.

12 Q I think that's probably all I have. Thank you so much
13 for being here today.

14 A Oh, sure.

15 Q But an opinion is an opinion, right?

16 A Yes.

17 THE COURT: Yes, ma'am, you may step down.

18 (The witness exited the stand.)

19 THE COURT: Ladies and gentlemen, we'll take a break
20 for about 15 minutes. Please do not discuss the case.

21 (The jury left the courtroom.)

22 (A break was taken.)

23 THE COURT: You may bring the jury.

24 (The jury returned to the courtroom.)

25 THE BAILIFF: The jury is present, sir.

1 THE COURT: All right, thank you.

2 You may call your next witness.

3 MR. CONRAD: State calls Devin Newell.

4 The witness, DEVIN NEWELL, was first duly sworn and
5 testified as follows:

6 THE CLERK: Take a seat in the witness stand, please.
7 You can adjust the microphone. State your name again for
8 the record. Spell your last name.

9 THE WITNESS: Devin Patrick Newell, N-e-w-e-l-l.

10 DIRECT EXAMINATION

11 BY MR. CONRAD:

12 Q Good afternoon -- or excuse me, almost afternoon, Mr.
13 Newell.

14 A Good morning.

15 Q All right. Where are you employed, sir?

16 A General Motors.

17 Q And what are your duties there at General Motors?

18 A I'm a senior technical expert in Advanced Driver
19 Assist Systems.

20 Q Okay, and can you just give the jury a very short
21 version of what that entails? Very short, please.

22 A I investigate fuel performance issues and concerns
23 with our advanced driver system systems.

24 Q All right, and as part of that role, do you help
25 maintain certain records that are kept by GM in the normal

1 course of business?

2 A I don't necessarily maintain those records, but I'm
3 aware of records that we keep on servers relative to
4 vehicle data that can be of assistance in field performance
5 investigations.

6 Q Okay, and when you say field performance
7 investigations, that's something you do, correct?

8 A That's correct.

9 Q All right, and that references generally what? I
10 mean, what does that mean when you say fuel performance
11 investigations?

12 A Understanding how our vehicles may perform in the
13 field. Active safety systems include things like forward
14 collision alert and automatic emergency braking. So, as we
15 look at how those things perform in the field, vehicle data
16 and other data we collect can be helpful in understanding
17 what is occurring with those events, understanding how our
18 systems are performing.

19 Q Okay, and do modern GM vehicles under certain
20 conditions upload information to GM servers?

21 A That's correct. We've got telematics units in our
22 vehicles. That's a fancy name for sending information over
23 the air. Those -- as part of our normal course of
24 business, those electronic modules in the vehicle collect
25 lots of pieces of data from different sensors and modules

1 in the vehicle, and that information can be sent by cell
2 phone, networks, and/or Wifi back to servers at General
3 Motors.

4 Q And General Motors then keeps that information in the
5 course of normal business, correct?

6 A That is correct.

7 Q Now, if someone buys a GM vehicle and they are not
8 comfortable with uploading certain types of information,
9 can they opt out of some of the things?

10 A Certainly privacy, customer privacy is a big concern
11 at General Motors, as you would expect. We've got lots of
12 teams that look at that, investigate and understand that,
13 and we've got various protocols in place to protect the
14 customer's privacy.

15 Q And just -- let's speak generally. Again, what
16 specific sorts of information is routinely uploaded from GM
17 vehicles to the GM servers?

18 A It can be a lot of different pieces of information.
19 Diagnostic trouble codes with your engine or brake systems
20 could be information we upload. We monitor the performance
21 of things like your battery to understand if your battery
22 is getting low or needs some charging, and other pieces of
23 information about what the vehicle may be doing. That can
24 and does include, I would say, GPS information, your
25 vehicle location, and potentially speed and things like

1 that.

2 Q Okay, and that sort of information is kept by GM in
3 the course of the normal business. Is that correct?

4 A That's correct, sir.

5 Q And I'm going to draw your attention to March of last
6 year. Are you aware, at least as of today, that SLED sent
7 a search warrant to GM?

8 A That's correct. I believe a search warrant was sent
9 to General Motors to generally request information we may
10 have about a particular vehicle.

11 Q All right, and I know you don't have the search
12 warrant in front of you, but did you make a note of what
13 vehicle identification number, or VIN, that search warrant
14 was requesting information for?

15 A I do. I have that number here with me. I can read
16 that.

17 Q Can you read that, please?

18 A Yeah. VIN, it's the vehicle identification number
19 that uniquely identifies the vehicle. It's a 17 character
20 number: 1GNSKFKD0MR210998.

21 Q Okay, and let's fast forward to last Friday, which I
22 believe was February 10th if I looked at my calendar
23 correctly. Did it come to your attention that even though
24 that search warrant had been served back in March of last
25 year, GM, in fact, had some information that was responsive

1 to that original search warrant?

2 A Yeah, that's correct. I wasn't necessarily involved
3 in the search warrant back in March, but I did become aware
4 Friday evening that additional information not previously
5 given before existed.

6 Q All right, and so that -- GM did, in fact, have some
7 information on servers for that particular event, correct?

8 A That's correct.

9 Q That had not been previously provided to law
10 enforcement prior to last Friday.

11 A That is my understanding, yes.

12 Q All right, and -- okay. I'm going to show you what's
13 been marked as State's Exhibit 515. 515.

14 A Thank you.

15 Q And I'm going to ask if you recognize that CD, sir.

16 A Yes, that's correct. That's a CD with information on
17 it that I reviewed on a laptop earlier today, and I have
18 signed and dated the CD.

19 Q All right, and did you verify that the records
20 contained on that CD is the information GM provided in
21 response to that original March search warrant?

22 A Yes, that's correct. I reviewed the three
23 spreadsheets, Excel files that were on here, and those are,
24 in fact, the same information that was stored in our
25 databases and provided to you. And, yes, I can

1 authenticate that.

2 Q Okay, and so those records contained on this CD are
3 authenticate copies of records maintained by GM in the
4 normal course of business?

5 A Yes, sir.

6 Q All right, and just briefly, what sorts of information
7 was contained? And we're not going to ask you to go line
8 by line or anything because there's a pretty voluminous
9 amount of data, correct?

10 A Yeah. There's three different Excel sheets,
11 information collected over three days. Again, as I kind of
12 talked, I have not reviewed the details of this. I was not
13 asked to analyze it. The form and content is what we get
14 there. But generally speaking, that information includes,
15 it says vehicle diagnostic information, information on the
16 battery systems, and GPS information.

17 Q Okay. GPS information, including speed information?

18 A That's correct. Longitude, latitude, speed
19 information are included in there.

20 MR. CONRAD: At this time, the State would move to
21 enter Exhibit 515 into evidence.

22 MR. BARBER: No objection.

23 THE COURT: It's admitted.

24 (DVD MARKED AS STATE'S EXHIBIT NUMBER 515 WAS RECEIVED
25 INTO EVIDENCE.)

1 MR. CONRAD: All right, nothing further from the
2 State.

3 THE COURT: By the defense?

4 MR. BARBER: Thank you, Your Honor.

5 CROSS-EXAMINATION

6 BY MR. BARBER:

7 Q Good morning, sir.

8 A Good morning.

9 Q I just have maybe one minute worth of questions. So,
10 you were not part of the -- you weren't working on this
11 when the search warrant came in. Is that correct?

12 A That's correct.

13 Q And you just became aware of this on Friday?

14 A That's correct.

15 Q How did you become aware of it?

16 A GM, General Motors' legal staff reached out to me in
17 response to the subpoena as a person who could come down
18 and authenticate these records.

19 Q The legal staff told you that you had information
20 responsive to the search warrant?

21 A That's correct.

22 Q Okay.

23 A I'm sorry, that General Motors had information
24 responsive. Not me personally.

25 Q Yeah. I apologize for that. Of course General

1 Motors.

2 A Thank you.

3 Q Are you aware of the testimony that occurred earlier
4 in this case regarding reverse engineering the electronics
5 in the Chevy Suburban?

6 A I have general knowledge that some FBI folks have
7 looked at some infotainment -- information inside the
8 infotainment system in the vehicle.

9 Q Well, do you have any knowledge of any reverse
10 engineering efforts the FBI conducted over the course of a
11 full year?

12 A I have not been involved in those or not aware of any
13 details of that, no, sir.

14 Q Maybe you can ask -- answer one quick technical
15 question. The timestamps in this data, where do they come
16 from?

17 A Again, I have not reviewed this specific data, but the
18 timestamps of these things here, when GPS information is
19 collected by a GPS receiver, included in that is timestamp
20 information.

21 Q Okay, and then finally, this is information that was
22 uploaded to a server at GM?

23 A That's correct.

24 MR. BARBER: No further questions, Your Honor.

25 THE COURT: Anything further?

1 MR. CONRAD: Not from the State, Your Honor.

2 THE COURT: You may step down.

3 THE WITNESS: Thank you, sir.

4 (The witness exited the stand.)

5 THE COURT: You may call your next witness.

6 MR. FERNANDEZ: State calls Roger Dale Davis.

7 The witness, ROGER DALE DAVIS, was first duly sworn
8 and testified as follows:

9 THE CLERK: If you would, please, sir, be seated.

10 State your full name for the record, spell your last name,
11 and adjust the microphone so we can hear you.

12 THE WITNESS: My name is Roger Dale Davis, Jr. Last
13 name is D-a-v-i-s.

14 DIRECT EXAMINATION

15 BY MR. FERNANDEZ:

16 Q And, Mr. Davis, do you go by Dale?

17 A Dale, Roger, either way.

18 Q Okay. Or Mr. Davis?

19 A It don't matter.

20 Q If you would do me a favor? Because it's a little
21 hard to hear some folks in this courtroom, if you would
22 make sure that that microphone is pulled close to you and
23 speak into it, we'd all greatly appreciate it. All right,
24 Dale, why don't you tell us a little bit about yourself.
25 Where were you born? Where were you raised?

1 A I was born in Hampton County. I was raised in
2 Hampton. Went to Wade Hampton High School.

3 Q Okay, and, again, if you would please try to get a
4 little closer to that microphone. I know it's tight in
5 there. All right. What line of work do you -- have you
6 done?

7 A Construction work all my life.

8 Q Do you -- did you ever have an opportunity to work at
9 the farm in Moselle?

10 A Yes.

11 Q Okay. Is that close to where you actually live?

12 A Mile and a half.

13 Q How did you -- how did you get -- how did you become
14 familiar with the Murdaugh family and the Moselle property?
15 How did you start working there?

16 A I was walking and Alex would stop and talk with me,
17 and he asked me one day about cleaning the kennels for him,
18 and probably a couple of months, six months later, then he
19 asked me to come do it on the weekends.

20 Q And that started about four years ago?

21 A About four years ago.

22 Q And walk us through the process. What did you do, and
23 how many times a day did you do it?

24 A Twice a day. Once in the morning and once in the
25 evening.

1 Q What time in the morning generally?

2 A Average around 7:00.

3 Q Do you wake up early?

4 A Oh, yeah.

5 Q So 7:00 a.m., and then what time in the evenings
6 generally?

7 A Usually around -- I would try to get there around 3:30
8 or 4:00.

9 Q How long does the process typically take you?

10 A About 45 minutes.

11 Q And walk us through what that process is. What do you
12 do out there?

13 A In the morning times I would take -- go feed all the
14 dogs, give them time to eat. I would feed the chickens.
15 That way the dogs would have time to eat. Then I would
16 wash the pens out. Then I would usually roll the hose up,
17 and then go to the house, and then come back in the
18 afternoon and repeat the process.

19 Q Now, you mentioned washing the pens out. Did the
20 dogs, did they -- are dog beds --

21 A Yes.

22 Q -- in their kennels?

23 A Yeah. Buster, Buster -- excuse me, Grady and Bubba
24 had two dog pens -- beds.

25 Q And if you're washing it out, meaning -- are you

1 spraying it with water?

2 A Sprayed it with water.

3 Q What did you do with the dog beds?

4 A I would stick them up on top of the dog box.

5 Q And then did you leave them up there or did you put
6 them back?

7 A Normally during -- typically once I washed the pens
8 out, I would lay them back down. Especially if it was cold
9 in the wintertime, I would lay them back down on the
10 ground. But during the summertime, you would wait until
11 that afternoon to lay them back down on the ground.

12 Q In the four years you worked there, did you get to
13 know the property fairly well?

14 A Yes.

15 Q And did you get to know the folks that lived there
16 pretty well?

17 A Yes.

18 Q Did you get to know Maggie Murdaugh?

19 A Yes, sir.

20 Q All right. Well, tell us what your experiences with
21 her were.

22 A Normally she was just so laid back. She would talk to
23 you like a normal person. We'd sit there and talk about
24 the dogs. She would talk about sometimes where she would
25 be at the beach. And she normally would tell me, you know

1 I'm going to the beach. I'm taking Bubba and Grady with me
2 or whatnot, or I'm going to leave them. Or if it was real
3 hot, she would want to put them over there in the ice
4 house, turn the air condition on where they would have the
5 ice -- the coolers at.

6 Q Did Maggie like to spend time with the dogs?

7 A All the time.

8 Q You mentioned the ice house. Was that the processing
9 house kind of on the back of the hangar?

10 A Property. That was the --

11 Q And was it air conditioned? Is that why you said she
12 would put them in there?

13 A During the summertime if it got real hot.

14 Q And that house, does it have air conditioning, that
15 shed?

16 A Yes, sir.

17 Q All right. Did you get to know Paul?

18 A Yes.

19 Q All right. What was your experiences with him?

20 A He was a little wild and crazy, but he would work.
21 That boy would work.

22 Q He liked being at the farm?

23 A He liked getting out and doing things, hunting and --
24 but he would work on the tractor or whatever Daddy needed
25 him to do.

1 Q And did you get to know Alex?

2 A I did.

3 Q Is he here today?

4 A Yes, sir.

5 Q Where is he?

6 A He's sitting right over there.

7 Q Would you explain what he's wearing?

8 A Wearing a suit and a pair of glasses, blue looking
9 shirt.

10 Q And what were your experiences with Alex?

11 A He was always very particular. He would want the dog
12 buckets washed out. If it looked like they started getting
13 any kind of green or brown looking stuff in the water, he
14 wanted to make sure -- which I usually washed them out
15 every two weeks anyway with bleach. But I always dumped
16 them every day.

17 Q Was Alex easy to get ahold of?

18 A No.

19 Q All right. Explain that. What do you mean by that?

20 A He would either be in court or doing something with
21 business. It would sometimes be a little bit difficult to
22 get ahold of him.

23 Q Who did you see most often when you were out there?

24 A Ms. Maggie or either Paul.

25 Q And how did Maggie and Paul typically come to and from

1 the big house to the kennel area?

2 A Paul would usually be in his truck. Very --

3 Q We've heard a lot about trucks. Which truck was that?

4 A His white F150 unless his daddy had him doing
5 something. Then he would have to drive the F250, but most
6 of the time he would be in his white F150.

7 Q And what color was the F250?

8 A It was also white.

9 Q So, two white truck were what he typically used?

10 A Yes, sir.

11 Q And how about Maggie?

12 A She normally drove her Range Rover until he -- she got
13 the black Mercedes.

14 Q And then what would she drive after that?

15 A Most of the time she would drive the black Mercedes.

16 Q And would she load her dogs, the house -- first of all
17 let's go back. Which dogs were down there? Do you
18 remember all the dogs.

19 A Bubba, Grady, Maggie. Then they started letting -- I
20 can't remember his name right off -- Dahlia was there,
21 Armadillo, and I call her Tappy Toes. I don't know what
22 they called her but that's what I always called her.

23 Q And I think the other dog, was that a dog owned by one
24 of Paul's friends, Rogan? Is that the one you're referring
25 to?

1 A Yes.

2 Q What type of dog was it?

3 A A lab, chocolate lab.

4 Q And which dogs were the family dogs, the family pets?

5 A Grady, Bubba, and Maggie.

6 Q And what kind of dogs were they?

7 A Labs.

8 Q And colors?

9 A Bubba was yellow, Grady was black, and Maggie was
10 yellow.

11 Q And would they typically -- where would they typically
12 stay, those dogs, those animals?

13 A It all depend on -- most of the time -- because Bubba
14 was very rambunctious, so they got to where they would lock
15 him up in the kennels at night, and most of the time they
16 would lock all of the labs up in the kennels to keep them
17 from roaming off. But she, Ms. Maggie, would take them out
18 during -- when she was home. Usually a lot of times after
19 I done left, she would take them up to the house and let
20 them roam around the house -- the yard a couple of hours,
21 and then she would bring them back down to the pens.

22 Q And if Maggie -- would Maggie load them into her car
23 if she was taking them elsewhere, to the beach or wherever
24 else she was staying?

25 A Wherever she was staying at, she would load them in

1 the vehicle. Most of the time she would load them right in
2 her vehicle.

3 Q Dale, I'm going to hand you what's been marked State's
4 Exhibits --

5 (Break in proceedings.)

6 Q I am going to hand you what's been mark as State's
7 Exhibits 505, 506, 502, 503, 504, and 516. Dale, if you
8 wouldn't mind, please take a moment to review all of these
9 and let me know if you recognize what they show.

10 A They show the kennels.

11 Q And then the -- I believe there's one diagram there,
12 if you recognize what that shows.

13 A It shows the diagram drawing of the kennel.

14 Q Very good.

15 MR. FERNANDEZ: Your Honor, we would move to place all
16 of those exhibits into evidence, I believe without
17 objection.

18 MR. GRIFFIN: No objection, Your Honor.

19 THE COURT: They're admitted without objection.

20 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 502 WAS
21 RECEIVED INTO EVIDENCE.)

22 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 503 WAS
23 RECEIVED INTO EVIDENCE.)

24 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 504 WAS
25 RECEIVED INTO EVIDENCE.)

1 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 505 WAS
2 RECEIVED INTO EVIDENCE.)

3 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 506 WAS
4 RECEIVED INTO EVIDENCE.)

5 (PHOTO MARKED AS STATE'S EXHIBIT NUMBER 516 WAS
6 RECEIVED INTO EVIDENCE.)

7 Q All right, Dale, I'm going to show you what's been
8 marked as State's Exhibit 505.

9 MR. FERNANDEZ: Can we have the ELMO, please?

10 (Break in proceedings.)

11 Q Dale, while we get this loaded up, tell us -- tell me
12 a little bit -- I know -- did you have a particular way of
13 hosing down and, you know, with the -- dealing with the
14 hose? Tell us a little bit about what that was about.

15 A The particular way of me putting the hose away or --

16 Q Right.

17 A Normally after I got through washing, I would stretch
18 the house straight out.

19 Q Into which direction?

20 A Back towards the shed room right there, the dog feed
21 room.

22 Q All right, and we now have the ELMO up, and we're
23 looking at Exhibit 505. And the feed room, I believe, is
24 what you referred to. Is that the structure on the far
25 right?

1 A Yes.

2 Q Okay. All right, and then where -- in this picture
3 where is the hose you're talking about located?

4 A It's back towards the left-hand side back towards the
5 farthest end.

6 Q Is that that yellow, wrapped up --

7 A That's that yellowish/green looking hose.

8 Q All right. Go ahead and explain this, what you would
9 typically do after rinsing off and putting the hose away.

10 A I would stretch the hose out back towards the feed
11 room. I would cut the valve off at the top, which is right
12 up above as the hose come in. Then I would walk back down
13 and cut the valve on at the end of the hose. That way it
14 would release the pressure, and then I would roll it up
15 slowly until I had it uniform.

16 Q Were you pretty particular about how you wound that
17 hose?

18 A Yes.

19 Q And why would you do it that way? And did you do it
20 that way every time?

21 A Every time.

22 Q And why would you do it so particularly?

23 A Because if you notice how the hose right now is kinked
24 up, it would start making the hose where if you didn't do
25 it right, eventually would it keep kinking. It would start

1 making it where it didn't want to -- and it would cause the
2 hose to start having little splits in them.

3 Q The picture that you're seeing there, that hose, is
4 that the way you would rewind it up?

5 A No.

6 Q How do you know?

7 A I'm very particular how I roll that. If you notice
8 the pressure on that hose, somebody used that hose after I
9 did because it's twisted. And the nozzle is too far up.
10 The nozzle, I could always have it and make sure it was
11 laying down flat. That nozzle is too far up.

12 Q Dale, I'm going to show you what's been marked as
13 State's Exhibit 516. And, again, please briefly explain
14 what it is we're looking at there.

15 A The drawing of the kennel.

16 Q Okay. I'm going to hand you a pen, and with the
17 Court's permission I'm going to ask you to go ahead and
18 fill in -- well, first of all let's back up. Did you work
19 the -- were you aware of the events surrounding June 7,
20 2021, where Maggie and Paul were murdered?

21 A I received a phone call from C.B. that the SLED wanted
22 to see me because Ms. Maggie and Paul had been murdered,
23 and I thought he was joking but he told me no. And I told
24 him give me 5 minutes and I would be up there because I
25 was going to carry my trash off at the time. And I got up

1 there and the dogs was raising Cain, and I asked him could
2 I go ahead and feed the dogs so they would quiet down, and
3 they told me to give them a few minutes, and then they gave
4 me permission to feed them. And as soon as I fed them,
5 they just quiet down. They didn't bark no more.

6 Q Okay. So, you were familiar about that incident at
7 the --

8 A Yes, sir.

9 Q And you went out there what day?

10 A That morning.

11 Q Was that the 8th, the morning of Tuesday?

12 A When the murders happened, yes.

13 Q Did you work every day leading up to that day?

14 A Yes.

15 Q And did you do that normal routine which you already
16 described?

17 A Yes.

18 Q All right. Did you, in fact, do that normal routine
19 on the Monday of the -- before the murders?

20 A Yes.

21 Q Okay. Walk us through that day. What did you do in
22 the morning?

23 A I got there probably around 7:00, between 7:00 and
24 8:00. It all depended on when I got up, but most of the
25 time I got up early. I would be there before 6:30 or 7:00.

1 I would go through there, feed the dogs, feed -- then go
2 feed the chickens. That would give the dogs time to eat
3 their food, and then I would wash the pens out.

4 Q And was anything unusual or out of place when you were
5 down there in the morning?

6 A No.

7 Q And did you repeat the process again in the afternoon,
8 the evening time?

9 A I did.

10 Q All right. What time did you -- on Monday, June 7th,
11 what time did you go back to the pens?

12 A I got there before 4:00 o'clock because I remember
13 leaving at 4:30.

14 Q All right, and was anyone there at the time you went
15 to the dog kennels that day?

16 A No.

17 Q Did you notice anything out of place when you went
18 there to the dog kennels in the evening time?

19 A No.

20 Q And what did you do after arriving?

21 A Well, once I arrived that afternoon, I got out. I fed
22 Grady, Bubba, and Maggie because we fed them twice a day.
23 The hunting dogs only got once a day. Took and fed them.
24 I picked the dog beds up. I dumped all the water out
25 because I washed all of their buckets, gave them fresh

1 water, washed the pens out. Stretched the hose out, cut
2 the water at the valve off at the top. Went down there and
3 cut the water on the valve on down at the end of the hose
4 so the water would come out, rolled the hose up, and at
5 4:30 I left.

6 Q And you rolled -- did you roll the hose up the way
7 you've always done it that day?

8 A Every time.

9 Q Do you remember how the dogs were laid out in the
10 kennels that day when you left?

11 A When I left, yes, sir.

12 Q And with the Court's permission, I'm going to ask the
13 witness to please, if you would, write on that piece of
14 paper, the exhibit -- State's Exhibit 516, beginning
15 with -- first of all on the far right, what does that door
16 signify in the --

17 A Storage room, storage room/feed room.

18 Q Beginning with kennel one next to the feed room, what
19 dog was in there when you left that day at 4:00, or before
20 5:00?

21 A Grady.

22 Q All right. If you would, please write Grady on there.

23 A (Witness complies.)

24 Q Okay, and then moving on to kennel two, what dog was
25 in kennel two?

1 A Bubba.

2 Q And for our reference, Grady was the black lab?

3 A Grady is the black lab.

4 Q Okay, and Bubba is what?

5 A Yellow lab.

6 Q Okay, and who was next to Bubba in pen three?

7 A Maggie because she was getting bigger than Bubba.

8 Q And Maggie is a what colored lab?

9 A Yellow. A yellow lab.

10 Q All right. Were there any dogs next to Maggie?

11 A No, there was -- no.

12 Q Okay, and that would be kennel four was open?

13 A That would be -- yeah. That one should have been
14 opened. The next one down should have been Rogan's dog.

15 Q All right, can you write that in there? Just right
16 chocolate lab, or Rogan's dog, whatever you want to write.

17 A (Witness complies.)

18 Q That would be kennel five?

19 A I'm trying to remember what Rogan's dog's name. That
20 one should have been there. I don't remember what Rogan's
21 dog's name was at the time.

22 Q Okay. Was there any dog located in kennel six? And
23 if you want to work -- however you want to do it, sir, if
24 you want to just fill out the rest of the dogs, the working
25 dogs, that's fine.

1 A Well, Dahlia was at the very end of kennel ten. I
2 know that. Then, let's see, Armadillo should have been the
3 next one coming back from ten. Let's see, empty on nine.
4 All right. It should have been -- yeah, Armadillo should
5 have been right past the hose right there. And then it
6 would be Tappy Toes. It would be Tappy Toes right there,
7 because they always kept Rogan's dog and Maggie -- there
8 was a kennel in between them. So, that should have been
9 Tappy Toes right there.

10 Q Okay. Thank you. All right, I'm going to put this on
11 the screen and just verify that that was what you filled
12 out. All right, Mr. Dale, I see starting with number one,
13 Grady, then Bubba, Maggie, then five is Rogan's, six is
14 Tappy Toes, seven is Armadillo, and ten is Dahlia. Is that
15 correct?

16 A That's correct.

17 Q And that's the way it was when you left the property
18 at around 5:00 that Monday, June 7th.

19 A Yes.

20 Q And on -- for our reference on this diagram, that
21 green circle, that represents what?

22 A The hose, garden hose.

23 Q I'm going to show you a few more pictures. If you
24 would, just describe what we're seeing. Are you familiar
25 with that angle?

1 A Yes.

2 Q All right. Where are we looking at -- from this
3 angle, where are we looking at things?

4 A You're looking straight down the kennel where you got
5 the hose and the walkway going down up under the kennels.

6 Q And on this picture, where would the feed room be
7 located?

8 A At the very end on the right hand of this picture.

9 Q Okay. When you -- in the four years you were washing
10 out the kennels, did water collect or pool in certain
11 areas?

12 A It did.

13 Q All right. Can you identify in this picture those
14 areas?

15 A Right under the hose and right there, which should
16 have been Armadillo's pen, there should have right there,
17 and then right below it should have been collected, and
18 maybe one more little spot right down towards the end of
19 the post right there, but that would be about it.

20 Q For the record -- I think I neglected to say for the
21 record this is State's 504. Moving on to State's 502, a
22 very similar angle. Dale, do you see those pools of
23 collected water that you mentioned just on the last
24 exhibit?

25 A Yes.

1 Q And also State's 506. And, again, do you see the same
2 angle just pulled a little farther back?

3 A Yes.

4 Q Who's the dog there on the last pen that we can see in
5 the dog shed in the dog house?

6 A Dahlia.

7 Q All right. Did water ever pool over by the feed room?

8 A No. Because usually when the -- that's the reason I
9 would go in the afternoons. The sun would come down and
10 beat -- it would dry it up a lot quicker, especially in the
11 summertime it would really dry it real quick. In the
12 wintertime the sun would actually still hit the concrete
13 around 3:00 to 4:00. It would be usually around 6:00 or so
14 before the sun wouldn't be hitting on the concrete.

15 Q Did water pool in the front of where Bubba would have
16 been located, or Grady?

17 A No.

18 Q I'm showing you State's Exhibit 503. Dale, were you
19 able to see the water located in front of the feed room in
20 front of the two kennels, one and two?

21 A Yes.

22 Q Is that how water would normally pool when you washed
23 the kennels for four years?

24 A Normally, no. There was too much water right there.
25 You can tell where the concrete has already started drying,

1 but there's too much water right there around the second
2 and third pen.

3 Q Looking at this picture, what dog do we see in kennel
4 one, and what dog do we see there in kennel two?

5 A You see Bubba in kennel one and Maggie in kennel two.

6 Q And, again, Grady is what kind of dog?

7 A Grady is a lab.

8 Q What color is he?

9 A Black.

10 Q Black. Is that the -- and when we say the spots where
11 you would put them or they were located, were there
12 assigned kennels necessarily to the dogs?

13 A Not really. But most of the time Ms. Maggie wanted
14 Grady to be in that kennel right next to the feed room, and
15 then we would usually put Bubba or Maggie in the following.

16 Q So that was just out of habit, mostly Maggie's habit?

17 A Yes, sir.

18 Q All right. Did anyone else in the family put the dogs
19 in a specific location, or did they put it wherever they
20 could find a spot?

21 A They would put it wherever they could find a spot.

22 Q But Maggie was particular about where she put them up?

23 A Most of the time, yes.

24 Q Dale, I'm going to ask you about firearms in general.

25 Are you familiar generally with firearms?

1 A Yes.

2 Q Did Paul have any firearms that he favored more often
3 than others just in your experience with him?

4 A Yes.

5 Q All right. Are you familiar with an assault rifle
6 style rifle?

7 A Yes.

8 Q All right. Tell us about the one that you observed
9 Paul having with him most often.

10 A When he went hog hunting, he would have a AR style 300
11 Blackout.

12 Q And what color was it?

13 A Black.

14 Q Did it have a scope on it?

15 A Yes.

16 Q All right. Did Paul also favor a camo shotgun?

17 A Yes, during turkey season.

18 Q The family owned -- as far as you knew, the family
19 owned a lot of firearms. Is that correct?

20 A Yes.

21 Q Did you in your experience -- and did you spend a lot
22 of time primarily down here at this dog pen area?

23 A Yes.

24 Q Twice a day every day.

25 A Yes.

1 Q Did you have occasion -- did they occasionally leave
2 guns at this area?

3 A Yes.

4 Q All right. Where would you have found them? And when
5 I say occasionally, what does that mean to you?

6 A That would be -- especially when it was during hunting
7 season, they would leave either on the golf cart or .
8 Sometimes they would leave them in the truck. But most of
9 the time it would be on the golf cart or the .

10 Q And how often was that if you're there every day?

11 A Sometimes they could be once; sometimes they could be
12 three or four times.

13 Q In a month or --

14 A In a month. It just all depends on how hurried they
15 got.

16 Q But that's during hunting season, right?

17 A That's during the hunting season.

18 Q Okay, and did Alex carry a firearm?

19 A I never seen him carry a firearm, but I know he
20 carried a pistol in his vehicle.

21 Q Did you have a chance to listen to a kennel video in
22 the meeting with law enforcement?

23 A I did.

24 Q And did you identify the voices on that kennel video?

25 A I did.

1 Q Whose voices did you hear?

2 A Paul, Maggie's, and Alex's.

3 Q In all the time that you spent out there in the four
4 years every day, twice a day, did you ever see a gun left
5 in the feed room?

6 A No.

7 Q And you went in the feed room every day twice a day
8 for four years?

9 A Yes.

10 MR. FERNANDEZ: Beg the Court's indulgence.

11 (Break in proceedings.)

12 Q And when you refer to Alex carrying a pistol in his
13 car, is that because -- how did you know that?

14 A One time I had to drive his vehicle over to the law
15 firm. And then every once in a while, you, you would have
16 to roll up the window or something or other if it would go
17 to rain or something or other if they happened to not be
18 home.

19 Q You mentioned the vehicles. Were the vehicles
20 unlocked, all of the vehicles on the farm?

21 A All of the vehicles on the farm, keys in them.

22 Q Keys in them. So, someone could just open the door
23 and drive them?

24 A Oh, yeah. If they wasn't in the switch, they would be
25 in the center console.

1 Q And in this picture here that's still on, do you see
2 the dog beds located in those pictures?

3 A Yes. They on top of the dog kennel.

4 Q They haven't been put down.

5 A Haven't been put down.

6 MR. FERNANDEZ: Nothing further. Thank you.

7 THE COURT: By the defense.

8 MR. GRIFFIN: May it please the Court?

9 CROSS-EXAMINATION

10 BY MR. GRIFFIN:

11 Q Good afternoon, Dale.

12 A Afternoon.

13 Q I'm Jim Griffin. We've met a few times, haven't we?

14 A Yes, sir.

15 Q I want to start by asking you. How long did you work
16 at Moselle for Alex Murdaugh?

17 A About four years.

18 Q And twice a day every day?

19 A No. It started off just the weekends, and then it
20 went full-time with him right as -- right before Ronnie
21 quit.

22 Q Okay, and that's Ronnie Freeman?

23 A Whatever his last name is. I know Ronnie. That's all
24 I can tell you.

25 Q Yes, sir. And a couple of things. You've said you'd

1 never seen guns left in the feed room, but you certainly
2 have seen guns left down in the work shed and --

3 A Yes.

4 Q -- and then the, what do you call it, and that's an
5 off road vehicle that two people can sit beside each other?

6 A Yes.

7 Q And then I guess they had a golf cart down there?

8 A Yes.

9 Q And you have seen guns left in their vehicles.

10 A Yes.

11 Q Unlocked, right?

12 A Unlocked.

13 Q And hog hunting, there's really no season for hog
14 hunting, is there?

15 A No.

16 Q And a couple of dogs in that kennel were used for hog
17 hunting.

18 A We had got -- Paul had got rid of the Bluetick, but he
19 kept Armadillo, but he never really hunted him anymore
20 after that last time he got hurt.

21 Q Right. Now, this is -- when you're hog hunting with
22 dogs, I don't think you can use a gun, can you?

23 A Oh, yeah, you can use a gun.

24 Q Oh, you can? Okay. The --

25 A Unless you're man enough to go in there and catch him

1 by the foot and bring him out.

2 Q Well, somewhere along the way I heard you had to use a
3 knife as opposed to a gun, but I don't -- the -- let me ask
4 you the -- I'm going to pull up this video, Exhibit 297.
5 It's the kennel video. And hang on, let me get around
6 here. Dale, it should be on that screen there. And
7 it's --

8 MR. GRIFFIN: And I'm going to tell you when to stop,
9 Doug, but if you would go ahead and play it. Now, stop
10 right there.

11 Q Is that Rogan's dog?

12 A Yes.

13 Q Dog named Cash, you think?

14 A Yep, that was it.

15 Q Cash? And Cash was -- I'm going to show you what
16 you've got labeled on Exhibit 516. Cash would be in kennel
17 number five. Is that right?

18 A Should have been around --

19 Q And that's a -- that's a few kennels up from the hose.
20 Is that right?

21 A Yes.

22 Q Okay. All right.

23 MR. GRIFFIN: We're going to run this continuing and
24 I -- get ready to stop when I tell you, Doug.

25 (The video was played. Audio not transcribed.)

1 MR. GRIFFIN: All right, stop. Oh, wait, go back, go
2 back, go back a few seconds. All right. Right there.

3 Q What do you see over there in the top left on that
4 picture, Dale?

5 A Hose.

6 Q Is that the hose?

7 A Yeah.

8 Q Now, that hose is on the ground, isn't it?

9 A Yes.

10 Q It's not rolled up, is it?

11 A No.

12 Q Okay, and there's water around there, isn't there?

13 A Yes.

14 Q So, someone before this video was taken had taken the
15 hose down that you meticulously wrapped it up. Is that
16 right?

17 A Yes.

18 Q Okay.

19 MR. GRIFFIN: You can take that down.

20 Q Now, you say Mr. Alex was particular about how the
21 hose should be wrapped. Is that right?

22 A Well, not particularly him. He would like it to be
23 wrapped, but he wouldn't very particular how as long as it
24 was wrapped up out of his way.

25 Q Okay.

1 A But I was very particular how I wrapped it.

2 Q You were very particular.

3 A Yes.

4 Q How about Paul? Was he meticulous how he wrapped it?

5 A No.

6 Q All right. Now, you mentioned that water would not
7 normally accumulate up by Grady and --

8 A And Bubba.

9 Q -- Bubba's because that's where the sun would come in
10 the evening.

11 A Usually beats down. You watched it, because if you
12 didn't be very particular --

13 Q Right.

14 A -- they didn't seal up underneath that door, so the
15 inside of the jams started to rot. So, I tried to make
16 sure, because if it was any kind of puddle or whatever, you
17 would have to make sure it was gone.

18 Q Right.

19 A So, you would try not to make sure there was no puddle
20 in there. So, puddling doesn't usually happen around the
21 dog feed room. It would -- usually couple of posts back
22 you would have under the hose, usually around about where
23 Armadillo's pen was, and there was a few other little spots
24 around the posts that normally would puddle.

25 Q Now -- and you were meticulous about not letting water

1 build up around the feed room door because of the rot.

2 A Yeah.

3 Q And, in fact, there was sealant in the feed room where
4 you would have to routinely put by the door to keep it from
5 rotting.

6 A Alex done it the last time.

7 Q But you had to periodically do that, right?

8 A Yes.

9 Q And you do that because water builds up, right?

10 A Well, because the water would splash. They didn't
11 seal up underneath the door jam right, and it would just
12 run up underneath the plate right there where the cement,
13 it would run and drain off.

14 Q Now, we would -- can we agree that Paul was not as
15 meticulous as you were about spraying around the kennels?

16 A No.

17 Q We can or cannot agree?

18 A We can agree to that.

19 Q And so -- and we saw the hose out, and you don't know
20 what time that was, but I think the record reflects it was
21 sometime 8:44 in the evening. I mean, that's about
22 sundown, right, in June?

23 A Oh, yeah.

24 Q And so there wouldn't be a hot sun burning the water
25 off if the hose had been used, you know, right around that

1 period of time, would there?

2 A No.

3 Q And if Paul had not been meticulous like you, it
4 wouldn't be unusual to see water build up where you see it
5 in the photo. Isn't that right?

6 A Yes.

7 Q Okay, and sometimes the dogs would knock over the
8 water bowl.

9 A They would.

10 Q And that would -- and I think maybe we can see in the
11 photos that that would cause water to run off, too, as
12 well, right?

13 A Oh, yeah, it would run off.

14 Q Okay. Now, Dale, what's lovey dovey see mean to you?

15 A What does it mean to me?

16 Q Well, you used the phrase lovey dovey about Alex and
17 Maggie. What did that mean?

18 A It means they loved each other.

19 Q And in your presence you -- I mean, you described them
20 as being lovey dovey, didn't you?

21 A Yes.

22 Q And tell the jury what you meant by that.

23 A Every time I always see them, they, you know -- I've
24 never seen that man even raise his voice at his wife or
25 kids, so -- or his wife. I've never seen him even -- none

1 of them argue. But he always -- anything she wanted or the
2 boys wanted, he would try to get it.

3 Q And how do you -- what was your observations about his
4 relationship with Paul?

5 A They liked to hunt and fish together. I mean, they
6 always -- they drank beer together.

7 Q Okay, and his relationship with Buster?

8 A I didn't see Buster as much, but it was always
9 friendly. I mean, it's never --

10 Q Sure.

11 A -- seen any harmful way or anything with them.

12 Q Do you remember, Dale, one time one of the hunting
13 dogs got hung up in the one of the kennels --

14 A Yes.

15 Q -- choking to death?

16 A Yes.

17 Q And that dog was badly injured, wasn't he?

18 A It was. It didn't survive.

19 Q And the decision was made, it was mercy to put the dog
20 down, wasn't it?

21 A Yes.

22 Q And Mr. Alex couldn't shoot that dog and he asked you
23 to do it, didn't he?

24 A Yes.

25 Q And did you do that?

1 A Yes.

2 Q Now, on June 7th, the night of June the 7th, you got
3 off work, I think you said, 4:30?

4 A 4:30.

5 Q And do you remember what you did? Did you go home?

6 A I went straight to the house.

7 Q And did you stay at the house all night?

8 A I sure did.

9 Q Did you stay inside?

10 A I did.

11 Q And you lived --

12 A A mile and a half.

13 Q -- a mile and a half. Driven a lawnmower down that
14 road, I believe, the last time I saw you.

15 A I did.

16 Q Did you hear any gunshots that night while you were in
17 your house?

18 A No, I did not.

19 Q You mentioned Paul liked to hunt with a Blackout, 300
20 Blackout, I guess?

21 A He did, hog hunt.

22 Q Yeah. Before the murders, when is the last time you
23 saw that gun? Do you remember?

24 A I cannot remember the exact, but it was quite a few
25 months. He had said something about going hog hunting and

1 he had it in his truck.

2 Q Right.

3 A But it's been -- it was a couple of months I know, at
4 least five or six months.

5 Q All right. What -- two last points. Bubba has been
6 getting a bad name. Bubba was a little stubborn dog?

7 A Stubborn? No, he was just rambunctious.

8 Q Right, but would he listen to you?

9 A Somewhat.

10 Q Would he listen to Alex?

11 A He would.

12 Q And in that feed room, did you keep shock collars back
13 there for the hunting dogs and stuff?

14 A We did.

15 Q All right. What, what else was kept in that feed room
16 besides feed?

17 A Shock collars, feed, chicken feed, the GPS tracking
18 collar.

19 Q Was there some medicine if you needed it?

20 A There was medicine. There was all kinds of stuff in
21 it.

22 Q So, if you needed to put something on a dog's skin for
23 rash or something that -- had that in the feed room?

24 A Had that.

25 Q And now, Ms. Maggie would go down there, and you said

1 she would take a Mercedes sometimes, but she would ride her
2 bike down there, too, wouldn't she?

3 A Bicycle, golf cart, and then sometimes she would walk.

4 Q She would walk. And she liked to get the dogs out,
5 Grady, and Bubba. And Maggie, I think, was Mr. Randolph's
6 dog, wasn't she?

7 A Yes, sir.

8 Q And he -- and she liked to run the dogs in the golf
9 cart sometimes, run behind them?

10 A She would. Sometimes she would just would get out
11 there and walk with them.

12 Q All right. Now, those were pet dogs but they stayed
13 at the kennels, right?

14 A Most of the time they did.

15 Q And they didn't let those dogs in the house because
16 Buster had eczema. Were you aware of that?

17 A I wasn't aware of that. I know they would take them
18 up to the house. Now whether they went in, I didn't know.

19 Q You didn't know whether they went in or went out? You
20 did not?

21 A I know they stayed outside around the house.

22 Q And you know they had an electronic fence?

23 A They did.

24 Q And sometimes it worked and sometimes it didn't?

25 A Yes.

1 Q Okay, but it wasn't unusual for Bubba, Grady, and
2 Maggie to be down at the kennels --

3 A No.

4 Q -- at night, right?

5 A It wouldn't.

6 Q Okay, and they liked to take -- chase the chickens.
7 Was Bubba the one?

8 A They never would chase chickens until Alex had got a
9 rooster that would roost right over there. If you let that
10 rooster out, that joker would be out there and would taunt
11 them jokers, and they got to where they would -- got to
12 where they would chase the chickens.

13 Q Because the --

14 A That rooster --

15 Q -- rooster would be taunting the dogs?

16 A Yes. He would aggravate the dogs to death.

17 Q All right.

18 MR. GRIFFIN: That's all of the questions I have,
19 Dale. Thank you so much.

20 THE COURT: You may redirect.

21 REDIRECT EXAMINATION

22 BY MR. FERNANDEZ:

23 Q Just curious, Dale, what happened to that rooster?

24 A I can't remember if Grady got him or Bubba got him.

25 Q So, the rooster got his apparently?

1 A One of the dogs ended up getting the rooster.

2 Q All right. We heard a little bit about -- well, first
3 of all, did Alex do a lot of hunting?

4 A I don't know how much hunting he done, but I know he
5 done hunted.

6 Q And hunting involved killing animals?

7 A It.

8 Q So as far as you knew, he was a hunter?

9 A Yes.

10 Q The slope on the concrete -- I'm sorry, the concrete
11 out there on the dog kennels, did it have a slope to it?

12 A Yes.

13 Q And that would be for what reason?

14 A To run the water off.

15 Q So, water would naturally drain out there even if it
16 wasn't sunny?

17 A It would.

18 Q And I think you mentioned and talked at length about
19 the feed room and how there was issues there, but were the
20 issues caused -- the rotting wood, was that caused because
21 it was actually draining?

22 A When they done that room, they didn't -- like I told
23 that gentleman over there, they didn't seal that bottom
24 plate like it should have been, and it would allow water --
25 when you sprayed the concrete off, that water kept just

1 getting -- slowly getting underneath the concrete until it
2 started rotting out around the door jams and stuff.

3 Q If Maggie was down there at the kennels, would she put
4 the dog beds down for the dogs?

5 A She would have.

6 Q If the kennel lights and the hangar lights and the
7 underneath lights are on, is it fairly well lit out there?

8 A It is.

9 Q You mentioned -- what is your bedtime? You said you
10 rise early. What's your bed time?

11 A My bedtime, it never -- it all depends.

12 Q Okay. What time are you usually in bed?

13 A That's a good question. I can tell you my routine.

14 Q All right. Tell me your routine.

15 A Usually around 4:00 or 5:00 I go get a shower, and I'm
16 in my recliner usually the rest of the day.

17 Q Okay. So, you're not in bed, you're in that recliner.
18 And after you shower, you're in that recliner?

19 A That's it.

20 Q And the day is done.

21 A Done.

22 Q And June 7th, that was that Monday, you were -- were
23 you done that night at whatever time you took a shower,
24 4:00 or 5:00?

25 A I was done at 4:30. 5:00, I had done had my shower

1 and I was in my recliner.

2 Q And you were with your wife?

3 A Yes.

4 Q Last question. When you were out there at 5:00 at the
5 kennels at Moselle, were there any firearms anywhere on
6 that property?

7 A That night? That particular day?

8 Q That particular day.

9 A I did not see none.

10 MR. FERNANDEZ: Thank you.

11 THE COURT: Anything further?

12 MR. GRIFFIN: No, Your Honor.

13 THE COURT: Thank you, sir.

14 (The witness exited the stand.)

15 THE COURT: Call your next witness.

16 MR. JAMES: State calls Carson Burney.

17 The witness, CARSON BURNEY, was first sworn and
18 testified as follows:

19 THE CLERK: If you would, please, sir, be seated.

20 State your full name, spell your last name, and then move
21 the microphone as you need.

22 THE WITNESS: Carson Burney, B-u-r-n-e-y.

23 VOIR DIRE EXAMINATION

24 BY MR. JAMES:

25 Q Now it's the afternoon. Good afternoon, Mr. Burney.

1 A Afternoon.

2 Q Tell us a little bit with yourself, Mr. Burney.

3 A My name is Carson Burney, as I mentioned. I've lived
4 in South Carolina a little over twenty years. I graduated
5 from the University of South Carolina 2013 with a degree in
6 finance. In 2015 I went back to USC and completed a six
7 month paralegal certificate program there. 2019 I joined
8 the Department of Revenue as a sales tax auditor, and in
9 2021 I was hired on as the forensic accountant in the State
10 Grand Jury Division at the South Carolina Attorney
11 General's Office.

12 Q So, we work together.

13 A We do. We used to share half offices right next to
14 each other.

15 Q About how long have you been with the Attorney
16 General's Office again?

17 A Approximately a year and a half.

18 Q And about how long were you with the Department of
19 Revenue before you came over to us?

20 A A little over two years.

21 Q And say again for me. What is your job title with the
22 AG's Office?

23 A I'm the forensic accountant in the State Grand Jury
24 Division.

25 Q Forensic accountant. What is a forensic accountant?

1 A So a forensic accountant, it's a broad term, but
2 essentially what I do is compile records, primarily
3 financial records that include loans, credit card
4 statements, bank account information, compile that
5 information, and then pass it on typically to law
6 enforcement or the prosecutors in my section.

7 Q And when you talk about you look at these records,
8 what sort of volume of records are we talking about?
9 Hundreds of pages? Thousands of pages? Ten thousands of
10 pages?

11 A In this case thousands of pages of records, yes, sir.

12 Q Thousands of pages.

13 A Yes.

14 Q Would it be fair to say tens of thousands of pages?

15 A Probably, yes.

16 Q Do you like your job, Mr. Burney?

17 A I do like it. It can be tedious, but I do like it. I
18 find a sense of fulfillment.

19 Q Do you have any certifications in connection with your
20 work?

21 A I do. I am a certified fraud examiner, which is a
22 task essentially you learn and you're tested on different
23 fraud schemes, how to investigate those fraud schemes, the
24 law surrounding that, and then different fraud prevention
25 and deterrence methods.