EXHIBIT S-1
Amended Supplemental Expert Disclosure: Jennie Ayers

The State has previously disclosed Jennie Ayers, Forensic Scientist III, as an expert witness in the field of forensic science. The State hereby incorporates its previous responses and attachments filed on December 18, 2024, and February 16, 2025, and is hereby supplementing those responses as follows.

The purpose of processing the crime scene is to collect as much information and evidence as possible, in as pristine a condition as possible. The process involves assessing the situation and the scene; observing the condition of the scene; documentation of the scene via photography, written observation, sketches or diagrams; searching systematically for items or materials that may have evidentiary value; collecting items in a way that will preserve them and prevent alteration, contamination and tampering; and chemical or physical processing if needed to detect evidence that is not readily visible.

Items may be processed for latent prints on scene or collected for future processing in the laboratory. Latent print evidence can be developed on scene by using light enhancement, powder or blood enhancing chemicals (amido black). Observed or developed prints are preserved with photography and/or tape lifting. Preserved impressions can be used for further latent print analyses.

Ayers will testify about DNA. Deoxyribonucleic acid (DNA) is genetic material contained in human cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials such as blood, semen, and saliva or may be left on an item when it is handled (touch DNA). Biological evidence and possible/potential DNA evidence is collected for preservation and may be sent for further

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testing by qualified DNA analysts. Crime Scene personnel do not test or screen for DNA specifically.

DNA evidence may be collected at a crime scene if there is observable biological material in the form of blood, semen, saliva, hair or other tissue present. Some biological material may not be visible but may be collected for its "possible" presence. "Possible" DNA material refers to areas or items that are likely to have DNA based on the details of the case or known activities. "Potential" DNA material refers to areas or items that may have DNA based on how they may have been handled (touch DNA).

Biological/DNA material on a smaller item is generally collected by collecting the entire item (e.g. shirt, weapon, bottle). Visible biological/DNA material on a structural surface (e.g. floor, wall) or on a large object (e.g. furniture) is generally collected by using one or two sterile cotton swabs simultaneously. The swabs may be moistened with sterile water prior to sample collection. After swabbing the surface, the swabs are allowed to air dry in porous packaging. Any biological/DNA material on those swabs is preserved and can be used for future testing. Collection of "possible" and "potential" DNA are collected in the same method as described for visible DNA, using sterile water and sterile swabs.

Trace materials like hairs or fibers may be present at a scene or on an item. These items can be collected with forceps and/or adhesive material and packaged for potential analysis.

Shoe and tire impressions evidence may be observed or developed using chemical (amido black, leucocrystal violet, etc.) or physical methods (powder or light enhancement). Preservation methods include photography, casting and lifting.

Items that may have evidentiary value are identified, documented and collected.

Effort is made to ensure that items are preserved as found. The type and size of packaging are determined based on the type of evidence.

- Cigarette butt- paper evidence envelope
- Paper note/receipt- paper evidence envelope
- Computer and electronics components- paper evidence envelope or paper bag, depending on size and examination(s) to be completed. Larger items, like computer towers or monitors, that do not fit into standard evidence bags, may be identified with an evidence tag.
- Nitrile type glove- paper evidence envelope
- Vacuum dust container- paper evidence bag

Presumptive blood tests are chemical tests that are used to distinguish possible blood stains from non-blood stains. The chemical tests that can be used are phenolphthalein or Ortho-tolidine. These tests are considered presumptive because the chemicals react to blood, which indicates the material may be blood. They are not specific for blood meaning they could react with a substance that is not blood. A small sample of a stain is collected onto a swab or filter paper, and the chemicals are applied to the sample; this leaves the source stain unaffected by chemicals. If the chemical has a color change (pink for phenolphthalein or blue/green for Ortho-tolidine) the stain is considered "presumptively" positive for blood. The stain or item may be collected for future biological testing. If a test is inconclusive, the item/stain would likely be collected for further laboratory testing. If the test is negative, the item/stain would likely NOT be collected.

Buccal cells are found on the inside of a person's cheek. A sterile cotton swab, or pair of swabs, is used to collect these cells as a reference DNA sample from a known individual. Buccal swab samples can be compared to unknown DNA samples from a crime scene or from an item of evidence.

EXHIBIT S-2
Amended Supplemental Expert Disclosure: [redacted]

The State has previously disclosed [redacted], Special Agent (SA) from the Federal Bureau of Investigation (FBI), as an expert in the field of historical cell site analysis. The State hereby incorporates its previous responses and attachments filed on December 18, 2024, and February 16, 2025, and is hereby supplementing those responses as follows.

[redacted] will testify as an expert and will testify and answer questions about a summary exhibit (CAST Report attached as State's Exhibit S-2(b) to the December 18, 2024 filing) pursuant to Idaho Rules of Evidence Rule 1006 which mirrors the Federal Rules of Evidence. The rule provides that "[t]he proponent may use a summary, chart, or calculation to prove the content of voluminous writings, recordings, or photographs that cannot be conveniently examined in court." The proponent of summary evidence under the rule "must make the originals or duplicates available for examination or copying, or both, by other parties at a reasonable time and place." *Id.*

A significant portion of [redacted] testimony will relate to the presentation of summary evidence pursuant I.R.E. 1006, which allows for the introduction of summary evidence to aid the jury in the examination of testimony or documents in evidence. *See e.g., United States v. Behrens*, 689 F.2d 154, 161-62 (10th Cir.), cert. denied, 459 U.S. 1088 (1982). The proponent of a summary introduced pursuant to Rule 1006 must establish the admissibility of the underlying documents as a condition precedent to introduction of the summary. *United States v. Samaniego*, 187 F.3d 1222, 1223 (10th Cir. 1994). The underlying documents do not have to be admitted, but they must be established

as admissible. *Id*. Summaries must fairly represent the underlying documents upon which they are based. *United States v. Conford*, 336 F.2d 285, 287-88 (10th Cir. 1964). The Tenth Circuit has repeatedly approved the use of Rule 1006 summaries, particularly where, as here, the summaries will aid the jury in organizing the information contained in a large number of documents into understandable form. *Swallow v. United States*, 307 F.2d 81, 84 (10th Cir. 1962) (summaries approved in cases involving complicated documentary proof); *Behrens*, 689 F.2d at 161-62. Rule 1006 treats properly admitted summaries as evidence in their own right rather than just presentations of other evidence in a more coherent form, as long as the underlying evidence is admissible. *Samaniego*, 187 F.3d at 1223-24.

Pursuant to I.R.E. 1006, the State (the proponent of the summary evidence) has provided the original or duplicates for the contents of the voluminous records to defense as follows (and can produce them in court if so ordered):

Description of Discovery	**Location of Discovery**	**Date Discovered**
AT&T Records for Bryan Kohberger	Hard Drive AV000180 AV000228	4/5/23 4/12/23 5/18/23
AT&T Records for Madison Mogen and Xana Kernodle	Hard Drive AV000902	4/5/23 5/16/24

Regarding [redacted] Final CAST Report, the following testimony is anticipated in conjunction with the presentation of the Report:

- Pages 2-5 will serve as visual aids for [redacted] to explain how cellular technology works, as previously discussed, and the methods utilized for [redacted] to conduct analysis in this case.
- Page 6 serves as a legend to depict how cellular phone records analyzed in this case

will be represented on a map, specifically for phones associated with Bryan Kohberger, Madison Mogen, and Xana Kernodle.

- Page 7 shows examples of call information boxes that are used throughout the report and explains what each record in the box represents. [redacted] will explain how this information comes from the records obtained from the provider and they are simply transferred here to show specific records in conjunction with a map.

- Page 8 depicts an example of how drive test data, previously discussed, will be represented on a map to indicate the coverage area of a specific cell site and sector.

- Page 9 represents locations of interest provided to [redacted] during this investigation and the icon that will be used to represent each on a map. The red icon labeled "CS" represents the Crime Scene located at 1122 King Road, Moscow, Idaho and the yellow "BK" icon represents Bryan Kohberger's residence located at 1630 Northeast Valley Road, Apartment G201, Pullman, Washington.

- Page 10 is a map of Moscow, Idaho and Pullman, Washington. [redacted] will use this map to depict both locations of interest from page 9 as well as to show where AT&T towers, in the form of blue circles, are located on the map.

- Page 11 represents the subscriber sheet associated with 509-592-8458, hereafter the "8458 Phone" as provided by AT&T. [redacted] will highlight that this telephone number was subscribed to Bryan C. Kohberger.

- Page 12 depicts cellular phone usage by the 8458 phone and [redacted] is expected to testify that the usage indicates general movement of the 8458 phone from the area of West Yellowstone, Wyoming to Pullman, Washington on June 30, 2022 (showing when Bryan Kohberger moved to the Pullman, Washington area).

- Page 13 depicts cellular phone usage by the 8458 phone on November 13, 2022, and [redacted] is expected to testify that when the 8458 phone interacted with the AT&T network at 2:47:29 a.m., the phone was not at the Bryan Kohberger residence, marked "BK" on the map, rather it was southeast of the Bryan Kohberger residence as depicted by the drive test data. [redacted] is also expected to testify that he analyzed additional handoff data that occurred during this data session and that the 8458 phone stopped communicating with the network at 2:54:45.

- Page 14 provides the time period that the 8458 phone did not communicate with the AT&T network during the early morning hours of November 13, 2022.

- Page 15 depicts the interactions that the 8458 phone had with the AT&T network on November 13, 2022, starting at 4:48 a.m. consistent with the 8458 Phone being south of Moscow, Idaho.

- Pages 16-18 show the general movement of the 8458 Phone on November 13, 2022, consistent with traveling from south of Moscow, Idaho to Pullman, Washington, and ultimately using a cell site that provides coverage to the Bryan Kohberger residence.

- Pages 19-22 show the general movements of the 8458 Phone on November 13, 2022, consistent with departing Pullman, Washington and traveling to Moscow, Idaho, then returning back to a cell site that provides coverage to the Bryan Kohberger Residence.

- Pages 23 and 24 how the general movements of the 8458 Phone on November 13, 2022, consistent with traveling from Pullman, Washington to Lewiston, Idaho consistent with surveillance video that shows Bryan Kohberger in Lewiston, Idaho at the time.

- Page 25 depicts times when the 8458 Phone has had historical periods of no interaction with the AT&T network from June 23, 2022, to November 13, 2022, for more than 1 hour and 45 minutes. Included in this analysis is the time period during the early morning hours of November 13, 2022.

- Pages 26 and 27 show the usage of phones associated with Madison Mogen and Xana Kernodle during the morning of November 13, 2022, during times when evidence indicates that both phones were located inside the residence at 1122 King Road, Moscow, Idaho depicted by the Crime Scene "CS" icon. These pages will be used to highlight that the drive test data is consistent with the locations of both of these cellular phones when evidence shows their location is inside 1122 King Road, Moscow, Idaho.

- Page 28 shows a map that includes 1122 King Road, Moscow, Idaho, represented by the "CS" icon and a yellow circle that represents a 100 meter radius around the Crime Scene. [redacted] will explain that he conducted analysis of all the cell sites in the area that provided coverage to the Crime Scene and identified any cell sites that drive test data showed coverage that included this 100 meter radius around the Crime Scene.

- Pages 29 and 30 represent any time that the 8458 Phone utilized a cell site identified as part of Page 28, between the hours of 10:00 p.m. and 4:00 a.m. (23 separate instances between July 9, 2022, to November 7, 2022). [redacted] will testify that the 8458 Phone used cell sites consistent with being at the crime scene during these dates and times. [redacted] will further testify that the hours between 10:00 p.m. and 4:00 a.m. were identified by the investigative team as times of interest.

EXHIBIT S-3
Amended Supplemental Expert Disclosure: Taylor Maichak

The State hereby discloses Taylor Maichak, Forensic Scientist III, as an expert witness in the field of forensic DNA, which includes, but in no way is limited to, DNA extraction, quantification, amplification, analysis and interpretation/analysis (including but not limited to STR data, Y-STR data; and STRmix probabilistic genotyping). The State hereby incorporates its previous response and attachments filed on December 18, 2024 and is hereby supplementing its response as follows.

Taylor Maichak is currently employed as a Forensic Scientist III with the Idaho State Police Forensic Service, specifically in forensic DNA. Her CV with further qualifications is attached. Particularly, Maichak can be expected to testify as to the testing of several lab items. She will discuss the process of DNA analysis by utilizing the Polymerase Chain Reaction (PCR), which was used in this case to generate a Short Tandem Repeat (STR) profile. Additionally, Maichak may discuss lab testing protocols, procedures, and the consumption of evidence. Consumption of evidence is using an entire sample for DNA testing. This is typically utilized when a low-level of DNA is anticipated. Maichak previously testified in this case during grand jury proceedings and can be expected to testify in the same manner.

More specifically, Maichak will provide an explanation of what DNA is, how DNA can be collected, and how DNA can be used. Deoxyribonucleic acid (DNA) is genetic material contained in cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials such as blood, semen, and saliva or may be left on an item when it is handled. Biological evidence and possible/potential DNA

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evidence is collected for preservation and may be sent for further testing by qualified analysts. DNA can be collected by swabbing an item or by taking a cutting directly from an item. Reference DNA samples can be collected directly from individuals. DNA can be used to identify individuals, link individuals to crime scenes, link crime scenes, as well as exclude individuals from DNA profiles that we obtain. Maichak will explain the four steps of DNA analysis such as the 1) extraction of DNA from cells, 2) the quantification of DNA (how much DNA is present in a sample), 3) the amplification of DNA (generating copies of DNA), and 4) the generation of a DNA profile for comparison.

Maichak will explain how DNA STR profiles are developed. 1. Extraction: add chemicals to break open all the cells to release the DNA. 2. Quantification: amount of DNA is measured within each sample. 3. Amplification: copy the specific locations of DNA using polymerase chain reaction. 4. Developing a DNA profile: visualize the DNA profile, which looks like peaks on a graph. Once we have our DNA profiles we can begin interpreting the data and making comparisons.

As applicable, profiles may then be entered into the Combined DNA Index System (CODIS). CODIS is a national collection of DNA profiles maintained by the FBI. It contains convicted offender profiles as well as profiles obtained from evidence, and can be used to identify a suspect, generate potential leads, or link crime scenes together. Upon entry, profiles are automatically searched against the database and generate “hits” when a match occurs. In Idaho, individuals convicted of felonies and those placed on the sex offender registry must be entered into CODIS. Idaho also allows for the entry of unidentified profiles generated from evidence associated with a crime, when that profile is believed to be from the putative perpetrator. Idaho also allows for the entry of DNA

profiles associated with unidentified human remains or living people unable to identify themselves. The profiles are entered by the reporting analyst and reviewed during technical review. Each state also has one CODIS Administrator who is responsible for ensuring only approved profiles are entered.

Maichak will discuss at length the generation of a DNA STR profile from item 1.1 (swab of front strap of knife sheath), which Maichak concluded to be from an unknown male (ultimately deemed "male A"). There are STR locations specific to the Y chromosome, which only males have. When a peak is present at these locations it indicates that one or more donors are male. This conclusion can be found in report 4.

Maichak may also discuss her interpretations and conclusions regarding the mixture of DNA obtained from items 1.2 (swab of edges on handle portion of knife sheath), 1.3 (swab of edges on blade portion of knife sheath), and 1.4 (swabs of stains on back of knife sheath).

Maichak will discuss how individuals or reference samples are excluded as contributors to a DNA mixture or source. Comparisons can be between evidence and reference samples to include or exclude an individual from a single source or mixture DNA profile. For exclusions to single source profiles, the exclusion can be made by visually comparing DNA profiles. For mixture samples, a software tool (STRmix) can be used to aid in this comparison.

Maichak will also discuss the partial DNA profile obtained from item 1.2, which indicates a mixture of three individuals, at least one of which is male. However, due to low level results, no comparison could be made. Low level results are results with limited data that are not suitable for comparison. Determining if a sample is suitable for comparison is

guided by ISPFS policies but analyst discretion may also be considered when appropriate. Per the ISPFS Biology/DNA Casework Analytical Methods, results that contain minimal data (typically results at fewer than 6 loci) should not be interpreted. Additionally, the interpretation of DNA results should take into account the DNA results obtained, the nature of the sample, the condition of the profile, any forensically valid assumptions made, and should be scientifically justifiable and based on the collected experience and knowledge of the laboratory and the scientific community. The guidelines outlined in the Analytical Methods are designed to provide a general foundation for interpretation but may not account for all scenarios that will be encountered. In those scenarios the forensic scientist and DNA technical lead will determine the course of action that is scientifically most appropriate.

Maichak may explain the partial DNA profile obtained from item 1.3, which indicates a mixture of DNA from at least two individuals, at least one of which is male. However, due to low level results, no comparison could be made. Maichak may explain the mixture of DNA obtained from item 1.4.

Additionally, Maichak will explain how a DNA STR profile was generated from item 87.1 (cutting from one Q-tip style swab from 127 Parkside Ave, Blakeslee, PA (Pennsylvania State Police Department) which was taken from trash from the Kohberger residence, at 119 Lamsden Dr., Albrightsville, PA). Maichak determined the DNA profile obtained from item 87.1 was from an unknown male (ultimately deemed “male E”). Maichak concluded Male E was not the source of DNA previously obtained from item 1.1. However, Maichak was able to conclude that from the DNA profile obtained from item 87.1 (male E) and that obtained from item 1.1 (male A), male E cannot be excluded as

being the biological father of male A. Maichak made this conclusion using the single parentage index. The single parentage index for the loci examined was 19,070,000. Maichak will discuss that at least 99.9998% of the male population would be expected to be excluded from the possibility of being the biological father of male A. This conclusion can be found in report 17. The single parentage index is a statistical value that compares two probabilities: the probability of seeing the child's genetic information if a tested individual is the biological parent of the child versus if a random individual (either man or woman) from the population is the parent. This calculation only uses one parent for comparison. Half of your DNA is obtained from your mother and half from your father. "Single parentage index for the loci" means that we are only discussing the loci tested in this case.

Further, Maichak compared several items in this case, including more items listed in Report 17 (Bates Pages 5732-5758). Maichak may discuss the partial profile obtained from 93.1 (swab of Dunkin cup lid from 127 Parkside Ave, Blakeslee, PA) being consistent with male E's profile. Maichak may also explain the low levels of male DNA (or no presence of male DNA) on other items in Report 17.

EXHIBIT S-4
Amended Supplemental Expert Disclosure: Tara Martinez

The State has previously disclosed Tara Martinez, Forensic Scientist III, as an expert witness in the field of forensic science, which includes, but in no way is limited to, latent prints and buccal swab collection and scene processing. The State hereby incorporates its previous response and attachments filed on December 18, 2024, and is hereby supplementing its response as follows.

Martinez can be expected to testify regarding her involvement in this case, specifically when obtaining a buccal swab from Bryan Kohberger in January 2023. Martinez also collected hair samples and fingerprints from Kohberger. Further description of this can be found in Hailey Youngling's Report 21 (Bates Pages 6414-6422).

Martinez will explain the process of collecting buccal swabs and the purpose of collection. Buccal cells are found on the inside of a person's cheek. A sterile cotton swab, or pair of swabs, is used to collect these cells as a reference DNA sample from a known individual. Buccal swab samples can be compared to unknown DNA samples from a crime scene or from an item of evidence.

Martinez may discuss what latent prints are and why they are important in a forensic setting or investigation. Latent prints are impressions of friction ridge skin patterns that can be left on a surface when contact is made. The term "latent" refers to prints that are not visible prior to utilizing a development method; latent prints are often made up of various matrices, including sweat and oils that are colorless and require development with chemicals or powders to be seen. Prints at a crime scene may also be made from other materials that may coat the skin, like blood or dirt. Although latent means hidden, any

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prints recovered from a crime scene or from items of evidence are often referred to as latent prints.

Latent print processing methods are different at a crime scene versus in the laboratory. The methods for latent print processing at a crime scene are generally limited to glue fuming, powder processing and blood reagents. Preservation methods include photography and lifting.

Exemplars are intentional recordings of the friction ridge skin of an individual. These may be collected with black ink, powder/adhesive, electronic imaging, and/or other capture methods. These known exemplars can then be used for comparison against latent print evidence. Exemplars may include any/all areas of friction ridge skin from the hands or feet of an individual. Types of exemplars include fingerprints, palm prints, major case prints (tips, joints, sides of fingers), and footprints.

Martinez will explain what it means for comparison results to return as inconclusive due to quality or quantity or what it means for comparison results to be excluded. Latent print comparison refers to the process of analyzing latent prints and comparing them to known exemplars in attempt to determine their source. Examiners utilize the ACE-V methodology which is a specialized version of hypothesis testing. ACE-V stands for analysis, comparison, evaluation and verification.

Analysis is the assessment and documentation of friction ridge impressions to determine suitability for comparison. This assessment includes consideration of the quality and quantity of detail, orientation, anatomical source (finger, palm, etc.), type of matrix, deposition factors, complexity, substrate considerations, environmental factors, development mediums, and preservation methods. Latent prints may be of value for

comparison or may be deemed to contain insufficient detail for comparison purposes. Impressions deemed "of value" are impressions that in the opinion of the examiner, contain sufficient quantity, quality, and specificity of ridge detail to warrant a comparison. Examiners also take into consideration how discriminating the location and arrangement of features within an impression are. When quantity is low, quality must be relatively high. Whereas when quality is low, quantity must be relatively high. It is not uncommon for latent print examiners to have conflicting opinions with regards to sufficiency. Latent prints are also evaluated for their suitability for database entry (AFIS, ABIS, MBIS, etc.)

Comparison is the side-by-side, back and forth, examination of friction ridge detail between a latent print and a known print to determine whether the detail is in agreement or disagreement based upon features, sequences, and spatial relationships within the tolerance of clarity and distortion. Generally, latent prints are first compared against various known prints belonging to subjects associated with the evidence (victims, witnesses, and/or suspects if known). In the event that the latent prints are not identified or that there are no known prints available with which to compare, the prints may be entered into a computer database (MBIS) and compared to a large group of persons who have prints on file.

Evaluation is the formulation of a conclusion based upon analysis and comparison of friction ridge impressions. Conclusions that may be reached are source identification, source exclusion or inconclusive. Source identification is the examiner's opinion that two impressions originated from the same source. The observed features are in sufficient correspondence such that the examiner would not expect to see this level of agreement in impressions that came from different sources. Nor did the examiner find features in disagreement that would lead them to conclude that the impressions are from different

sources. There is no scientific basis for a predetermined number of corresponding friction ridge details be present in two impressions in order to effect a source identification. Source exclusion is an examiner's conclusion that two impressions did not originate from the same source. The observed features are in disagreement such that the examiner would not expect them to have originated from the same source. Inconclusive is an examiner's inability to reach a conclusion of source identification or exclusion. Inconclusive may be due to lack of quantity or quality of detail in the latent or known impression.

Verification is the independent examination by another qualified analyst using the ACE methodology to either support or refute the conclusions of the original examiner. ISPFS requires verification of all conclusions rendered in a case (value determinations, identifications, exclusions and inconclusives). Routine verification is considered "open". This means the verifier conducts independent analysis but has access to the original analyst's notes and images. Blind verification, in which the verifier has no knowledge of or access to the original analyst's conclusion, may be performed in cases of single identifications generated from a database, as a means of conflict resolution, or as an additional quality measure for complex impressions.

Martinez may describe the Multi-Modal Biometric Identification System (MBIS). MBIS is the general term referring to any system that contains a database of ten-print, latent prints and palm prints. MBIS also includes software that is utilized to search available databases. Idaho is a member of the Western Identification Network and is able to search the databases of WIN central site members and the FBI. MBIS allows for searching latent prints against known fingerprint and palm print database records. The system can also be used to search latent prints against other latent prints.

Martinez made several fingerprint comparisons in this case. The details of Martinez's involvement in the case can be found in multiple reports including Report 5 (Bates Pages 851-889), Report 10 (Bates Pages 899-930), Report 19 (Bates Pages 990-995), Report 23 (Bates Pages 5906-5919), Report 24 (Bates Pages 5920-5927), Report 27 (Bates Pages 13578-13614), Report 30 (AV000308), and Report 32 (AV000308). In addition, Reports 38 (Bates Pages 15940-15947), 40 (Bates Pages 15952-15961) and 41 (Bates Pages 15923-15935) have comparison results.

Martinez was present at 1122 King Rd. in Moscow, Idaho in November 2022 for the purpose of photographing the crime scene, the collection of evidence, and scene processing. This can be found in Martinez's Report 11 (Bates Pages 14921-14959). Additionally, Martinez was present at 1630 NE Valley Rd. G201 in Pullman in December 2022 for the purpose of photographing the apartment, and collecting potential evidence. Following this, Martinez accompanied other Forensic Scientists and Investigators to 1475 NE Glenn Terrell Mall, Wilson Short Hall, Room 12 in Pullman where Martinez took photographs. The explanation of these visits is outlined in Martinez's Report 25 (Bates Pages 9323-9354).

EXHIBIT S-5
Amended Supplemental Expert Disclosure: Jade Miller

The State has previously disclosed Jade Miller, Forensic Scientist III, as an expert witness in the field of forensic biology and DNA, which includes, but in no way is limited to, DNA extraction, quantification, amplification, analysis and interpretation/analysis (including but not limited to STR data and STRmix probabilistic genotyping). The State hereby incorporates its previous response and attachments field on December 18, 2024, and is hereby supplementing those responses as follows.

Miller will provide an explanation of what DNA is. Deoxyribonucleic acid (DNA) is genetic material contained in cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials such as blood, semen, and saliva or may be left on an item when it is handled. Biological evidence and possible/potential DNA evidence is collected for preservation and may be sent for further testing by qualified analysts.

DNA can be collected by swabbing an item or by taking a cutting directly from an item. Reference DNA samples can be collected directly from individuals. DNA can be used to identify individuals, link individuals to crime scenes, link crime scenes, as well as exclude individuals from DNA profiles.

Miller will explain the four steps of DNA analysis:

1. The extraction of DNA from cells by adding chemicals to break open all the cells to release the DNA.
2. The quantification of DNA to determine how much DNA is present in a sample.
3. The amplification of DNA by generating copies of the DNA). This requires copying

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the specific locations of DNA using polymerase chain reaction.

4. The generation of a DNA profile for comparison. This includes visualizing the DNA profile, which looks like peaks on a graph. Once a DNA profile is created, the data can be interpreted, and comparisons can be made.

Miller can be expected to testify at length about her conclusions and interpretations made in Report 26 (Bates Pages 5782-5901), which is that the DNA profile obtained from item 1.1 (from Report 4, Bates Pages 534-594)) matches that obtained from the known reference sample of Bryan Kohberger, item 108. Miller's conclusion (as set forth in Report 26) is that the DNA profile is at least 5.37 octillion times more likely to be seen if Bryan Kohberger is the source than if an unrelated individual randomly selected from the general population is the source.

Miller will also testify about CODIS. CODIS is a database managed by the FBI that allows state and local crime laboratories to upload and compare DNA profiles from crime-scene evidence and convicted offenders. Use of this database can help to provide links between evidence and crimes and evidence and known offenders. The CODIS database requires that DNA profiles meet specific eligibility requirements prior to being uploaded. These requirements include that a crime must have been committed, the profile was developed from an item related to the crime, and the profile must be attributable to the perpetrator. DNA profiles from victims, nonprobative individuals, and items that are not linked to the crime scene are not allowed to be entered. The laboratory must justify entry of every profile put into CODIS and many factors can influence eligibility.

In regard to Male B, this profile was not entered into CODIS based on the location of the profile within the residence and the proximity of the profile to the victims. This was

a large residence occupied by several college students, as well heavily trafficked by other students who may not have lived there. This profile was located on the underside of a handrail within a stairwell, which is a frequently touched area that cannot be directly linked to the crime. It would not be uncommon to find unknown DNA on a handrail within this residence that got there in a manner that was not related to this crime. Also, the proximity of this profile to the victims makes it difficult to ensure it is attributable to the perpetrator. The probative value of this profile (Male B) is not as high as that of the unknown male profile (Male A) obtained from the knife sheath, as the victims were believed to have been stabbed to death and the knife sheath was located next to one of the victims.

In regard to Male D, this profile was developed from a gardening style glove located outside the residence in a publicly accessible area. No DNA from the victims was located on this item and a direct link to the crime could not be established. Had DNA from one or more of the victims been located on this item, it likely would have been CODIS eligible. Also, perhaps if this DNA profile had matched Male B, from the handrail inside the residence, there's a possibility it could have been uploaded because there would have been a link to a profile found within the crime scene. At the time CODIS eligibility was determined, Male DNA profiles A, B, and D were unidentified, and it was not possible for lab staff to know who would ultimately be linked to any one item. CODIS eligibility determination was strictly made based on our evaluation of the probative value of each item.

EXHIBIT S-6
Amended Supplemental Expert Disclosure: Anne Nord

The State has previously disclosed Anne Nord, Forensic Scientist and Laboratory Manager, as an expert witness in the field of controlled substances and toxicology. The State hereby incorporates its previous responses and attachments filed on December 18, 2024, and is hereby supplementing those responses as follows.

Nord may testify to the laboratory process and procedure for receiving, storing, handling and returning evidence and what was done in this case with regards to lab item #71. The analyst may testify to the laboratory method for testing controlled substances, which may include identification of drugs detected in the sample and sample weighing. The analyst may testify to the results of testing in this case and the process for approving and reporting results.

Nord may testify regarding her involvement in this case in which Nord tested lab item #71 (ziplock bag with trace of blue powder). Nord's conclusion was that the item was amphetamine (CII). Nord will explain how she came to this conclusion and what method(s) she used to test item #71.

Nord tested Item #71 using the Idaho State Police Controlled Substance Analytical Method revision 13, specifically AM 1, AM 3, and AM 6. A copy of that method is available for online at: https://isp.idaho.gov/wpcontent/uploads/Forensics/archivedAMs/since/Controlled%20Substances/Controlled-Substances-Analytical-Methods-Rev13.pdf.

Item 71 was analyzed by preparing two separate samples by diluting the blue powder in methanol and running each of those on a gas chromatograph mass spectrometer

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(GCMS). GCMS consists of two analytical techniques run in tandem, the gas chromatograph is used to separate compounds and provides selectivity based on physical and chemical characterizations. The mass spectrometer provides selectivity based on the compound's chemical structure. The results from those runs were compared to a known standard of amphetamine that was run under the same conditions. Nord will testify that from the comparison of the extracts to the known standard she concluded that the sample contained amphetamine. Due to the limited sample amount, more than half of the sample was consumed in analysis. Due to this, the extracts were packaged and returned in the evidence envelope with the original item.

EXHIBIT S-7
Amended Supplemental Expert Disclosure: Rylene Nowlin

The State has previously disclosed Idaho State Police Forensic Services Laboratory Manager, Rylene Nowlin, as an expert witness. The State hereby incorporates its previous responses and attachments filed on December 18, 2024, and February 16, 2025, and is hereby supplementing those responses as follows.

As previously disclosed, Nowlin will testify about the day-to-day operations of a forensic lab, specifically: (1) accreditation, (2) ensuring quality control, (3) evidence receipt into the laboratory, and (4) evidence handling and storage at the laboratory and adhering to appropriate standards in the field.

(1) Accreditation, the accreditation process of creating compliant methods and a quality system, accreditation standards applicable in forensic science specifically ISO 17025 and the forensic supplemental document R221 (A2LA document), and the FBI Quality Assurance Standards for Forensic Casework labs and Forensic Databasing lab, accreditation assessments including frequency, the process of external assessors reviewing all documents and observing casework being performed, as well as the process and frequency of FBI Quality Assurance audits.

(2) Ensuring quality control—annual training, annual manual reviews and quality control activities including quality control tests and controls for reagents, instrumentation and methods, and required certification for all scientists in their specific discipline.

(3) Evidence receipt into the laboratory—prelog of evidence by customers into the

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Idaho Laboratory Information Management System (ILIMS), evidence review of information on the item compared to the prelogged information, assignment of a case and item number in ILIMS,

(4) Storage of evidence in the laboratory, transfer of evidence in the laboratory, proper storage conditions of evidence and storage of evidence while at the laboratory.

In addition, Nowlin will testify regarding the general structure of the Idaho State Police Forensic Services Laboratory. This includes three laboratories (Meridian, Coeur d'Alene, Pocatello) within the system with a fourth (Jerome) planned for 2025. Nowlin will discuss the disciplines offered in each lab. Nowlin will discuss the DNA casework analysis and DNA database exclusively performed at the laboratory in Meridian, Idaho, and the types of evidence submitted for each discipline will also be discussed.

Nowlin will also testify to touch DNA and transfer of DNA. Specifically, Nowlin will testify to the characteristics and nature of touch DNA, including how it is deposited and transferred to an item of evidence; the methods used to collect and preserve touch DNA samples from items of evidence; the procedures and protocols used by forensic scientists to extract and analyze touch DNA; the manner in which results from touch DNA samples are interpreted; and the reliability of touch DNA analysis and its acceptability in the field of forensic science. Nowlin will also testify to the potential for DNA to transfer between an individual and an object(s), including the distinction between primary and secondary transfer and the factors influencing the likelihood of transfer.

EXHIBIT S-8
Amended Supplemental Expert Disclosure: Eric Seat

The State has previously disclosed Eric Seat, Forensic Scientist, as an expert witness in the field of forensic biology and DNA, which includes, but in no way is limited to, DNA extraction, quantitation, amplification, analysis and interpretation/analysis (including but not limited to STR data, Y-STR data; and STRmix probabilistic genotyping). The State hereby incorporates its previous response and attachments filed on December 18, 2024, and is hereby supplementing its response as follows.

Seat may testify regarding his involvement in this case in which he developed a male DNA profile from lab item 6 (reference oral sample from Connor Chesnut). DNA (Deoxyribonucleic acid) is genetic material contained in cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials such as blood, semen, and saliva or may be left on an item when it is handled. Biological evidence and possible/potential DNA evidence is collected for preservation and may be sent for further testing by qualified analysts. DNA can be used to identify individuals, link individuals to crime scenes, link crime scenes, as well as exclude individuals from DNA profiles that we obtain. Seat will explain the four steps of DNA analysis such as the 1) extraction of DNA from cells, which is done by adding chemicals to a sample to break open the cells to release the DNA, 2) the quantitation of DNA (how much DNA is present in a sample), 3) the amplification of DNA, which is copying specific locations of DNA using polymerase chain reaction (PCR), (generating copies of DNA), and 4) the generation (visualizes the DNA profile, which looks like peaks on a graph) of a DNA profile for comparison. The involvement of Seat as well as his interpretations and conclusions can be found in Seat's Lab Report 3 (Bates Pages 5721-5731).

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EXHIBIT S-9
Amended Supplemental Expert Disclosure: Paulette Sutton

The State has previously disclosed Paulette Sutton, as an expert in the field of crime scene reconstruction and bloodstain pattern analysis. The State hereby incorporates its previous responses and attachments filed on December 18, 2024, and February 16, 2025, and is hereby supplementing those responses as follows.

The State is attaching a Revised Report of T. Paulette Sutton revised on February 13, 2025 (State's Exhibit S-9(a)). This Revised Report includes a basis for the Revised Report (See Page 1-2; Items 1-6) which details the revisions to the Report. Sutton's Revised Report includes: rebuttal testimony in response to Matt Noedel and Dr. Brent Turvey (See Pages 64-88); definitions for technical terms referenced throughout the Report (Pages 85-88); and "Absence of Evidence is Not Evidence of Absence", Kish, P.E., and MacDonell, H.L., Guest editorial, J. For. Ident., 46 (2), 1996, 160-164. In addition, the State is attaching a copy of the presentation which the State intends to introduce to aid Sutton in the presentation of her testimony (State's Exhibit S-9(b).

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T. Paulette Sutton, M.S., M.T. (A.S.C.P.), CLS
6025 Stage Road
Suite 42-253
Memphis, TN 38134

901-569-3034 psutton6025@comcast.net

Revised Report Date February 13, 2025
Original Report Date August 29, 2024

William W. Thompson, Jr.
Prosecuting Attorney
Latah County, Idaho

Ashley Jennings
Senior Deputy Prosecuting Attorney
Latah County, Idaho

Office of the Prosecuting Attorney
Latah County
PO Box 8068
Moscow, ID 83843-2246

Via Dropbox

RE: State of Idaho v Bryan Kohberger
Latah Case CR29-22-2805

REVISED REPORT

Decedents: **Kaylee J. Goncalves**
Madison M. Mogen
Xana A. Kernodle
Ethan J. Chapin

Location: **1122 King Road**
Moscow, Idaho

Basis for Revised Report:

The report in the above-mentioned case which was originally issued on August 29, 2024 is being revised due to the following:

1. Update list of "Items Received" to reflect:
    a. Defense reports received on January 30, 2025, to original list of "Items Received".

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b. Evidence list-received via email from Officer Timothy Smalldridge, Moscow Police Department. February 10, 2025.

2. Addition of rebuttal to the reports prepared by the Defense experts Matt Noedel (Appendix A) and Dr. Brent Turvey (Appendix B) received on January 30, 2025.

3. Address the discrepancy in DNA testing results related to the following stains identified in my original report issued August 29, 2024, as described in the report prepared by Matt Noedel[1].

   Mr. Noedel reported that the numbers reflected on the placards depicted in the scene photographs were not the same as the Sample numbers used when the evidence was submitted to the laboratory for testing. One needed to increase the placard number by 6 to correlate to the intake number(the prelogging number) used when samples were submitted to the laboratory for testing.

   To confirm this observation, I requested the original evidence log from the Moscow Police Department on February 10, 2025, and compared the information to the laboratory worksheets. Mr. Noedel's observation does appear to be correct so the laboratory results for several stains were amended.

   a. Stain F on the beer pong table in the living room (results corrected)
   b. Stain at Placard 48 on Mogen's bedroom door (results corrected)
   c. Stain at Placard 42 on Mogen's bedroom door (results corrected)
   d. Stain at Placard 41 on handrail of stairs from 3rd floor to 2nd floor (results corrected)
   e. Stain at Placard 35 on the study desk in Kernodle bedroom (results added)
   f. Stain at Placard 36 on exterior of Kernodle BR door (results added)
   g. Stain at Placard 37 on the floor of Kernodle BR near BR door (results corrected)

4. Delete original Conclusion 6 from my original report dated August 29, 2024, due to erroneous DNA results for Stain F on the edge of the beer pong table. The original conclusion read: *A single spatter stain attributed to the blood of Xana Kernodle located on the edge of the west side of the table on the 2nd level indicates that she sustained an injury in this area. There is no physical evidence to indicate that a significant amount of bleeding occurred in this area* is retracted.

5. Observation 8 regarding the screening tests conducted on the debris from the 3rd floor bedroom floor is amended to reflect the weakly positive o-tolidine test when examined at the laboratory.

6. Opinion 10 is added to the report regarding speculation about secondary footwear transfer stains.

[1] Exhibit D6 – Matt Noedel, January 22, 2025, Bates 003247-003423, p. 42 (Bates 003289)

Items Examined:

On September 27, 2023, I was contacted by Prosecuting Attorney William W. Thompson, Jr. and Senior Deputy Prosecuting Attorney Ashley Jennings of Latah County, Idaho, regarding the above referenced case.

On November 06, 2023, I received a Seagate 1 TB portable storage device from Latah County Prosecuting Attorney's office via FedEx Ground. The storage device was password protected, and the password associated with this hard drive was sent via a separate email from Ms. Jennings on October 31, 2023. Contained on this storage device was:

1. Crime scene photographs
    a. ISP – Scene Photos 1-6-2023 10 images IMG_0842 to IMG_0851
    b. ISP– Scene Photos 1-27-2023 25 images IMG_0865 to IMG_0889
    c. ISP – Scene Photos 11-13-2022 -INITIAL CRIME SCENE
    497 images ISP_4519 to ISP_5410
    d. ISP – Scene Photos 11-14-2022 29 images ISP_5411 to ISP_5439
    e. ISP – Scene Photos 11-17 & 11-18-2022
        i. 100NCD90 999 images DSC_3374 to DSC_4372
        ii. 101NCD90 1481 images DSC_4373 to DSC_5890
        iii. 102NCD90 37 images DSC_5372 to DSC_5408
    f. ISP – Scene Photos 11-19, 11-20 & 11-22-2022
    133 images ISP_5443 to ISP_5588
    g. ISP – Scene Photos 11-23-2022
        i. Folder: 100D7500 21 images ISP_5589 to ISP_5609
    h. ISP – Scene Photos 11-25-2022 36 images ISP_5686 to ISP_5721
    i. ISP – Scene Photos 12-03-2022 11 images IMG_0801 to IMG 0811
2. First officer on scene (Nunes) Body Cam
3. Autopsy reports and photographs
    a. Ethan Chapin autopsy report and photographs (229 images)
    b. Kaylee Goncalves autopsy report and photographs (314 images)
    c. Madison Mogen autopsy report and photographs (274 images)
    d. Xana Kernodle autopsy report and photographs (654 images)
4. Laboratory reports (36) from Idaho State Police Forensic Services
    a. 1_Maichak
    b. 1_Wilt
    c. 2_Walthall
    d. 2_Youngling
    e. 3_Seat
    f. 3_Wilt
    g. 4_Maichak
    h. 4-Youngling

i. 5_Martinez
j. 6_Dace
k. 7_Miller
l. 8_Wilt
m. 9_Wilt
n. 12_Youngling
o. 13_Miller
p. 14_Wilt
q. 15_Walthall
r. 16_Dace
s. 17_Maichak
t. 18_Nord
u. 19_Martinez
v. 20_Maichek
w. 21_Youngling
x. 22_Wilt
y. 23_Martinez
z. 24_Martinez
aa. 25_Martinez
bb. 26_Miller
cc. 28_Wilt
dd. 29_Wilt
ee. 30_Martinez
ff. 31_Miller (NOTE: report was amended and replaced with 34_Miller)
gg. 32_Martinez
hh. 33_Wilt
ii. 34_Miller
jj. 35_Wilt

5. Non-dissemination order Revised and Amended, June 23, 2023

On December 21, 2023, I traveled to Idaho and examined the residence at 1122 King Road, Moscow, Idaho. At the time of my examination, all physical contents and all areas of bloodstaining had been removed.

During this site inspection on December 21, 2023, the following additional files were provided:

1. 1122 King Road video, Exhibit 46
2. B. Kohberger apartment search photographs
   a. Folder 100NCD90 — 250 images — DSC_5891 to DSC_6141
   b. Folder 101D3300 — 411 images — _DSC8118 to _ DSC8528
   c. Folder Storage Unit — 20 images — IMG_0821 to IMG_0840

3. Hyundai Elantra search photographs 634 images
4. Kohberger family home search photographs 327 images DSC_0001 to DSC_0327
5. Pre-search crime scene video
6. WSU Office photographs 55 images _DSC8529 to _DSC8583
7. PC Affidavit 12-30-22

On June 03, 2024, I received the following lab report via email:

1. ISP_11: Idaho State Police Forensic Services Field Report 11_Martinez

On January 30, 2025, the following reports were received via email:

1. Exhibit D6-- Matt Noedel, January 22, 2025, Bates 003247-003423.
2. Exhibit D15--Dr. Brett Turvey, January 22, 2025, Bates 004025-004093.
3. Exhibit D1 --Dr. Ruth Ballard Bates, January 23, 2025, Bates 003116-003161.
4. Exhibit D3--Kathleen Bright-Birnbaum, January 02, 2025, Bates 003192-003218.
5. Exhibit D16--Dr. Barbara C. Wolf, January 21, 2025, Bates 004094-004158.

On February 10, 2025, the following was received via email:

1. Evidence list-Officer Timothy Smalldridge, Moscow Police Department.

Case Summary:

On November 13, 2022, Moscow Idaho police officers were contacted by friends of the residents of the multi-bedroom house at 1122 King Road in Moscow, Idaho. Officers discovered Xana Kernodle and Ethan Chapin in a bedroom on the second level of the residence. Upon further search, officers discovered Kaylee Goncalves and Madison Mogen in a bedroom on the third level of the residence. No medical intervention was attempted.

Autopsies:

All autopsies were performed by Chief Medical Examiner and Forensic Pathologist Veena Singh, MD, MPH at the Spokane County Washington Office of the Medical Examiner.

Kaylee J. Goncalves Autopsy[2]

Date and Time of Autopsy: November 16, 2022, at 4:50 pm
Cause of death: Multiple sharp force injuries.
Significant contributors to death: Blunt force injuries of the head
Asphyxial injuries
Significant findings include:

1. Stab and incised wounds of the scalp, face, and neck (24+)
2. Stab and incised wounds of the chest (11)
3. Stab and incised wounds of the upper extremities (3)

[2] Autopsy No: 221114-558, Goncalves, Kaylee J.

4. Punctures of the outer table of the skull
5. Injuries to the teeth and tongue
6. Perforations of the subclavian artery and vein
7. Hemorrhage into the chest cavities
8. Blunt force injuries include:
    a. Scalp laceration
    b. Bleeding around the brain
    c. Nasal fracture
    d. Scrapes on the nose and cheeks
    e. Bruising around the eyes
    f. Patterned bruises extending across the lower face
9. Petechial hemorrhages were present in the eyes and mouth
10. Blood alcohol concentration of 0.107 g/100 mL

Other findings:

11. Patchy hemoaspiration pattern with evidence of blood in upper and lower airways

Madison Mogen Autopsy[3]

Date and Time of Autopsy: November 16, 2022, at 2:25 pm

Cause of death: Multiple sharp force injuries

Significant findings include:

1. Stab and incised wounds of the scalp, face, and neck (13)
2. Stab wounds of the chest (5)
3. Incised wounds of the upper extremities (10)
4. Wounds of the lung and liver
5. Perforations of the subclavian vein, subclavian artery, and blood vessels of the chest wall
6. Blood alcohol concentration of 0.282 g/100 mL

Other findings:

7. Incision of the nasal septum
8. Perforation of the tongue and oral mucosa
9. Serosanguinous fluid in upper and lower airways

Xana Kernodle Autopsy[4]

Date and Time of Autopsy: November 16, 2022, at 11:15 am

Cause of death: Multiple sharp force injuries

Other Injuries: Abrasions and contusion of the head, torso, and extremities.

Significant findings include:

1. Stab and incised wounds of the scalp, face, and neck (23)
2. Stab wounds of the chest (7)

[3] Autopsy No: 221114-532, Mogen, Madison.

[4] Autopsy No: 221114-454. Kernodle, Xana A.

3. Stab wounds of the abdomen (4)
4. Incised and puncture wounds of the back (3)
5. Incised wounds of the upper extremities (25)
6. Incised wounds of the lower extremities (5)
7. Punctures of the outer table of the skull
8. Perforations of the jugular vein, heart, lung, and pulmonary blood vessels
9. Hemorrhage into the chest cavities
10. Wounds extending into the bones of the right hand
11. Scrapes and bruise on the face, torso, and extremities
12. Blood alcohol concentration of 0.229 g/100 mL
13. Amphetamine level of 12 ng/mL

Other findings:

14. Abundant bloody mucoid material in airways
    a. Patchy hemoaspiration pattern in pulmonary parenchyma

Ethan Chapin Autopsy[5]

Date and Time of Autopsy: November 16, 2022, at 8:00 am

Cause of death: Multiple sharp force injuries

Significant findings include:

1. Stab and incised wounds of the scalp, face, and neck (4)
2. Stab wound of the upper chest (1)
3. Incised wounds of the upper extremities (6)
4. Stab and incised wounds of the lower extremities (6)
5. Perforations of the jugular vein, subclavian vein, and subclavian artery
6. Blood alcohol concentration of 0.122 g/100 mL
7. Amphetamine level of 260 ng/mL

Caveat: In the content of this report, stains or stain patterns that are visually consistent with blood will be referred to as "blood" or "**bloodstains**"[6]. All referenced definitions are taken from AAFS Standards Board, ASB Technical Report 033, First Edition 2017, Terms and Definitions in Bloodstain Pattern Analysis.

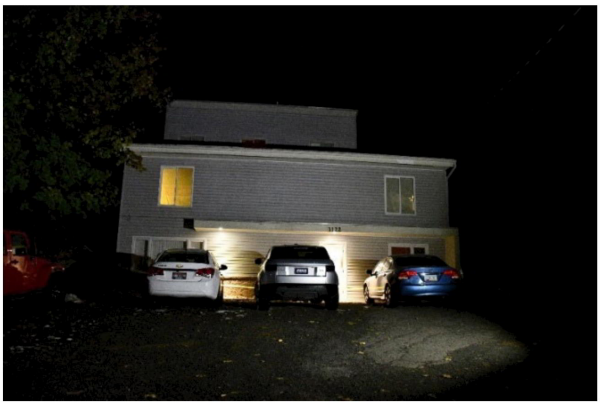
[5] Autopsy No: 221114-506, Chapin Ethan J.

[6] **Bloodstain:** A deposit of blood on a surface.

<u>Observations:</u>

Exterior of Residence:

1. The building at 1122 King Road; Moscow, Idaho is a multi-level house with six (6) bedrooms. Two (2) bedrooms are located on the first floor as one enters from the parking area depicted in ISP_4519. The front entrance door depicted between the silver vehicle and the blue vehicle in this image is located on the north side of the building.



ISP_4519

2. There are two (2) ways to access the second level of the residence. Either by entering the door on the north side of the building depicted in ISP_4519 and then traveling up the staircase from the first floor up to the second floor, or by entering directly via a sliding glass door located at the back (south side) of the residence. This sliding glass door on the south side of the building is depicted in ISP_4554 and enters directly into the kitchen on the second level. This level also includes a living area with a sofa and a beer pong table; a bathroom; the bedroom of Xana Kernodle on the west end of the building; and the bedroom of an additional resident on the east end of the building.

ISP_4554

3rd Level Bedroom:

3. The upper-most level of the residence is accessible via an internal stairway from the 2nd level and contains two (2) bedrooms. One bedroom on the third level was reportedly assigned to Kaylee Goncalves, and the other bedroom was assigned to Madison Mogen.

4. The bodies of Kaylee Goncalves and Madison Mogen were reportedly discovered in the bedroom assigned to Madison Mogen as depicted in ISP_4856. Ms. Mogen was located on the south side of the bed (closest to the closet opening), and Ms. Goncalves was located on the north side of the bed (closest to the wall). Both are covered with a beige comforter. A white fleece item, which appears to be a blanket, is lying at the foot of the bed.

5. Madison Mogen and Kaylee Goncalves are lying on their backs. Ms. Goncalves is partially lying on top of the right arm, right shoulder and upper torso of Ms. Mogen as depicted in ISP_4968 (see ISP_4978 for view after comforter is removed).

ISP_4968

6. The posture and proximity of the bodies of Kaylee Goncalves and Madison Mogen can best be visualized when the comforter is removed as depicted in ISP_4978.
    a. No blood is noted on the bottoms or tops of their feet indicating they were not upright or moving about the area after their bloodletting injuries were inflicted.
    b. The blood visible on the bottom sheet is limited to the upper portion of the bed sheet at approximately chest level.
    c. According to their respective autopsy reports[7,8], no blood-letting injuries were reported below the waist or on the backs of either Ms. Goncalves or Ms. Mogen.

ISP_4978

7. The image 694_1245 taken at autopsy shows a clearer view of the sleep pants of Kaylee Goncalves. The lack of blood on the front of her sleeping pants further supports the conclusion that Ms. Goncalves never stood upright after the bloodletting injuries to her upper body were inflicted.

Autopsy Image 694_1245

[7]Autopsy No: 221114-558, Goncalves, Kaylee J.
[8]Autopsy No: 221114-532, Mogen, Madison.

8. Ms. Mogen's left leg is extended from under the bedcovers and her left foot is on the floor as depicted in ISP_4871. A piece of debris is noted on the floor between the left foot of Madison Mogen and the pillow and is indicated by the yellow oval in ISP_4871. A swabbing of the debris, as well as the debris itself was tested for the presumptive presence of blood. The swabbing of this debris yielded a positive presumptive test for blood at the scene, but the o-tolidine test conducted at the laboratory was weakly positive.[9]

   It should be noted that there were no **drip trails** [10]of blood noted on the bedroom floor. Drip trails are indicative of movement by a bleeding individual.

ISP_4871

9. In image ISP_4968, the comforter has been turned inward.
   a. The left leg of Madison Mogen is extended from the bed.
   b. **Drip stains**[11], **spatter stains**[12], **transfer stains**[13], and **saturation stains** [14] are visible on the comforter and on the exposed bed sheets.
   c. Apparent strands of hair are also visible on the comforter.
   d. A large **pool**[15] of blood has accumulated at approximately the thigh region of Kaylee Goncalves even though, referring to the autopsy report,[16] no injuries are reported in this area to account for this pool of blood.
      i. For this large pool of blood to accumulate, a source of blood had to be above this area while bleeding occurred.

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[9] Idaho State Police Forensic Services report, Lab No. M2022-4843, Stephanie Wilt, 11/19/2022, (3_Wilt)
[10] **Drip trail**: A bloodstain pattern resulting from the movement of a source of drip stains between two points.
[11] **Drip stain:** A bloodstain resulting from a falling drop that formed due to gravity.
[12] **Spatter stain:** A bloodstain resulting from an airborne blood drop created when external force is applied to liquid blood.
[13] **Transfer stain:** A bloodstain resulting from contact between a blood-bearing surface and another surface.
[14] **Saturation stain:** A bloodstain resulting from the accumulation of liquid blood in an absorbent material.
[15] **Pool:** A bloodstain resulting from an accumulation of liquid blood on a surface.
[16] Autopsy No: 221114-558, Goncalves, Kaylee J.

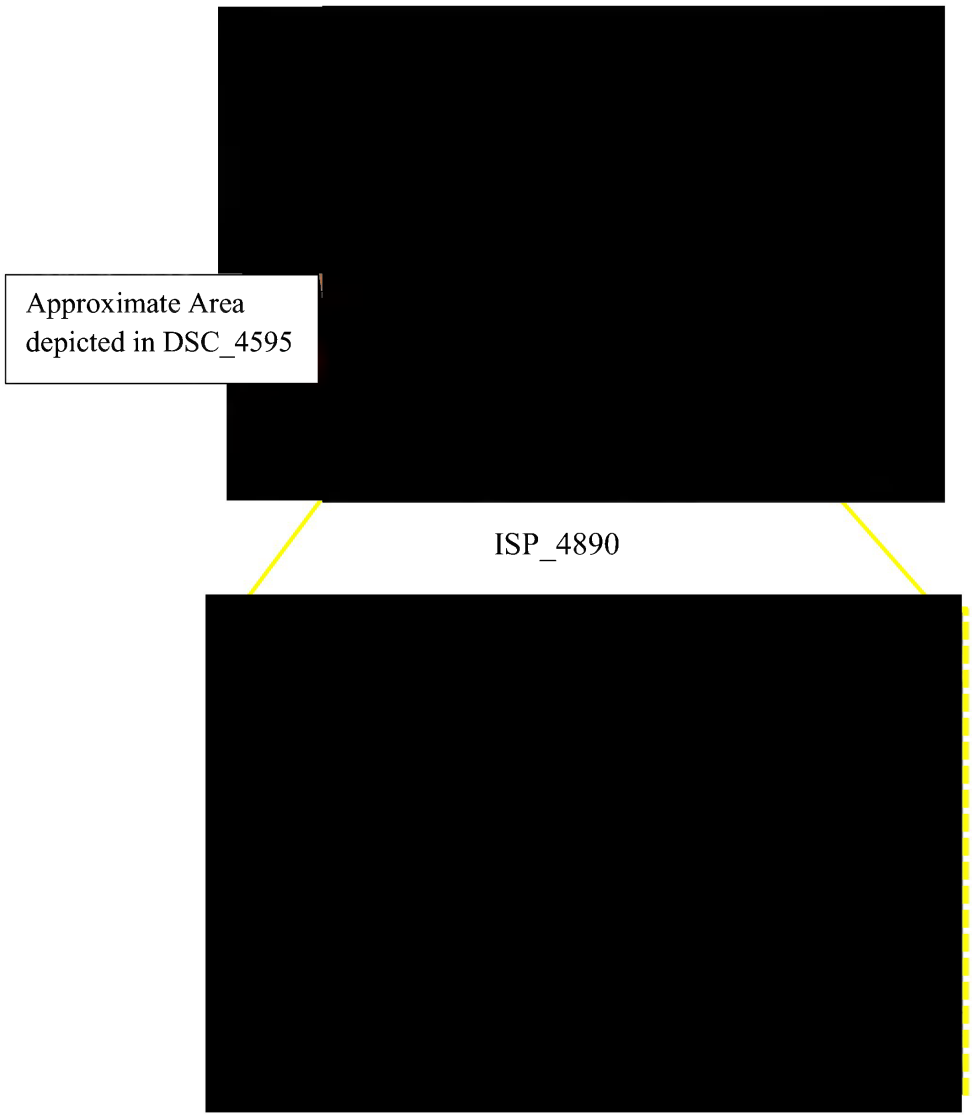
e. The distribution of the bloodstains on the face and upper body of Kaylee Goncalves, the bloodstain on the south wall beside the bed and the pool of blood at Ms. Goncalves thigh region on the comforter indicate that her posture and position did change during this event.

ISP_4968

10. **Spatter associated with impact** is noted on all four (4) walls of the bedroom: above the head of the bed, to the south wall beside Kaylee Goncalves, to the north wall, and to the door at the foot of the bed. These areas will be described more fully in this report.

11. Multiple **spatters associated with impact** and two (2) **cast-off patterns** are noted on the north wall (to the right of Kaylee Goncalves) as depicted in the overview in ISP_4890. Image DSC_4595 shows the area indicated by the yellow box in ISP_4890 in more detail.
    a. The directionality of the **spatters** closer to the doorway is from right to left and downward as indicated by the yellow arrows in DSC_4595.
        i. The **area of convergence**[17] of this spatter pattern indicates they originated from a spatter producing event(s) that occurred above the level of the bed.
    b. Two (2) patterns of **cast-off** [18] blood is indicated in DSC_4595 by the green dotted lines. **Cast-off** is created by the movement of a bloodied object(s).

[17] **Area of convergence:** The space in two dimensions to which the directionalities of spatter stains can be retraced to determine the location of the spatter producing event.
[18] **Cast-off pattern:** A bloodstain pattern resulting from blood drops released from an object due to its motion.


Approximate Area depicted in DSC_4595
ISP_4890
DSC_4595

12. Image ISP_5122 depicts **spatter stains associated with impact** on the door casing and on the exterior surface of the bedroom door belonging to Madison Mogen.
    a. The shape and location of these **spatter stains** are consistent with their being a continuation of **spatter stains** observed on the north bedroom wall beside the bed.
    b. This is consistent with these **spatter stains** having originated due to an impact delivered to a source of exposed blood on the bed.

ISP_5122

13. Image DSC_4603 depicts a portion of the north bedroom wall by Ms. Goncalves' right arm. The following bloodstains are noted on this wall:
    a. **Spatter associated with an impact(s)** is traveling downward and to the right as indicated by the yellow arrows.
        i. The area of convergence of these spatters indicates they originated from an impact that occurred above the level of the bed.
    b. Several areas of **transfer** staining are noted.
    c. Near the center of the image, a **cessation pattern**[19] is indicated by a green arrow. Cessation patterns are the result of a bloodied object undergoing abrupt deceleration.
    d. **Flow patterns**[20] are indicated by the blue arrows inserted in DSC_4603. The appearance of the stains making up these flow patterns are consistent with **diluted blood**. Diluted blood is created when blood is mixed with another liquid.

[19] **Cessation pattern:** A bloodstain pattern resulting from blood drops released from an object due to its abrupt deceleration.
[20] **Flow:** A bloodstain resulting from the movement of a volume of blood on a surface due to gravity or movement of the target.

i. The mouth and nose injuries of Kaylee Goncalves and/or Madison Mogen as noted in the autopsy reports[21],[22] are potential sources of diluted blood.

DSC_4603

14. Image ISP_4975 CROPPED depicts the area adjacent to and above the head of Kaylee Goncalves.
    a. Three (3) discrete areas of **transfer stains** (indicated by the yellow arrows) are noted on the pillow nearest the head of Kaylee Goncalves.
        i. These **transfer stains** have thin protrusions extending from the edges of the transfer stains. This geometric configuration is indicative of transfer stains created by head hair.
        ii. No wiping, smearing or other connection is noted between the three (3) **transfer stains**. These transfer stains were created by discrete moments of contact. No dragging or sliding movement is noted.
    b. **Spatters associated with impact** are noted on the pillow and the wall above the head of Ms. Goncalves.

[21] Autopsy No: 221114-558, Goncalves, Kaylee J.
[22] Autopsy No: 221114-532, Mogen, Madison.

ISP_4975 CROPPED

15. **Spatters associated with impact** are visible on the pillow and the wall above Madison Mogen as depicted in image ISP_4953 CROPPED.
    a. Near the lap region of Ms. Mogen, two (2) linear **saturation stains**[23] are indicated by the green arrows in image ISP_4953 CROPPED.

ISP_4953 CROPPED

[23] **Saturation stain:** A bloodstain resulting from the accumulation of liquid blood in an absorbent material.

16. Image ISP_5132 provides a closer image of the area on the east wall between Ms. Mogen's left shoulder and the bedside table. The smaller stains on the wall in this image are consistent with **spatter stains associated with impact.** These spatter stains are traveling from left to right as indicated by the yellow arrows.
    a. The directionality and the distribution of the **spatter stains** indicate that they originate near the location of Ms. Mogen as depicted in ISP_5132 and that they originate only a short distance above the surface of the bed.
    b. The larger stains which culminate with **flow** stains, as indicated by the blue arrow, are indicative of **cast-off stains** created by a bloody object in motion.

ISP_5132

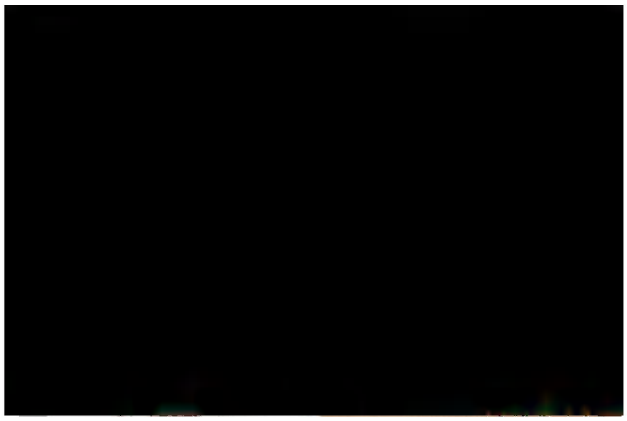
17. ISP_5149 depicts the underside of the shelf above the headboard of the bed. **Spatters associated with impact** are noted on the underside of this shelf.
    a. These spatters represent the termination of the **spatters associated with impact** seen on the wall above the head of the bed.
    b. The directionality and the distribution of these **spatter stains** is consistent with their originating from the head region of the mattress.

ISP_5149

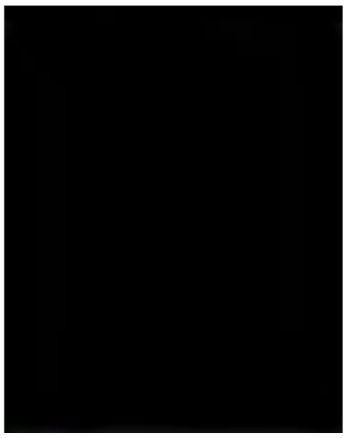
18. The **flow patterns** on Madison Mogen's face are depicted in image ISP_4868. There is little deviation in the directionality of these **flow patterns** indicating there was little change in the posture of Ms. Mogen after these flows were created.

ISP_4868

19. **Spatter stains associated with impact** on the right side of the closet opening on the south wall are indicated by Marker 46 in image DSC_4621 and DSC_4623 CROPPED.
    a. The majority of these **spatter stains** are circular in shape with the shape of the spatters along the lower margin of the overall pattern being directed downward.
    b. The shape and distribution of these **spatter stains associated with impact** are consistent with their originating from the area of the bed.



DSC_4621



DSC_4623 CROPPED

20. The location of a brown object in the vicinity of the lower left back and/or thigh of Madison Mogen is indicated by a yellow oval inserted in image ISP_4865. This object was later identified as a brown knife sheath. The back of the knife sheath is exposed.
    a. In image ISP_4966, this knife sheath is indicated by placard 14. **Spatter associated with an impact** is noted on the sheet on which the brown knife sheath is found.

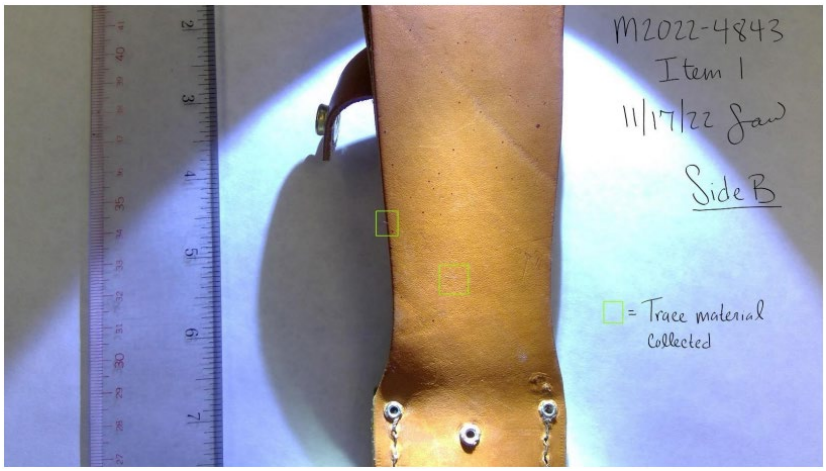
ISP_4865

ISP_4966

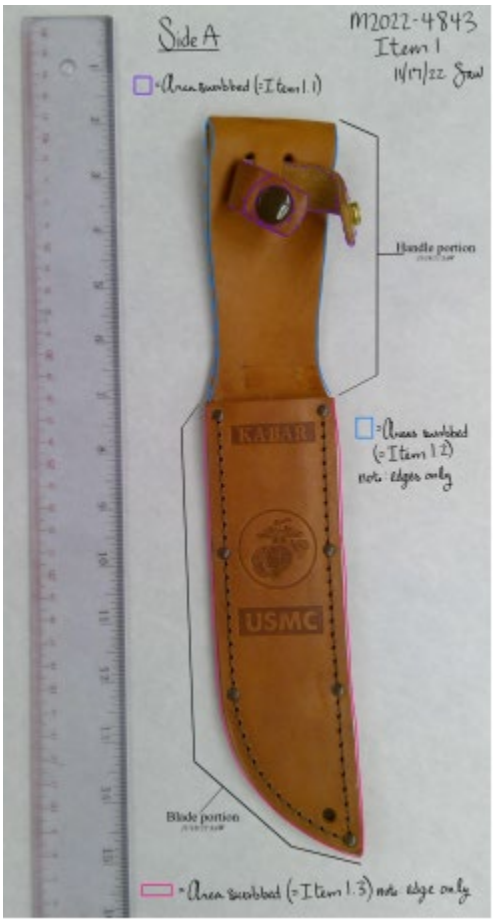
21. Photographs included in the forensic biology report related to the laboratory analysis of the knife sheath provide closer images of the **spatter stains associated with impact** on the exposed surface (back) of the knife sheath.[24]
    a. Presumptive testing for the presence of blood in the stains on the back of the knife sheath was positive.[25]
    b. Subsequent DNA testing of the stains on the back of the knife sheath revealed a mixture of DNA
        i. Kaylee Goncalves matches the major profile of DNA
        ii. Madison Mogen is a potential contributor to the minor component of DNA[26]
    c. The back of this knife sheath was exposed to **spatter stains** which originated from an impact(s) to Kaylee Goncalves and Madison Mogen.

22. The front strap of the knife sheath was swabbed and tested as Item 1.1 as indicated in the attached image.
    a. DNA from Bryan Kohberger was identified on the front strap of the knife sheath.[27]

[24]Idaho State Police Forensic Services report, Lab No. M2022-4843, Stephanie Wilt, 11/18/2022, (1_Wilt)
[25] Idaho State Police Forensic Services report, Lab No. M2022-4843, Stephanie Wilt, 11/18/2022, (1_Wilt)
[26] Idaho State Police Forensic Services report, Lab No. M2022-4843, Taylor Maichak, 11/20/2022, (4_Maichak)
[27] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 02/06/2023, (26_Miller)



Idaho State Police Forensic Services report, Lab No. M2022-4843, page 8 of 9 of Note Packet, page 10 of pdf (1_Wilt), Stephanie Wilt, 11/18/2022



Idaho State Police Forensic Services report, Lab No. M2022-4843, page 3 of 9 of Note Packet, page 5 of pdf (1_Wilt), Stephanie Wilt, 11/18/2022

3rd Level Bedroom Door:

23. Stain 48 on the opening edge of the door to Madison Mogen's bedroom is depicted in Image DSC_4863. Stain 48 is a **swipe**[28] stain which originates approximately 4 feet 1 inch above the floor and is approximately 2 inches in length (it continues to approximately 4 feet 3 inches above the floor). Image ISP_4885 shows this **swipe** in closer perspective. **Swipe** stains are caused by a transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.
    a. Stain 48 was prelogged into the ISPFS system as stain 42[29]. This sample was then assigned the laboratory number 77[30].
        i. Testing showed the sample to originate from Kaylee Goncalves[31].
    b. There is no physical evidence to indicate that either Ms. Goncalves or Ms. Mogen created this transfer stain.

24. DSC_4857 CROPPED was taken by the Forensic Field Services team on November 17, 2022, and shows a second area of swipe transfer stain on the opening edge of the bedroom door as indicated by Marker X.[32]
    a. Subsequent testing at Marker X showed a mixture of DNA:
        i. Kaylee Goncalves matches the major profile of this mixture.
        ii. Madison Mogen is a potential contributor to the minor component of this mixture.[33]
    b. There is no physical evidence to indicate that Ms. Goncalves or Ms. Mogen created this swipe on the edge of the door.

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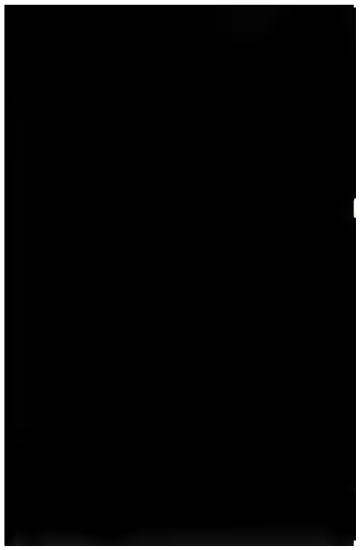
[28] **Swipe:** A bloodstain resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.
[29] Idaho State Police Forensic Services report, Lab No. M2022-4843, 01/23/2023, (22_Wilt)
[30] Idaho State Police Forensic Services report, Lab No. M2022-4843, 01/23/2023, (22_Wilt)
[31] Idaho State Police Forensic Services report, Lab No. M2022-4843, 02/06/2023, (26_Miller)
[32] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez, (11_Martinez)
[33] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 06/16//2023, (34_Miller)

DSC_4863

ISP_4885



DSC_4857 CROPPED

Exterior Surface 3rd Level Bedroom Door:

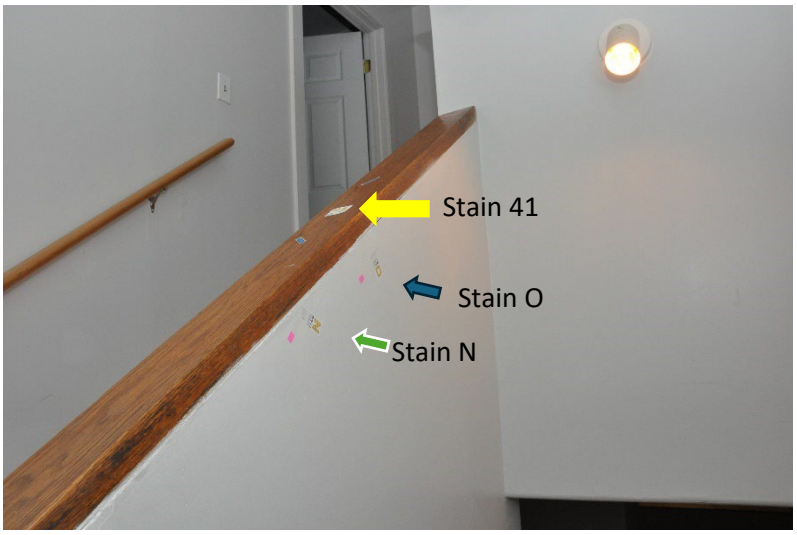
25. Marker 42 in image DSC_4585 and DSC_4587 depicts a patterned **transfer stain** near the hinge side of the exterior surface of the 3rd level bedroom door.
    a. A patterned transfer is created when a patterned object which was wet with liquid blood made contact with the surface.
    b. The appearance of this stain is consistent with **diluted blood** creating this patterned transfer. Diluted blood is created when blood is mixed with another liquid.

DSC_4585

DSC_4587

Stairwell from 3rd level to the Switchback:

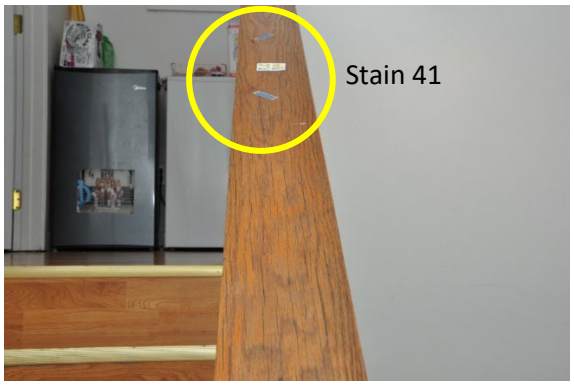
26. The stairwell from the 3rd level to the 2nd level is depicted in DSC_4730.
    a. **Transfer stain** designated Stain 41 is indicated on the top of the banister as indicated by the yellow arrow.
    b. Stains N and O are indicated on the wall below the banister.
        i. Presumptive testing for blood was positive with Stains N and O.[34]



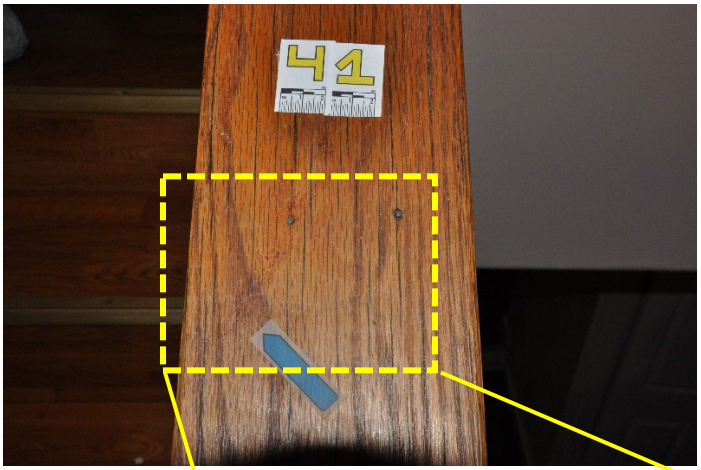
DSC_4730

27. Stain 41 is depicted in Images DSC_4578 and DSC_4580 and DSC_4582 and consists of two (2) patterned **transfer stains** on the handrail between the 3rd level and the 2nd level of the residence.
    a. Patterned **transfer stains** were created when an object(s) with a similar pattern object(s) which was wet with liquid blood made contact with the handrail of this stairway.
    b. **Swiping** motion is visible within the patterned transfer as depicted by the yellow arrow inserted into image DSC_4582.
    c. Stain 41 was positive with presumptive testing for blood.[35]
    d. DNA testing matched Madison Mogen.[36]

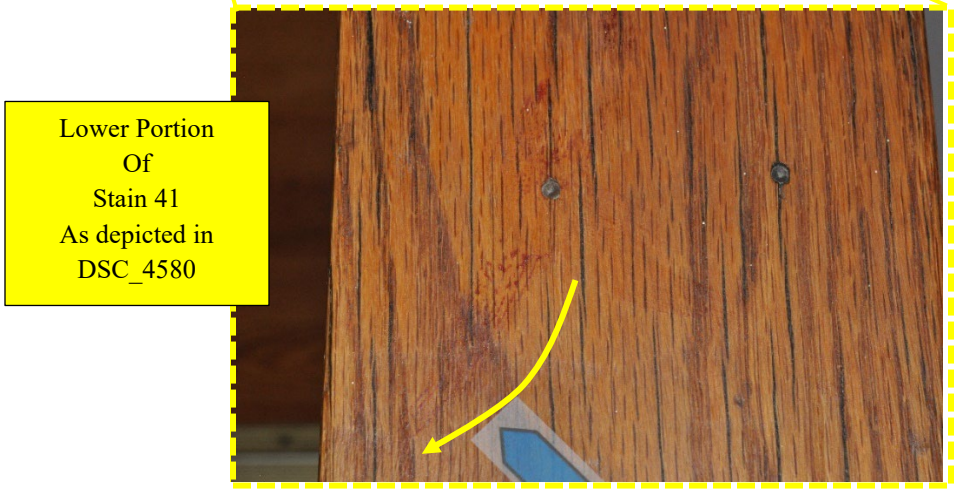
[34] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[35] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[36] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller; (13_Miller)



DSC_4578

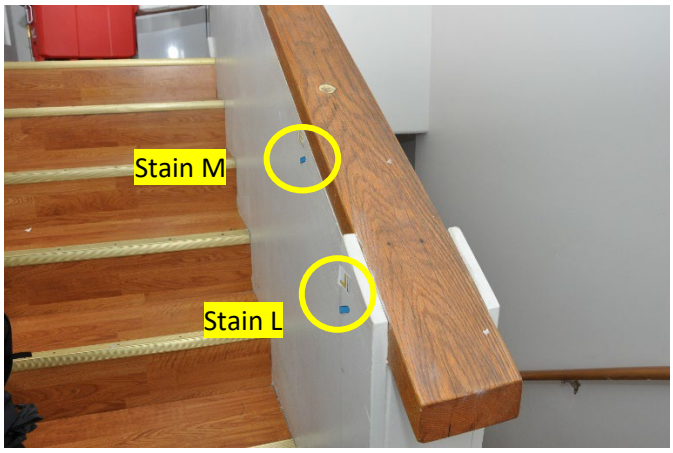


DSC_4580

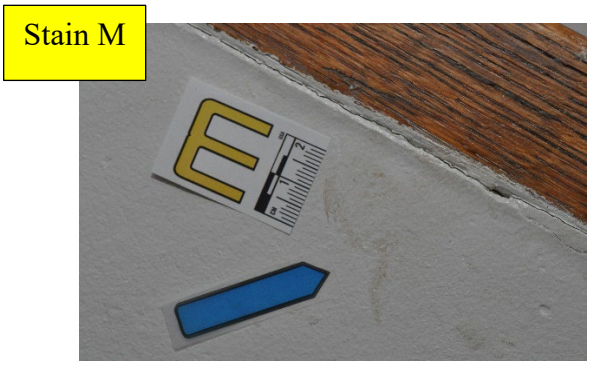


DSC_4582

28. Stains M and L are located on the inner side of the banister of the stairs between level 3 and the switchback (as depicted in DSC_4728).
    a. Stains M and L are light colored **transfer stains** as depicted in DSC_4736 and DSC_4734.
    b. Presumptive testing for the presence of blood was positive with Stains M and L.[37]



DSC_4728



DSC_4736

DSC_4734

[37] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)

Switchback leading down to Level 2:

29. The location of Stain K is indicated in image DSC_4726 at the switchback between level 3 and level 2.
    a. Stain K is a light-colored transfer stain on the wall at the switchback between level 3 and level 2. Stain K can be seen in more detail in image DSC_4732 CROPPED.
    b. Presumptive testing for the presence of blood was positive with Stain K.[38]

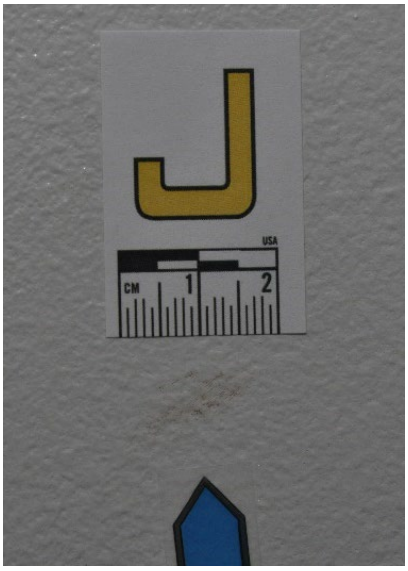
DSC_4726

DSC_4732 CROPPED

[38] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)

30. Stain J is indicated in image DSC_4718 and can be seen in more detail in image DSC_4723 CROPPED.
    a. Stain J is a light-colored transfer stain on the wall at the bottom of the stairs between level 3 and level 2.
    b. Presumptive testing for the presence of blood was positive with Stain J.[39]

DSC_4718



DSC_4723 CROPPED

[39] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)

Living Room Area:

31. ISP_4756 depicts the living room area of the residence. Within this area, there is a sofa, a television, and a beer pong table. A metal framed console table is partially visible against the wall opposite the sofa. A narrow path exists between the metal console table and the beer pong table. Two (2) overturned red cups and a partially empty Bud Light Lime bottle is noted on the beer pong table along with a wooden handled knife.

ISP_4756

32. DSC_4690 depicts the overall location of two (2) stained areas on the beer pong table.
    a. Stain 39 is indicated by the yellow arrow on top of the table and shown in greater detail in DSC_ 4574.
        i. Presumptive testing of Stain 39 for blood was positive.[40]
        ii. Stain 39 demonstrates the appearance of diluted bloodstain.
        iii. This stain on the table revealed the DNA of Kaylee Goncalves (Item 76).[41]
    b. The presence of an overturned cup in the vicinity of stain 39 is a potential source of the dilution if the cup in fact contained a source of liquid. It is unclear if this cup contained a liquid at some time or if it was a part of the setup for beer pong game.
    c. Spatter Stain F is on the edge of the west side of the table. It is depicted by the orange arrow in DSC_4690 and is shown in greater detail in DSC_4694.
        i. Presumptive testing of Stain F for blood was positive.[42]
        ii. DNA from this stain was not identified.

[40] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[41] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 02/06/2023 (26_Miller)
[42] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)

iii. The extremely elongated shape of stain F is attributable to an acute angle of incidence between the source object and the side of the beer pong table.

DSC_4690

DSC_4574

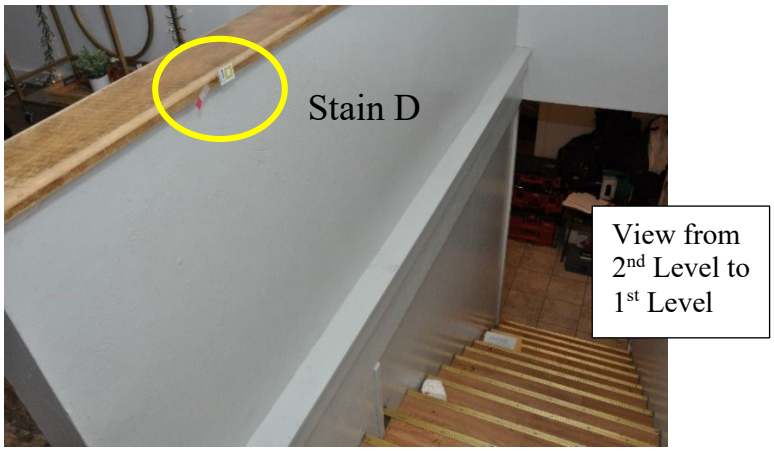
DSC_4694

33. Image ISP_4687 depicts the view looking across the beer pong table toward the bedroom assigned to Xana Kernodle. Across from the beer pong table is the metal console table referenced earlier. On the right side of this image, one can see a half-wall with a wooden ledge, and the stairs leading from the 2nd level down to the 1st level parking lot entrance on the north side of the residence. Near the middle of the frame, the hallway leading from the living room to the bedroom of Xana Kernodle is depicted.

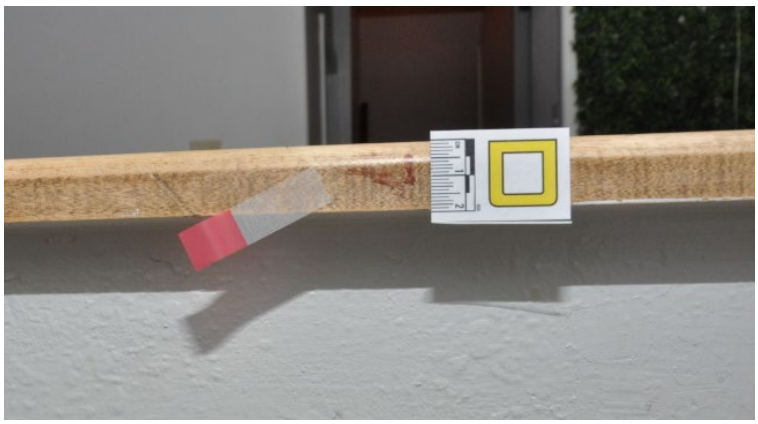
ISP_4687

Stairway leading from Level 2 to Level 1:

34. Stain D is located on the north side of the wooden ledge of the half-wall in the living room. The location of Stain D is depicted in DSC_4682, and a closer view is depicted in DSC_4683 CROPPED.
    a. Stain D was tested for the presumptive presence of blood and was positive.[43]
    b. Stain D is a **transfer** bloodstain.
    c. Subsequent testing of Stain D on the edge of the ledge showed a mixture of DNA.
        i. Ethan Chapin being the primary contributor.[44]
    d. There is no physical evidence to indicate that Ethan Chapin was ever outside of the bedroom after sustaining his bloodletting injuries.



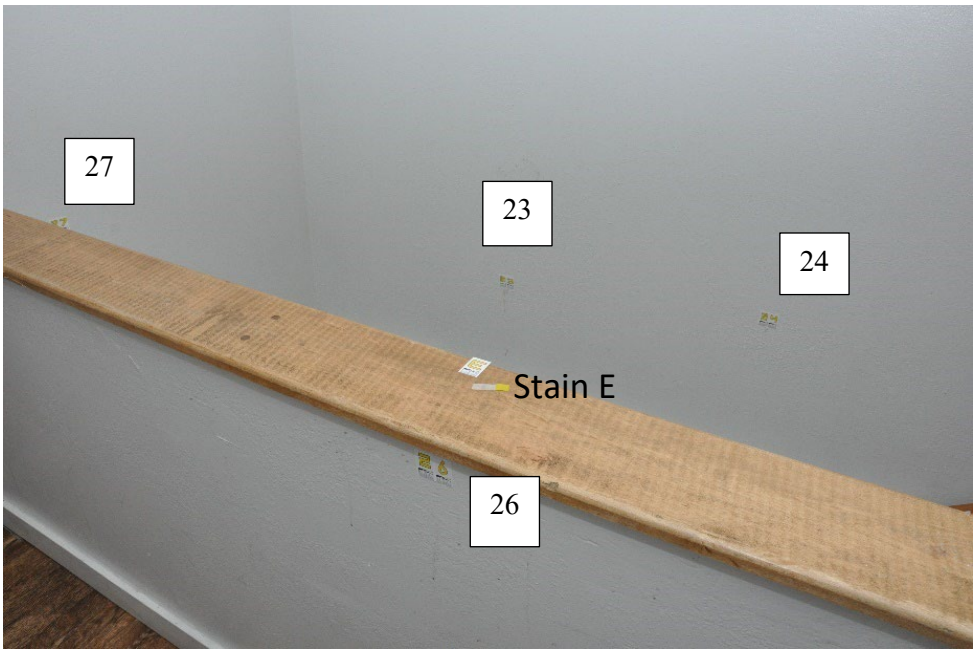
DSC_4682



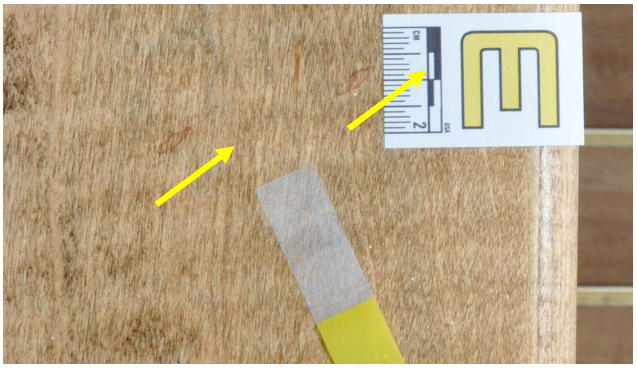
DSC_4683 CROPPED

[43] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[44] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 12/17/2022 (13_Miller)

35. Stain E on top of the wooden ledge is depicted in DSC_4685 and DSC_4687 CROPPED.
    a. Stain E was tested for the presumptive presence of blood and was positive.[45]
    b. Stain E consists of two (2) **diluted spatter stains**.
    c. The shape of these spatters show they are traveling from the area of the living room and towards the stairwell opening (in the direction of the yellow arrows).
    d. The coloration and the **edge characteristic**[46] of Stain E show concentration around the outer periphery indicative of a **diluted stain**.
    e. Stain E was not tested further.



DSC_4685



DSC_4687 CROPPED

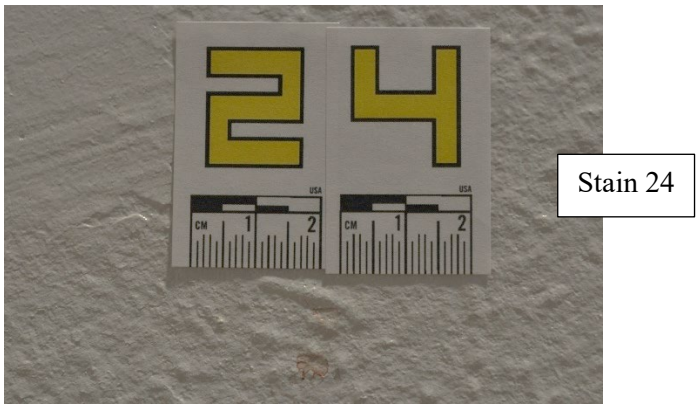
[45] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[46] **Edge characteristic:** A physical feature of the periphery of a bloodstain.

36. Three (3) areas of staining are noted in the stairwell between the 2nd level and the 1st level as depicted in DSC_4430. On the North wall, these stains are labeled as 23 and 24, and Stain 27 is in the area located above the steps. Stain 23 is depicted in more detail in image DSC_4400 CROPPED, and stain 24 is shown in more detail in image DSC_4402. A closeup view of stain 27 is depicted in DSC_4435.
    a. Stains 23, 24 and 27 were tested for the presumptive presence of blood and were positive.[47]
    b. The location and distribution of Stains 23, 24 and 27 are consistent with a **cast-off mechanism** while their physical appearance is consistent with **diluted blood**.
        i. **Cast-off** is created when blood is released as the result of a bloodied object in motion.
        ii. The appearance of the **bloodstains** reveal that the blood has been **diluted** by another liquid.
    c. DNA testing of stains from the North wall (Stain 27) of the stairwell shows a mixture of DNA:
        i. Kaylee Goncalves matches the major component
        ii. Madison Mogen is a potential contributor to the minor component[48].
    d. There is no physical evidence to indicate that Kaylee Goncalves or Madison Mogen was in this location after sustaining their bloodletting injuries.

DSC_4430

[47] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[48] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 02/06/2023, (26_Miller)

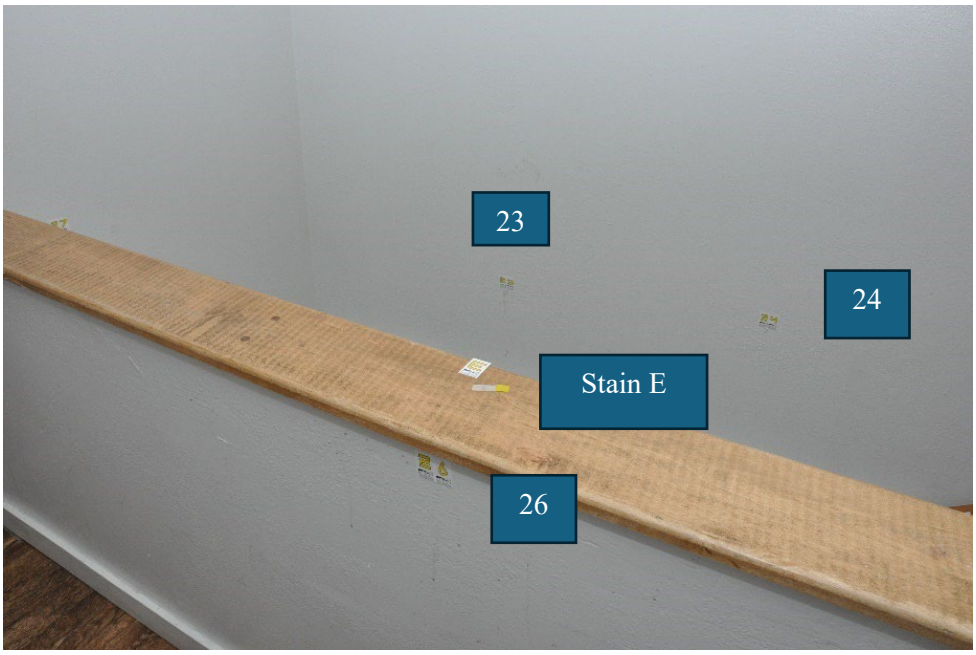
DSC_4400 CROPPED



DSC_4402 Lightened

DSC_4435

37. Stain 26 on the half wall of the 2nd floor living room at the end of the beer pong table is depicted in image DSC_4886 and DSC_4685.
    a. Stain 26 was tested for the presumptive presence of blood and was positive.[49]
    b. Stain 26 is **diluted cast-off with associated flow stains.**
        i. **Cast-off** is created when blood is released as the result of a bloodied object in motion.
        ii. The appearance of the **bloodstains** reveal that the blood has been **diluted** by another liquid.
        iii. **Flow** stains as demonstrated in Stain 26 result from gravitational attraction
    c. Additional testing of Stain 26 shows the presence of a mixture of DNA.
        i. Kaylee Goncalves matches the major component
        ii. Madison Mogen is a potential contributor to the minor component [50].
    d. There is no physical evidence to indicate that Kaylee Goncalves or Madison Mogen was in this location after sustaining their bloodletting injuries.



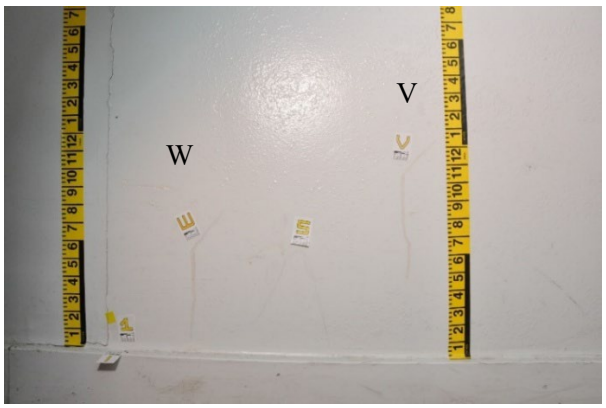
DSC_4685

[49] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)
[50] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 02/06/2023, (26_Miller)

DSC_4886

38. Stains V and W represents an area of staining on the half wall in the 2nd level living room. This area is west of Stain 26. (NOTE: The label "Stain 5" indicates a hair)
    a. Stains V and W were tested for the presumptive presence of blood and were positive.[51]
    b. Stains V and W represent a second area of diluted **cast-off stains with associated flow.**
        i. **Cast-off** is created when blood is released as the result of a bloodied object in motion.
        ii. The appearance of the **bloodstains** reveal that the blood has been **diluted** by another liquid.
        iii. The **flow** patterns are the result of gravitational attraction.
    c. There is no physical evidence to indicate that Ms. Goncalves, Ms. Mogen, Ms. Kernodle, or Mr. Chapin were in this location after sustaining their bloodletting injuries.

DSC_4870

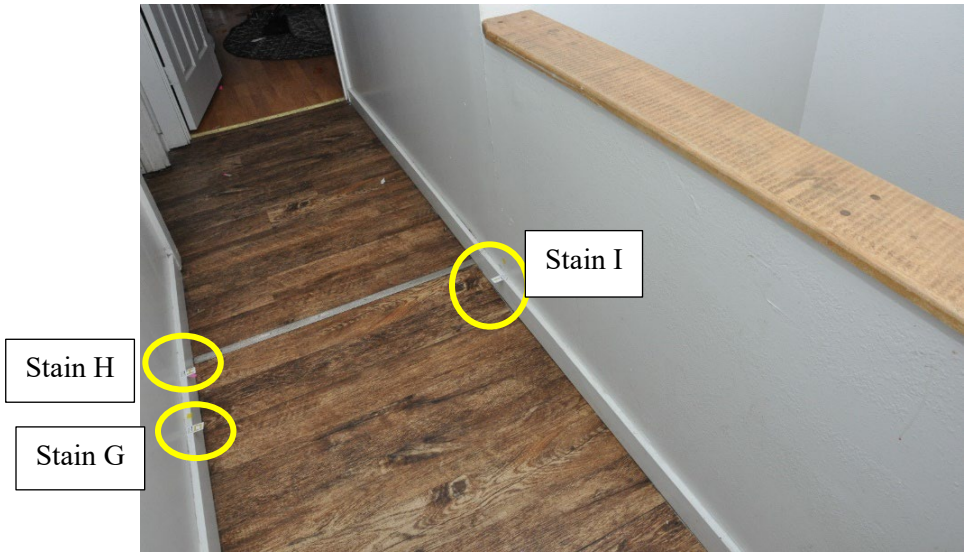


DSC_4873

[51] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)

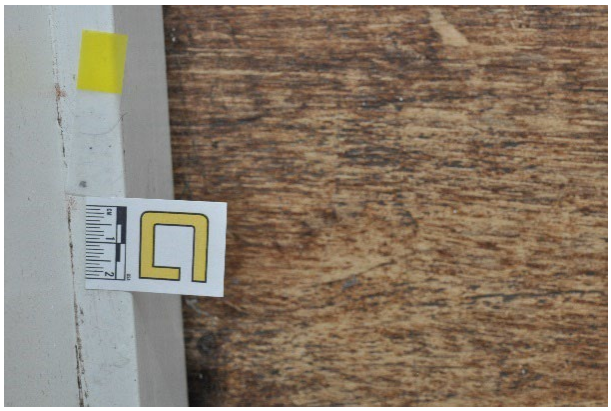
Hallway leading to bedroom of Xana Kernodle:

39. Image DSC_4704 depicts the stains identified on the baseboards in the hallway between the living room area on the 2nd level and the bedroom assigned to Xana Kernodle. On the left side of the hallway are Stains G and H, and on the right side of the hallway is Stain I (Stain I can also be seen in DSC_4873 above). Stain G is depicted in closer detail in image DSC_4699. Stain H is depicted in closer detail in image DSC_4703. Stain I is depicted in closer detail in image DSC_4712.
    a. Stains G, H and I were tested for the presumptive presence of blood and were positive.[52]
    b. The physical appearance of Stains G, H and I is consistent with **diluted blood**. Diluted blood is the result of intermixing blood with another liquid.
    c. There is no physical evidence to indicate that Ms. Goncalves, Ms. Mogen, Ms. Kernodle, or Mr. Chapin were in this location after sustaining their bloodletting injuries.



DSC_4704

[52] Idaho State Police Forensic Services; Forensic Field Services Report; Tara Martinez; (ISP Lab _11)



DSC_4699

DSC_4703

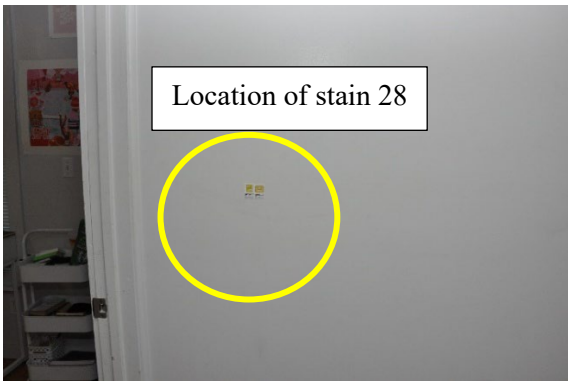
DSC_4712

40. Stain 38 is depicted in image DSC_4438 near the bathroom doorway on the left side of the hallway between the living room area and the bedroom assigned to Xana Kernodle. Stain 38 is depicted in closer detail in image DSC_4439.
    a. Presumptive testing for the presence of blood was negative.[53]

DSC_4438

DSC_4439

41. Stain 28 is depicted in image DSC_4443 and in closer detail in image DSC_4445 on the North side of the hallway between the living room and the bedroom of Xana Kernodle.
    a. Stain 28 gave a positive presumptive test for blood.[54]
    b. Stain 28 is a **swipe stain.**
    c. Stain 28 appears dark in color and not diluted.
        i. An undiluted swipe stain indicates that a bloodied object/surface made contact with this wall while in motion.



DSC_4443

DSC_4445

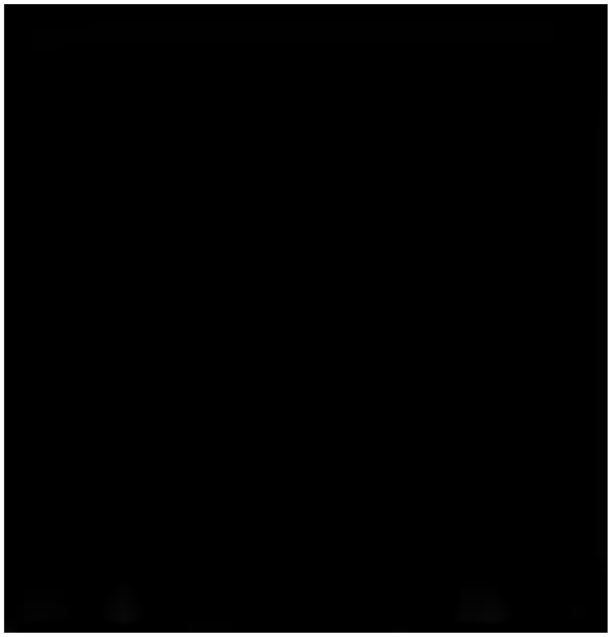
[53]Idaho State Police Forensic Services; Forensic Field Services Report; Martinez, Tara; (11_Martinez)
[54] Idaho State Police Forensic Services; Forensic Field Services Report; Martinez, Tara; (11_Martinez)

Bedroom of Xana Kernodle:

42. ISP_4719 shows an overview of the bedroom assigned to Xana Kernodle.
    a. Ms. Kernodle is lying on the bedroom floor. She is wearing a pair of underwear, a long-sleeved shirt and is barefoot.
    b. Ethan Chapin is lying on the bed partially covered with a blue blanket and a pink comforter. He can be seen to be wearing a pair of white socks.

ISP_4719

43. Image ISP_4708 CROPPED shows blood on the bottoms of the feet of Xana Kernodle.
    a. This observation indicates that Xana Kernodle was moving about and stepping into liquid blood after bloodletting injuries had occurred.
    b. Although there is physical evidence to support that Ms. Kernodle was moving about within her bedroom, there is no physical evidence to indicate that she ever moved beyond this room once she was bleeding heavily.



ISP_4708 CROPPED

44. The bottoms and tops of the socks of Ethan Chapin are depicted in ISP_4719 CROPPED and ISP_4933.
    a. No blood is visible on either the bottoms or tops of his socks.
    b. This observation supports that he was not moving about and dripping blood or stepping into blood after liquid blood was shed.

ISP_4719 CROPPED

ISP_4933

45. A **projected** pattern (indicated by yellow arrow) is visible on the bedroom wall in the vicinity of the head of Ethan Chapin in image ISP_4933. Mr. Chapin's head is between the edge of the mattress and the wall. This projected pattern is more readily visible in image DSC_4513 CROPPED.
    a. Damage to an artery can lead to production of an arterial/**projected pattern**[55] .
    b. According to the autopsy report related to the postmortem examination of Ethan Chapin, he suffered injuries to his left subclavian vein and artery[56].

ISP_4933

[55] **Projected pattern:** A bloodstain pattern resulting from the ejection of blood under hydraulic pressure, typically from a breach in the circulatory system.
[56] Autopsy No: 221114-506, Chapin Ethan J.

DSC_4513 CROPPED

46. Image ISP_4935 shows an overview of the positioning of Ethan Chapin, and the relationship between the **projected** arterial pattern on the wall and the location of the injured left subclavian vein and artery described in the autopsy report.[57] The subclavian artery lies just below the collar bone (the clavicle) on each side of the body.
    a. **Saturation** staining is located on the lower corner of the pillow under his left shoulder and on the sheet underneath each pillow.
    b. A **swipe stain** is located on his left side
    c. **Transfer stain**s are located on Chapin's:
        i. Left chest, left shoulder and left upper arm.
        ii. Top and bottom surfaces of his left upper wrist.
    d. **Transfer stain**s and **saturation stains** are located on the:
        i. Blue blanket lying across his torso and upper legs.
        ii. Bottom sheet under and along his right side.

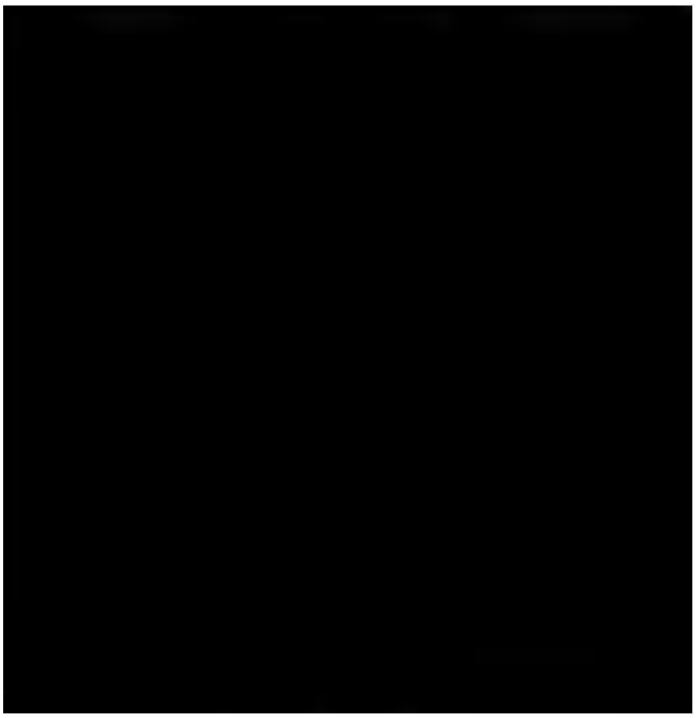
[57] Autopsy No: 221114-506, Chapin Ethan J.

ISP_4935

47. ISP_4935 CROPPED shows a closer view of Ethan Chapin's upper body and neck.
    a. Heavy flow stains originating in the region of his left clavicle and flowing towards the right side of his body are visible. These flows then change directionality and flow down the right arm towards the elbow (indicated by the yellow arrow).
    b. His right shoulder has a transfer stain on the uppermost portion of the shoulder and flow stains traveling towards the elbow (indicated by the white arrows).
    c. The antecubital fossa of the right arm and the right armpit is **void**[58] of staining (indicated by the orange arrows). These **void**s are the result of these areas being shielded or protected from bloodstains as the **projected** blood was created.
    d. A second area of **projected** staining is located below the antecubital fossa on the upper portion of the right forearm (indicated by the green arrow).

[58] **Void:** An absence of blood in an otherwise continuous bloodstain or bloodstain pattern.

e. These observations indicate that Ethan Chapin was on his right elbow when his left subclavian artery was injured. This positioning created a void at his right armpit as blood flow began to emanate from the wound. Blood flows toward his right neck and down his upper right arm resulting in the void at the folded, right antecubital fossa. As he falls toward his right, the flow patterns change directionality accordingly, and directional spatters from the injured subclavian artery strike his face



ISP_4935 CROPPED

48. **Spatter**s showing directionality are visible on the left cheek of Ethan Chapin. These spatters were created due to the injured subclavian vein and artery. A **flow pattern** originating from the area of his neck continues across the chin, across the left cheek and culminates above his right brow. Another flow travels around the bottom of the left nostril on to the tip of the nose. No expiration of blood is visible at the nostrils.

ISP_5004

49. **Void**ed areas are visible on the wall beside the bed after the body of Ethan Chapin was moved (DSC_4518).
    a. These **voids** were created due to Mr. Chapin's head and hair shielding the wall from projected arterial blood originating from his injured left subclavian artery.
    b. His head was down near the wall while the arterial pattern on the wall was created.

DSC_4518

50. An incision is located at the lateral right leg slightly above the knee (see ISP-4735).
    a. **Saturation**[59] staining on the bottom sheet is associated with this injury.
    b. **Spatter** stains are located on the top of the right knee.
    c. A second injury below this incision is visible when his leg was rolled medially (see ISP_5006).

ISP_4735

ISP_5006

[59] **Saturation stain:** A bloodstain resulting from the accumulation of liquid blood in an absorbent material.

51. Image ISP_4948 shows the location of an incision visible at Ethan Chapin's upper left leg.
    a. This incision is not visible in image ISP_4933 which depicts his body prior to removal of the blanket and comforter.
    b. Saturation stains are noted on the pink comforter in image ISP_4933.
    c. The blue blanket and/or pink comforter was placed on top of the incision to the left leg after the incision was inflicted

ISP_4948

ISP_4933

52. Image ISP_4950 depicts the incision of the left upper leg of Ethan Chapin. A small amount of **saturation** staining is noted on the bedsheet at the level of the incision.
    a. **Spatters** are located forward of the saturation stains.
    b. **Transfer**s are noted on the left leg above the incision.

ISP_4950

53. Xana Kernodle was discovered lying on the floor of her bedroom as depicted in image ISP_4911. Above the location of her head, a white nightstand is at an angle to the bed. A white shelving unit with dark gray drawers is against the wall between the bed and the closet. On the wall opposite the bed is a white desk. A white faux fur chair is between the closet and the desk.

ISP_4911

54. Image ISP_4719 CROPPED shows a closer view of the bloodstains on the body of Xana Kernodle.
    a. The bloodstains on her legs exhibit many **transferred stains**, **wipe**d stains, and **flow stains**.
    b. Numerous **transfer**s and **saturation stains** are noted on her sweatshirt.

ISP_4719 CROPPED

55. On the right thigh of Xana Kernodle, a patterned **transfer** is indicated by the yellow arrow in image ISP_4927 CROPPED. An object with a similar pattern either transferred the blood to her right thigh or contacted an existing bloodstain on her upper right thigh while it was still wet.

ISP_4927 CROPPED

56. The white nightstand depicted in image ISP_5077 shows **transfers** and **wipes** on the side closest to the bed and on the top surface.
    a. The front edge of the nightstand has been moved away from the bed in order to make room for a bloody object that created the **transfers** on the side of the nightstand and to allow room for the **drip stains** noted in the floor.
    b. **Drip stains** and **drip trails** are noted on the bottom shelf of the nightstand and on the floor between the bed and the nightstand. Drip stains and trails are created when a surface wet with blood is above the level of the surface showing deposition
    c. **Spatter stains associated with impact** are noted on the wall and on top of the nightstand.

ISP_5077

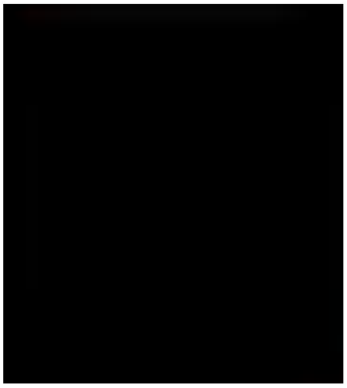
57. Stain 31 in DSC_4941 is a **cessation pattern** located on the wall between the bed and the location of the white nightstand. This pattern is shown in more detail in image ISP_5074.
    a. The shape and edge characteristics of this pattern indicate that a bloodied object struck the wall in this location.

DSC_4941

ISP_5074

58. Image ISP_5073 depicts an apparent defect in the bed sheet (circled in white). Yellow material is visible beneath the defect in the bed sheet as seen in the cropped image.

ISP_5073



ISP_5073 CROPPED

59. DSC_4556 depicts the area surrounding the white shelving unit along the west wall of the bedroom near the closet opening.
    a. **Spatter stains** are noted on the wall beside the leg of the shelving unit and are labeled with the placard 34. A closer view of this spatter pattern is depicted in DSC_4562.
    b. The appearance of the stains indicated by the yellow oval in DSC_4562 is consistent with diluted blood. Diluted blood is created when blood is mixed with another liquid.
        i. The mouth and nose injuries of Xana Kernodle as noted in the autopsy report[60] are potential sources of diluted blood.
    c. The shape and **area of convergence** of these **spatter stains** indicate that the source of the blood was slightly above the level of these stains.

[60] Autopsy No: 221114-454. Kernodle, Xana A.

DSC_4556

DSC_4562

60. **Spatter stains associated with impact** are located on the wall to the right of the opening for the closet as depicted in image ISP_4740. The spatter is indicated by marker 29 in image DSC_4892.
    a. The appearance of these spatters is consistent with diluted blood (see DSC_4892 CROPPED).
        i. The mouth and nose injuries of Xana Kernodle as noted in the autopsy report[61] are potential sources of diluted blood.
    b. The directionality of the spatter stains is from right to left as indicated by the yellow arrow inserted in image DSC_4892 CROPPED.
    c. These spatter stains originated from an impact to a source of exposed blood located approximately 3 feet and 7 inches above the floor as indicated by the scale in image DSC_4892 CROPPED.

ISP_4740

DSC_4892 CROPPED

[61] Autopsy No: 221114-454. Kernodle, Xana A.

61. **Transfer stains** are noted on the white faux fur chair depicted in image ISP_5091. This chair is located adjacent to the head of Xana Kernodle. There are additional transfer stains on the uppermost portion of the leg of the desk depicted in image ISP_5093 and indicated by marker 35.
    a. Marker 35 presumptive test for blood was positive.[62]
    b. DNA matched Xana Kernodle.[63]

ISP_5091

ISP_5093

[62] Idaho State Police Forensic Services report, Lab No. M2022-4843, Stephanie Wilt, 01/23/2023 (22_Wilt)
[63] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 02/06/2023 (26_Miller)

62. **Swipe stains** are located on the trash can underneath the desk as depicted in image DSC_4800 and DSC_4800 CROPPED and indicated by marker T.

    a. **Swipe stains** result from the transfer of blood from a blood-bearing surface onto another surface with characteristics that indicate relative motion between the two surfaces.
    b. Testing showed the presence of the blood of Xana Kernodle.[64,65]

DSC_4800

DSC_4800 CROPPED

[64] Idaho State Police Forensic Services report, Lab No. M2022-4843, Stephanie Wilt, 03/08/2023 (29_Wilt)
[65] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 06/16/2023 (34_Miller)

Upper portion of Xana Kernodle's bedroom door:

63. DSC_4781 depicts the upper portion of Xana Kernodle's bedroom door. The bloodstains depicted indicate a:
    a. **Cast-off** pattern composed of diluted blood and associated **flow patterns**
        i. **Cast-off** is created when blood is released as the result of a bloodied object in motion.
        ii. The appearance of the **bloodstains** reveal that the blood has been **diluted** by another liquid.
            1. The mouth and nose injuries of Xana Kernodle as noted in the autopsy report[66] are potential sources of diluted blood.
        iii. **Flow patterns** in this instance are the result of gravitational attraction.

DSC_4781

[66] Autopsy No: 221114-454. Kernodle, Xana A.

Lower portion of Xana Kernodle's bedroom door and adjacent floor:

64. DSC_4784 shows the lower portion of Xana Kernodle's bedroom door (exterior surface).
    a. Stain 36 indicates **diluted flow stains** on the exterior surface of the bedroom door.
        i. The appearance of these stains indicates that the blood has been **diluted** with another liquid altering their appearance.
        ii. Subsequent testing of these **flow stains** on the exterior of bedroom door indicates the blood of Xana Kernodle.[67,68]
        iii. The mouth and nose injuries of Xana Kernodle as noted in the autopsy report[69] are potential sources of diluted blood.
    b. **Drip stains** were noted on the bedroom floor below the door. The relative location of these drip stains is indicated by a pink marker on the floor in image DSC_4784. These **drip stains** are better visualized in image DSC_4787.
        i. These drip stains do not appear to have been altered or diluted.
    c. The location of these drip stains near the opening edge of the bedroom door represents the furthermost location of undiluted blood
    d. Once Xana Kernodle was actively bleeding, there is no physical evidence that she was ever east of this location.

DSC_4784

[67] Idaho State Police Forensic Services report, Lab No. M2022-4843, Stephanie Wilt, 01/23/2023 (22_Wilt)
[68] Idaho State Police Forensic Services report, Lab No. M2022-4843, Jade Miller, 02/06/2023 (26_Miller)
[69] Autopsy No: 221114-454. Kernodle, Xana A.

DSC_4787

CONCLUSIONS:

1. There is no physical evidence that any of the decedents were outside of their respective bedrooms after sustaining significant bloodletting injuries. The only decedent to move from the bed and/or be standing upright after actively bleeding was Xana Kernodle.
2. Someone other than the decedents had a source of blood on their person or in their possession and is responsible for the creation of the bloodstains in the following locations:
    a. Madison Mogen's bedroom door
    b. Stairway leading from the 3rd level to the 2nd level
    c. Stairway leading from the 2nd level to the 1st level
    d. Diluted stain on top of the beer pong table on the 2nd level
    e. Half-wall near the end of the beer pong table on the 2nd level
    f. Wooden ledge of the half wall on the 2nd level
3. The presence of diluted bloodstains outside of the respective bedrooms indicates that the person(s) responsible for the creation of these bloodstains also caused their dilution.
4. The cast-off bloodstains on the half wall at the end of the beer pong table and in the stairwell between the 2nd and 1st floor indicate that the source of the diluted blood was in motion.

5. The presence of diluted blood from Kaylee Goncalves and Madison Mogen in the cast-off bloodstains on the half wall at the end of the beer pong table and in the stairwell opening between the 2nd and 1st floors establishes that Ms. Goncalves and Ms. Mogen had already been injured and that the source of their blood had been mixed with another liquid before these cast-off stains were created.
6. Transfer Stain D on the north side of the wooden ledge of the half-wall in the living room which was identified as containing the blood of Ethan Chapin is the only undiluted bloodstains identified outside of the bedrooms.
7. The knife sheath recovered from the bed of Madison Mogen had DNA associated with Bryan Kohberger and blood spatters associated with an impact delivered to Kaylee Goncalves and Madison Mogen.
8. There is no physical evidence to indicate that a significant amount of time elapsed during the commission of this violent activity.
9. There is no physical evidence to exclude a single perpetrator causing the death of these four individuals.
10. There is no scientific basis to predict the necessary occurrence of secondary footwear transfer stains due to overall lack of visible footwear patterns in the entire crime scene.

These findings are based upon the materials provided to date. Submission of additional materials could alter these conclusions.

Respectfully submitted,

T. Paulette Sutton, MS, MT (ASCP), CLS

Appendix A Response and Rebuttal Report issued by Matthew Noedel on January 22, 2025

Appendix B Rebuttal to Report issued by Dr. Brent Turvey issued on January 22, 2025

Appendix C Terms and Definitions in Bloodstains Pattern Analysis

Appendix D "Absence of Evidence is Not Evidence of Absence", Kish, P.E., and MacDonell, H.L., Guest editorial, J. For. Ident., 46 (2), 1996, 160-164

Appendix A

Response and Rebuttal to

Report issued by Matthew Noedel on January 22, 2025

Responses to Rebuttal Items in Report by Matt Noedel dated January 22, 2025

[1] Sutton Report (page 10) – *"It should be noted that there were no drip trails of blood noted on the bedroom floor. Drip trails are indicative of movement by a bleeding individual."*

Noedel Comment: *Drip trails, when present, can represent movement of a bleeding person – or movement of an object with wet blood of sufficient volume to continue to drip after blood acquisition (i.e. a bloody weapon can create a drip trail from the weapon being carried away from a blood source). [Bates 003289]*

Sutton Response: Drip trails can certainly indicate movement of an object with enough wet blood to create drips, but this type of drip trail is typically characterized by a small number of drips due to the lack of a replenishing blood supply. In comparison, a bleeding individual can create a longer, more continuous drip trail.

The comment made in my report was intended only to address whether or not a continuous drip trail indicative of a bleeding individual was observed.

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[2] Sutton Report (page 22) –

(A) "Marker 42 in image DSC_4585 and DSC_4587 depicts a patterned transfer stain near the hinge side of the exterior surface of the 3rd level bedroom door."

(B) "A patterned transfer is created when a patterned object which was wet with liquid blood made contact with the surface. The appearance of this stain is consistent with diluted blood creating this patterned transfer. Diluted blood is created when blood is mixed with another liquid."

(C) "Subsequent testing at Marker 42 showed the DNA of Kaylee Goncalves."

Noedel Comment:

(A) This stain (as depicted in the Sutton report image 4587) is an altered bloodstain. The appearance depicted in this image represents what was left of the stain after the initial sampling conducted by Detective Talbott.

(B) Original images of this stain show it to be small spatter (black and white numbered placard #42 of Talbott). The sample was then collected (likely with excessive water applied to the swab) altering the original appearance of the stain. Days later when the ISPFS laboratory processed the scene, a yellow sticker "42" was placed and the after-collection appearance photographed (see figure 26).

(C) This stain was never DNA tested and therefore it cannot be attributed as originating from any specific individual. The misidentification of this sample may be associated with the renumbering system employed by Detective Payne. (Bates 003289)

Sutton Response:

Regarding alteration of Stain 42: My description of Stain 42 was based on its appearance in Image 4587. Mr. Noedel had the advantage of seeing Stain 42 in situ. If the original stain was in fact collected using excess water, I agree with Mr. Noedel's opinion of it being an altered spatter stain.

Regarding the DNA profile of Stain 42: I was unaware of the change in numbering system as it correlated to the description of the agency number in the ISPFS worksheets described by Mr. Noedel (Bates 003289): *"The misidentification of this sample may be associated with the renumbering system employed by Detective Payne"*

After further investigation, I removed any DNA results for Stain 42 as it appears not to have been tested.

==========

[3] Sutton Report (page 16) – "ISP_5149 depicts the underside of the shelf above the headboard of the bed. Spatters associated with impact are noted on the underside of this shelf. These spatters represent the termination of the spatters associated with impact seen on the wall above the head of the bed."

Noedel Comment: *This part of the assessment should also consider cast off from a bloody object being swung upward and toward the northeast corner. (Bates 003291)*

Sutton Response: While I agreed that a cast-off pattern may be intermingled with the impact spatters on the underside of the shelf above Mogen's bed, it is my opinion that a simple call of impact spatter is more conservative.

==========

[4] Sutton Report (page 30) – "Xana Kernodle was injured in proximity to this table"

Noedel Comment: *As a single drop deposited (with potential dilution), it cannot be determined when this drop arrived or what specific mechanism generated it. The Sutton report incorrectly reported that "stain "F" revealed the DNA of Xana Kernodle; however, no record of this stain having been tested for source DNA was located in the provided data. No additional or accompanying bloodstains, patterns or transfers from Kernodle are demonstrated in this area so there is no data to suggest Kernodle was injured at or near this table. (Bates 003291)*

Sutton Response: The incorrect DNA profile originally attributed to Stain F has been corrected in the body of this amended report. The conclusion stating that the finding of Kernodle's blood on the table in the living room was the basis for my conclusion that she had suffered an injury at or near this table.

My original reporting of DNA from Stain F as being blood from Xana Kernodle was the result of my mistaken belief that the description of a stain as being collected from a "2nd floor study table" (ISPFS 22_Wilt) was an alternative description of what I referred to as the beer pong table in the living room. This error has been corrected, and the conclusion drawn as result of this error has been deleted.

[5] Sutton Report (page 56) – *"The appearance of the stains indicated by the yellow oval in DSC_4562 is consistent with diluted blood. Diluted blood is created when blood is mixed with another liquid. The mouth and nose injuries of Xana Kernodle as noted in the autopsy report are potential sources of diluted blood."*

Noedel Comment: *As occurred with the stain on the 3rd floor door (item #42), this stain was also diluted through the collection process after it had been documented by Detective Talbott (see figure 27). The original deposit was not diluted and therefore does not fit with a source from any mouth or nose injury to Kernodle. The dilution of this stain is an artificial remnant of sampling. (Bates 003291)*

Sutton Response:

Regarding the alteration of stain depicted in DSC_4562: As occurred with the stain on the 3rd floor door (item #42), my description of this stain was based on its appearance in Image DSC_4562. Mr. Noedel had the advantage of seeing this stain in situ. If it is confirmed that the original stain was collected using excess water, I agree with Mr. Noedel's opinion of it being an altered spatter stain.

Regarding the conclusion that the mouth and nose injuries of Xana Kernodle as noted in the autopsy report are potential sources of diluted blood, this statement does not imply a substitute for DNA testing. It is only stated as a "potential source" and was not intended to exclude other mechanisms. Other evidence demonstrated that only Kernodle and the perpetrator were moving about her bedroom. This statement was meant simply to caution the reader that in this particular instance an innocuous explanation for diluted blood should be considered in comparison to the dilution of blood discovered in the adjacent living room. I am in complete agreement with Mr. Noedel that potential mechanisms other than blood originating from the mouth and nose of the victim(s) should be considered and never intended to imply otherwise.

==========

[6] Sutton Report (page 58) –"*The appearance of these spatters is consistent with diluted blood (see DSC_4892 CROPPED). The mouth and nose injuries of Xana Kernodle as noted in the autopsy report are potential sources of diluted blood." "These spatter stains originated from an impact to a source of exposed blood located approximately 3 feet and 7 inches above the floor as indicated by the scale in image DSC_4892 CROPPED."*

Noedel Comment: *This pattern of diluted blood (sample #29) is consistent in color and appearance to the diluted blood seen on the pony (half) wall and adjacent areas. Without source testing, this spatter cannot be assigned as originating from Kernodle nor can it be associated with injuries to Kernodle without DNA source testing. (Bates 003292)*

Sutton Response: The pattern of diluted blood (sample #29) may indeed have been created by the same source as the diluted blood seen on the half wall and adjacent areas in the living room. As is stated in my original report though, the mouth and nose injuries of Xana Kernodle should also be considered.

==========

[7] Sutton Report (page 61) – *"The appearance of these stains indicates that the blood has been diluted with another liquid altering their appearance. The mouth and nose injuries of Xana Kernodle as noted in the autopsy report are potential sources of diluted blood."*

Noedel Comment: *The proximity (height and location) of this deposit is similar to the deposit at position #29. This is a pattern similar to what was deposited onto the pony (half) wall and that already diluted blood was deposited onto the door at this location. Without further testing of sample #29 or area "Q", no specific assignment of source or mechanism can be identified. (Bates 003292)*

Sutton Response: My statement that the diluted blood is potentially attributable to the mouth and nose injuries of Xana Kernodle was not meant to imply a substitute for DNA testing. This statement was meant simply to caution the reader that an innocuous explanation for diluted blood should be considered. I am in complete agreement with Mr. Noedel that potential mechanisms other than blood originating from the mouth and nose of the victim(s) should be considered and never intended to imply otherwise.

Rebuttal-Matthew Noedel Report

In a report prepared by Matt Noedel dated January 22, 2025, the following results were reported. The following excerpts from the Noedel report are included here to provide further interpretation or assessment considerations beyond what was presented in the Noedel report.

[1] Noedel report (page 40; Bates 003287) regarding the findings of secondary transfer in the vehicle or residence of Mr. Kohberger.

• *The comprehensive search of Bryan Kohberger's vehicle did not locate any blood or specific evidence in connection with the events that took place at 1122 King Road.*

On December 30, 2022, representatives from the Idaho State Police Forensic Services Laboratory examined Bryan Kohberger's apartment at 1630 NE Valley Rd #G201 in Pullman, WA. In total, the search resulted in testing 51 positions in the apartment for indications of blood with only four of these indicating presumptive positive for the presence of blood, none of which connected to the victims at the King Street residence and all four of which were consistent with the known reference sample of Kohberger's own DNA.

The amount of collective blood distributed within the scene supports that inadvertent, secondary transfers of blood would be highly likely. Smudges, smears and transfers of blood seen on the third-floor door, stair rail and walls, the second-floor rail and in the room of Kernodle are indicators that an assailant had received blood onto themselves or onto objects they possessed. (underlining added)

Secondary transfers of blood are common when a particularly bloody scene is encountered. Because these transfers are known to occur regularly, such secondary transfers of blood are purposefully sought during crime scene processing and evaluation.

In the textbook "Principles of Bloodstain Pattern Analysis", the authors wrote:

" Smudges, wipes, and transfer patterns of victim's blood are frequently produced on and within an assailant's vehicle while leaving the scene. Door handles, steering wheel, gearshift apparatus, console, and floor pedals should be examined carefully for these types of bloodstains."

Sutton Comments:

- As Mr. Noedel stated (inserted below), there is evidence that the assailant did have blood on their person and/or on objects in their possession and that secondary transfers of blood inside of the residence did occur.

  "Smudges, smears and transfers of blood seen on the third-floor door, stair rail and walls, the second-floor rail and in the room of Kernodle are indicators that an assailant had received blood onto themselves or onto objects they possessed."

- To predict that the amount of secondary transfer of blood would be *"highly likely"* (as stated in the quotation inserted below) does not agree with the relatively small number and quantity of blood in secondary transfers which were found within the scene. Even during the activity associated with an assault when the perpetrator was focused on the assault instead of exercising caution not to create secondary transfers, only a limited amount of blood was transferred outside of the bedrooms.

  "The amount of collective blood distributed within the scene supports that inadvertent, secondary transfers of blood would be highly likely" (underlining added)

- While spatter was widely distributed in both bedrooms involved, the amount of spatter in the surrounding areas where a perpetrator would be located as to create a void[70]. If a perpetrator had been "covered in blood", it seems a void would be identifiable.

- There was no visible footwear transfers associated with any of the possible exits from the scene. Even though it can be established that the perpetrator left the scene, they did so without leaving visible footwear transfer stains.

ISP_4871

Lack of large amount of bloodstaining on wall Opposite bed Madison Mogen Bedroom

[70] **Void** An absence of blood in an otherwise continuous bloodstain or bloodstain pattern

ISP_4876

Lack of large amount of bloodstaining on wall at foot of bed Madison Mogen Bedroom

ISP_4873

Lack of visible footwear transfers leaving Mogen bedroom

ISP_4709
Lack of large amount of bloodstaining on wall of Xana Kernodle's room

ISP_4715

Lack of visible footwear transfers leaving Kernodle bedroom

- The significance of the lack of secondary transfer in a vehicle purportedly used when leaving the scene must take into consideration what is applicable to the particular scene in question.
    - One must consider first that there was a limited amount of secondary transfer within the scene itself which is attributable to someone other than Mogen, Goncalves, Kernodle, or Chapin.
    - Secondly, one must consider how much, if any, wet blood would still be exposed when the secondary contact was made.
        - An assailant can easily remove protective clothing and shoe covers or place unstained coverings over stained clothing or shoes before they contact their vehicle or residence.
        - Cleaning or wiping off excess blood before making contact with secondary surfaces is also possible.
    - Regarding secondary footwear transfers, there are no visible footwear transfers associated with any of the possible exits from the scene. Even though it can be established that the perpetrator left the scene, they did so without leaving visible footwear transfer stains.
    - Even if secondary transfers are in fact created, there is also the possibility that the vehicle or residence has been cleaned before a documented search of the vehicle occurred.

- Refer to the historic article entitled "Absence of Evidence is Not Evidence of Absence", Kish, P.E., and MacDonell, H.L., Guest editorial, J. For. Ident., 46 (2), 1996, 160-164 which is attached as Appendix D.

- I certainly agree with Mr. Noedel's statement (inserted below) that the vehicles and residences of any suspect should be examined for blood or other evidence that might have been transferred from the crime scene.

"Secondary transfers of blood are common when a particularly bloody scene is encountered. Because these transfers are known to occur regularly, such secondary transfers of blood are purposefully sought during crime scene processing and evaluation."

- The significance of the resultant findings when examining secondary surfaces such as the vehicle or residence of an accused must be interpreted considering all available information. As stated in the textbook "Principles of Bloodstain Pattern Analysis" (page 120), the authors wrote:

    "The lack of bloodstains on an accused person should be viewed as an issue of further inquiry. Often the lack of bloodstains on an accused person or his or her clothing will relate to the types and location of the deceased's injuries or actions taken by the accused during or subsequent to the violent act. Therefore, the

analyst should exercise caution as to what the size of the stains or the quantity of spatter is expected to be present at a scene or on a suspect's clothing."

==========

[2] Noedel report (page 14; Bates 003261) Describes re-numbering of samples

The initial bloodstain areas cataloged by Detective Talbott were identified in scene images with white cardboard numbered placards. Many of these areas were sampled onto swabs. Detective Talbott identified swab blood samples as scene placards #23 through #49. These swabs were then turned over to Detective Payne who renumbered the swabs as items 17 through 43.

Then on November 17, 2022, Idaho State Police Forensic Services Laboratory (ISPFS laboratory) personnel were asked to help process the scene and test the previously labeled areas with a presumptive blood test (o tolidine). The ISPFS laboratory was directed to the locations of the previously collected areas and identified these locations with new yellow numbered stickers applied to the areas (matching the Talbott placard numbers). The individual areas tested by the ISPFS laboratory had already been altered from the initial swab collection.

The ISPFS laboratory personnel located additional stains and groups of patterns, each of which were identified with yellow alphabet stickers.

• *Samples that were ultimately tested in the forensic laboratory received new laboratory numbers and the notes associated with the new laboratory numbers reference the Detective Payne renumbering system. Assuming Detective Payne kept the same sequence of blood swab samples as Detective Talbott, one must add "6" from the Payne item number to get the Talbott on-scene "placard" number (i.e. Payne item 17 is Talbot scene placard 23). ISPFS laboratory notes, scene images and descriptions support the sequence used by Detective Talbott was maintained in the Payne renumbering.*

Sutton Comments:

Specifically referring to the following excerpts from Matt Noedel's report (Page 14; Bates 003261):

one must add "6" from the Payne item number to get the Talbott on-scene "placard" number (i.e. Payne item 17 is Talbot scene placard 23).

ISPFS personnel used yellow stickers but their numbers matched the original numbers that Detective Talbott had used.

As a result, if Payne prelogged a sample into the ISPFS system as Sample 48, it would actually represent Sample 42 as depicted in the scene images taken by ISPFS personnel (48– 6). The ISPFS then assigned Lab # 77 to this stain, and it was shown to be linked to Kaylee Goncalves.

I was not initially aware of this situation with the scene placards vs. the numbers depicted in the ISPFS laboratory worksheets.

Appendix B

Rebuttal to Report issued by Dr. Brent Turvey issued on January 22, 2025

Rebuttal to Dr. Brent Turvey Report dated January 22, 2025

[1] Turvey comments on lack of blood detected in Kohberger's vehicle (Bates 004038)

4. Despite an extensive and exhaustive forensic examination of the Defendant's vehicle for bloody clothing, blood transfer, and other evidence related to these crimes — down to the metal — none was found. This has essentially excluded the Defendant's vehicle as being related to the commission of these crimes. The failure to be absolutely clear and forthcoming about this evident fact would be evidence of bias.

Sutton Comments:

- The failure to detect blood in the Defendant's vehicle does not exclude the vehicle from being related to the commission of these crimes. For reasons previously discussed at Noedel Rebuttal, there can be a myriad of reasons blood was not transferred to or detected in the Defendant's vehicle. These findings need to be understood in the context of all available information.

==========

[2] Turvey comments on lack of blood at the sliding door at floor 2 (Bates 004039)

On the second floor, there is a sliding glass door which was found to be open by law enforcement. It has been inferred that this is the location where the suspect(s) may have entered or at least exited. There is no physical evidence to support this as, again, there would need to be the requisite bloody transfer. If an intruder left the house through this door, having left it open upon entry, there would need to be bloody footwear patterns on the floors from bloody shoes or feet both leading up to and out of that sliding glass door.

Sutton Comments:

- If the sliding glass door was in an open position when the intruder entered or if it was left in an open position after the intruder entered the residence, there would be no need for the intruder to touch the door when exiting. Therefore, there would be no need for the intruder or any bloodstains on the intruder's person or in their possession to make contact with the sliding glass door.

- The assailant could have removed bloody gloves or removed bloodstains before leaving.

- The extent of secondary transfer inside the crime scene by someone other than the decedents is minimal.

- There are three (3) possible exits from the crime scene, and there are no visible footwear transfer stains or secondary transfer stains at any of the exits. It can be established that the perpetrator had to have used one of the available exits to leave the crime scene, but no

secondary footwear transfer stains or secondary transfer stains were created. This seems to negate Dr. Turvey's conclusion that lack of secondary transfer stains would preclude the sliding glass door being the avenue of exit.

==========

[3] Dr. Turvey indicates that Goncalves and Mogen were posed (Bates **004045)**

7. The evidence suggests that after both victims were killed or unresponsive, they <u>were posed</u> in their shared bed. Kaylee was moved from a position with her head on her pillow to partially atop of Madison. <u>Then the comforter was placed over them both.</u> (Underlining added)

Sutton Comments:

- Posing is a possibility but not a determination that can be made to the exclusion of other explanations for their positioning.

- As Dr. Turvey states (quoted below), posing requires an intentional act.
    - *This refers to intentionally arranging the scene for effect. In the present case, the bodies of Kaylee and Madison were posed together after the lethal attacks suffered by both, and then they covered together with a comforter (Bates 004045)*
    - *… Kaylee was moved from a position with her head on her pillow to partically atop of Madison (Bates 004045)*

- There are discrete transfers on the pillow consistent with contact being made by Goncalves' bloodied head, but these discrete transfers could be the result of several mechanisms:
    - Purposeful movement before she was rendered unresponsive
    - Movement of her head caused by blows or in response to blows by the assailant
    - Movement during the struggle
    - Intentionally or inadvertently moved by the assailant

- As for the comforter being placed over them, the spatter on the bottom sheet was limited to approximately chest level. With a limited distribution of spatter on the bottom sheet, it is difficult to determine with certainty that the comforter has been moved.

==========

[3] Dr. Turvey makes several statements regarding the extent of blood that would be on the perpetrator.

8. The extensive and close up nature of the attacks on Kaylee and Madison, along with the blood spatter evident in the room and the moving of Kaylee's body, are evidence that the suspects upper bodies (face, hair, hands, arms, and chest area) would have been covered in blood. (underling added) [Bates 004041]

9. All available physical and blood evidence suggests that these were the first victims; that they were specifically sought out on the 3rd floor; and that the suspects then moved downstairs to the 2nd floor where at least one of the suspects was observed by Xana Kernodle. This would have been covered in blood. (underling added) [Bates 004041]

10. The extensive and close up nature of the attacks on Xana and Ethan, along with the blood spatter and blood smears evident in the room, are evidence that the suspects entire bodies (face, hair, hands, arms, chest area, legs, and feet / footwear) would have been covered in blood. (underling added) [Bates 004044]

Sutton Comments:

- The term "covered in blood" is not scientifically quantifiable.

- There is certainly evidence that the assailant in this case had some degree of bloodstains on the person or on object(s) in their possession, and that secondary blood transfers resulted by subsequent movement through the scene.

- The number and quantity of bloodstains that were secondarily transferred in the scene was relatively small. Even during the violent activity associated with an assault, only a small number and quantity of blood was transferred outside of the bedrooms.

- While spatter was widely distributed in both bedrooms involved, the amount of spatter in the surrounding areas where a perpetrator would be located as to create a void. If a perpetrator had been "covered in blood", it seems a void would be identifiable.

- Dr. Turvey himself points out that there is a lack of bloody footwear patterns at "the scene in general"
    - *Precautionary Acts: The precautionary acts in this case include the execution of living witnesses; the clean-up of bloody hands, feet / foot-ware and clothing before leaving; and the disposal of said clothing along with the weapons used. Direct evidence of this clean-up can be found in at least some of the dilute blood transfer*

which was located in different areas of the home. Indirect evidence includes the absence of bloody transfer from feet and hands, despite the movement of suspects within the homes, the necessary opening of doors, and the absence of bloody footwear patterns at the scene in general. All of this would have required an extensive amount of time at the scene to clean, perhaps hours, which is inconsistent with the State's theory that these crimes were committed within a time interval less than 15-20 minutes, subsequent to 4am. (Bates 004045) [Underlining added]

==========

[4] Dr. Turvey refers to indicators of more than one assailant

9. It is not reasonable to think that Ethan would have remained in his bed after waking up or being awake while Xana was being attacked in front of him. This evidence and context begin to suggest the existence of a second attacker. This issue will be addressed in a later section of this report. (Underlining added) [Bates 004044]

B. Number of Suspects: At least two suspects were involved in this attack. This is indicated by the fact that multiple weapons were used against Kaylee; that multiple types of lethal force were used against Kaylee; and that Ethan and Xana appear to have been attacked at the same time. This is inconsistent with the State's theory that these crimes were committed solely by one individual.(Underlining added) [Bates 004045]

Sutton Comments:

- There is evidence that Ethan Chapin and Xana Kernodle were in close proximity to each other at some point after the assault began as evidenced by the finding of Kernodle's blood and DNA under the fingernails of Ethan Chapin's right hand and the finding of Chapin's blood and DNA under the fingernails of both of Xana Kernodle's hands. One assailant could contain two people in close proximity to each other, especially if the assailant is armed.

- A single perpetrator can certainly use more than one weapon and can use multiple types of lethal force.

[5] Dr. Turvey indicates that an excessive amount of time would be required for a perpetrator to clean up after the assault.

1. Planning: Whatever planning may have taken place with respect to this crime, it resulted in an excessive number of victims with an excess of bloody transfer and bloody clothing on the part of the suspects. This took additional time to both effect and clean up before they could leave. (Bates 004044)

2. Precautionary Acts: The precautionary acts in this case include the execution of living witnesses; the clean-up of bloody hands, feet / foot-ware and clothing before leaving; and the disposal of said clothing along with the weapons used. Direct evidence of this clean-up can be found in at least some of the dilute blood transfer which was located in different areas of the home. Indirect evidence includes the absence of bloody transfer from feet and hands, despite the movement of suspects within the homes, the necessary opening of doors, and the absence of bloody footwear patterns at the scene in general. All of this would have required an extensive amount of time at the scene to clean, perhaps hours, which is inconsistent with the State's theory that these crimes were committed within a time interval less than 15-20 minutes, subsequent to 4am. (Bates 004045)

Sutton Comments:

- Washing or wiping hands takes little time especially if preparations for cleaning are made beforehand.

- Removal of protective clothing and shoe coverings takes seconds.

==========

[6] Turvey reports that the knife sheath was staged for the following reasons:

D. Staging: Crime Scene Staging refers to an attempt to confuse or misdirect a law enforcement investigation by altering, fabricating, or planting evidence in relation to a crime scene (Chisum & Turvey, 2012). In the present case, a Ka-Bar Knife Sheath was discovered in the crime scene by law enforcement. Evidence of staging with respect to this item of evidence is as follows:

Turvey: *"1. The sheath was found precariously placed just slightly under the body of Madison Mogen, and partially covered by the comforter that was placed atop the midsection of her body by the suspects. It could not have fallen accidentally into this location"* (Bates 004046)

Sutton Comments:

- The sheath could have become trapped under Madison Mogen's body when she moved her left leg out of the bed. (See ISP_4963) If she were hurriedly moving her left leg, she would not have taken time to move the comforter. In which case, the sheath would be trapped between the comforter and the bed.

- It would be reasonable for the sheath to be in this location because the evidence indicates that Kaylee Goncalves and Madison Mogen were the first to be killed.
    - Dr. Turvey also concluded that Goncalves and Mogen were the first to be killed.

ISP_4963

- The sheath could have been covered by the comforter during the assault; when and if the comforter was moved by someone other than the decedents or even when someone was searching for the sheath. There is no physical evidence to determine which scenario is more likely.

A 2nd reason Dr. Turvey feels that the sheath was staged: *"2. The sheath was new and unused, as indicated by the absence of damage or wear to the leather.'* (Bates 004046)

Sutton Comments:

- Unsure why this proves that staging occurred. It could just as easily mean that the knife was subjected to only light use in the past or that it was purchased for this purpose.

A 3rd reason Dr. Turvey feels that the sheath was staged: *" "3. The sheath was face down, and had received only a few areas of minute blood spatter (impact or aspirated) while resting atop a sheet with significant impact spatter all around. The inconsistency of blood spatter dispersion and density indicate transfers occurring at different times, under different conditions, with different levels of intensity."* (Bates 004046)

Sutton Comments:

- The difference in the amount of spatter on the sheath vs. the amount on the fitted sheet or even the comforter simply proves that the sheath came to rest in this location where it was discovered at a different time during the spatter producing event(s). It does not prove that it was staged in this location.

- The sheath could have been at another location when it was spattered and then moved here at a later time. If the perpetrator moved the comforter as Dr. Turvey believes, the sheath could have been moved to this location when the comforter was moved. This could account for a different amount of spatter on the exposed surface of the sheath and the exposed surface of the bed sheet.

A 4th reason Dr. Turvey feels that the sheath was staged: "Turvey: *"4. The sheath was placed at that location without receiving bloody transfer from the hands or fingers of the suspect that did it. This means it was done after the attacks / posing, but also after the suspect had washed their hands, subsequent to lean-up efforts and the scene (See photos below)."* [Bates 004046]

Sutton Comments:

- It is true that there are no bloody transfers visible on the knife sheath, but the significance of this finding does not support that the placement of the sheath was staged. It could have gotten in this location without having been touched by a perpetrator or even after their hands were cleaned or gloves removed. Either scenario would explain the lack of contact staining without staging having occurred.

Technical and Peer Review by Paul Erwin Kish, February 13, 2025

Appendix C

ASB Technical Report 033, 1st Ed. 2017

Terms and Definitions in Bloodstain Pattern Analysis

Scope This document provides a list of recommended terms and definitions to be used in published manuscripts, forensic reports discussing the conclusions of scientific examination of bloodstains, in courtroom testimony, and when teaching bloodstain pattern analysis.

ASB Technical Report 033, 1st Ed. 2017

Terms and Definitions in Bloodstain Pattern Analysis

Accompanying drop A small blood drop produced as a by-product of drop formation.

Altered stain A bloodstain with characteristics that indicate a physical change has occurred.

Angle of impact The angle (alpha), relative to the plane of a target, at which a blood drop strikes the target.

Area of convergence The space in two dimensions to which the directionalities of spatter stains can be retraced to determine the location of the spatter producing event.

Area of origin The space in three dimensions to which the trajectories of spatter can be utilized to determine the location of the spatter producing event.

Backspatter pattern A bloodstain pattern resulting from blood drops which can be produced when a projectile creates an entrance wound.

Blood clot A gelatinous mass formed by a complex mechanism involving red blood cells, fibrinogen, platelets, and other clotting factors.

Bloodstain A deposit of blood on a surface.

Bloodstain pattern A grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited.

Bubble ring An outline within a bloodstain resulting from air in the blood.

Cast-off pattern A bloodstain pattern resulting from blood drops released from an object due to its motion.

Cessation pattern A bloodstain pattern resulting from blood drops released from an object due to its abrupt deceleration.

Directionality The characteristic of a bloodstain that indicates the direction blood was moving at the time of deposition.

Directional angle The angle (gamma) between the long axis of a spatter stain and a defined reference line on the target.

Drip pattern A bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood.

Drip stain A bloodstain resulting from a falling drop that formed due to gravity.

Drip trail A bloodstain pattern resulting from the movement of a source of drip stains between two points.

Edge characteristic A physical feature of the periphery of a bloodstain.

Expiration pattern A bloodstain pattern resulting from blood forced by airflow out of the nose, mouth, or a wound.

Flow A bloodstain resulting from the movement of a volume of blood on a surface due to gravity or movement of the target.

Forward spatter pattern A bloodstain pattern resulting from blood drops which can be produced when a projectile creates an exit wound.

Impact pattern A bloodstain pattern resulting from an object striking liquid blood.

Insect stain A bloodstain resulting from insect activity.

Parent stain A bloodstain from which a satellite stain(s) originated.

Perimeter stain An altered stain consisting of its edge characteristics, the central area having been partially or entirely removed.

Pool A bloodstain resulting from an accumulation of liquid blood on a surface.

Projected pattern A bloodstain pattern resulting from the ejection of blood under hydraulic pressure, typically from a breach in the circulatory system.

Satellite stain A smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface.

Saturation stain A bloodstain resulting from the accumulation of liquid blood in an absorbent material.

Serum stain The stain resulting from the liquid portion of blood (serum) that separates during coagulation.

Spatter stain A bloodstain resulting from an airborne blood drop created when external force is applied to liquid blood.

Splash pattern A bloodstain pattern created from a large volume of liquid blood falling onto a surface.

Swipe A bloodstain resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.

Target A surface onto which blood has been deposited.

Transfer stain A bloodstain resulting from contact between a blood-bearing surface and another surface.

Void An absence of blood in an otherwise continuous bloodstain or bloodstain pattern.

Wipe An altered stain resulting from an object moving through a preexisting wet bloodstain.

Appendix D

"Absence of Evidence is Not Evidence of Absence", Kish, P.E., and MacDonell, H.L., Guest editorial, J. For. Ident., 46 (2), 1996, 160-164

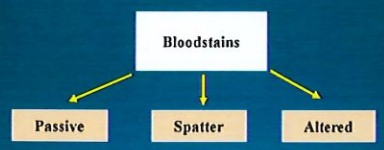
1

Bloodstain Pattern Analysis

Examine the static aftermath of a bloodletting event and apply that laws of physics, mathematics and biology to recreate events that caused the stain creation

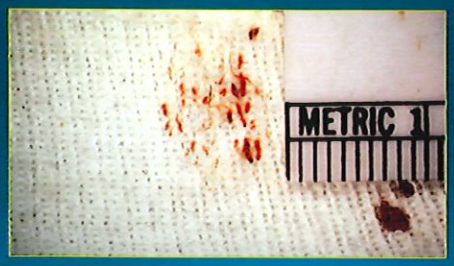
2

Primary Bloodstain Categories



3

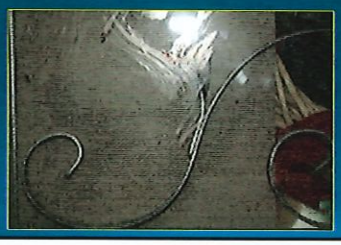
Transfer Stains



4

Object Creating Transfer May be Indistinguishable

But Source DNA C/B Important



5

Flow

Follow gravity or surface contours

Gravity always wins!

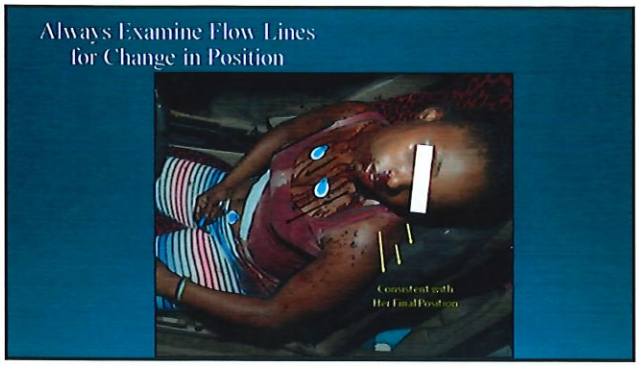
6

STATE'S EXHIBIT

S-9b

CR01-24-31665

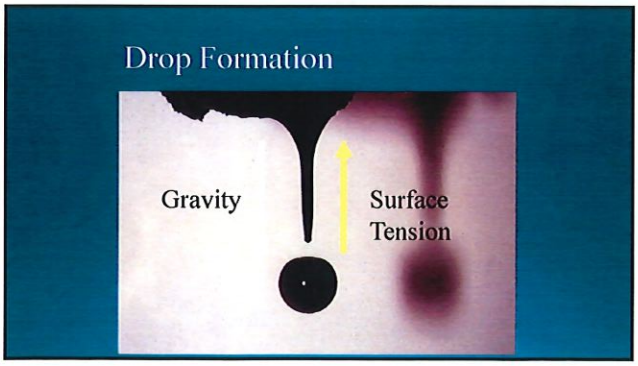
exhibitsticker.com


Always Examine Flow Lines
for Change in Position

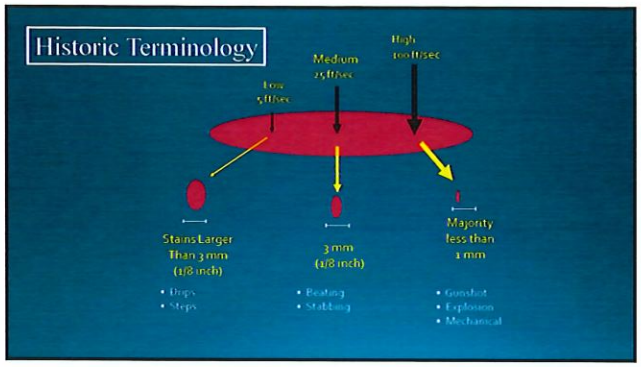
7

Void
Duct tape Bindings Removed

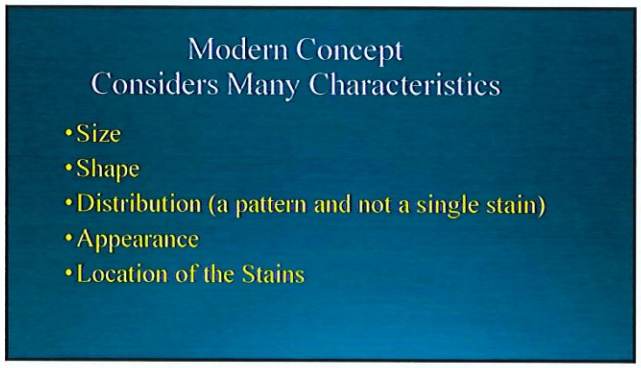
8


Drop Formation
Gravity
Surface
Tension

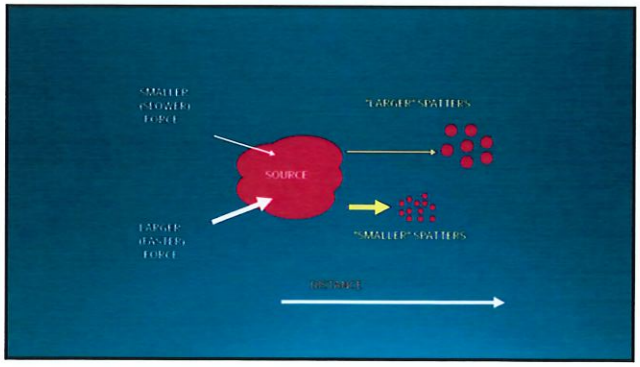
9


Historic Terminology
Medium
25 ft/sec
Stains Larger
Than 3 mm
(1/8 inch)
3 mm
(1/8 inch)
Majority
less than
1 mm
• Drips
• Steps
• Beating
• Stabbing
• Gunshot
• Explosion
• Mechanical

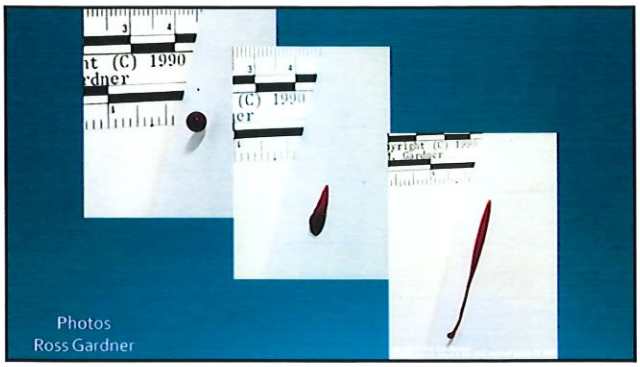
10


Modern Concept
Considers Many Characteristics
•Size
•Shape
•Distribution (a pattern and not a single stain)
•Appearance
•Location of the Stains

11


SOURCE

12



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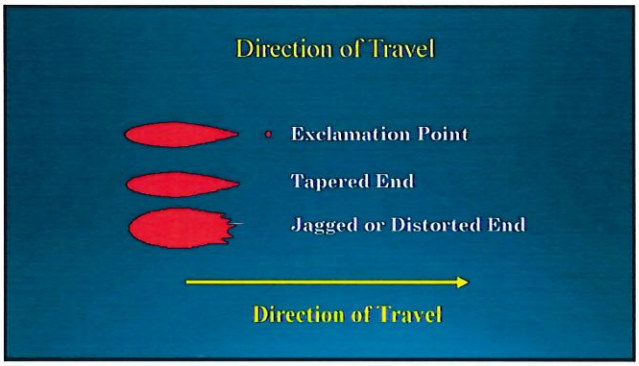

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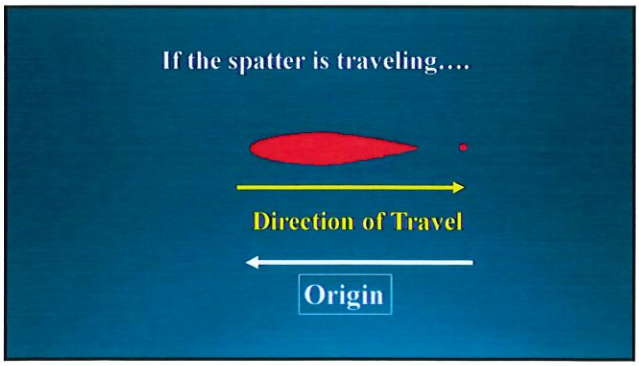

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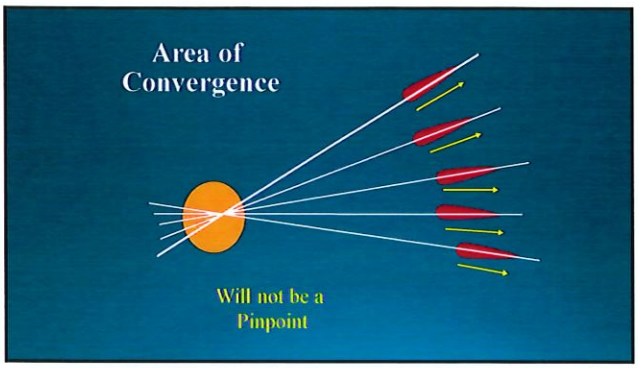

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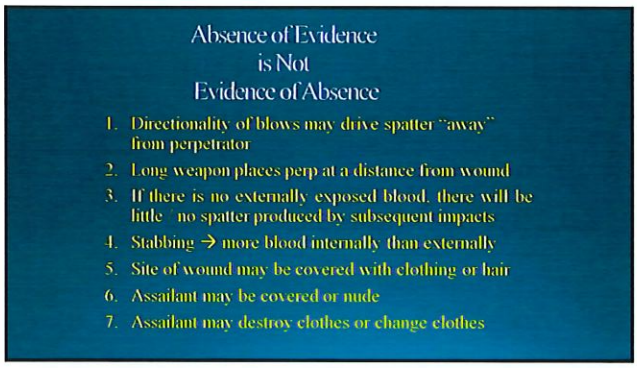

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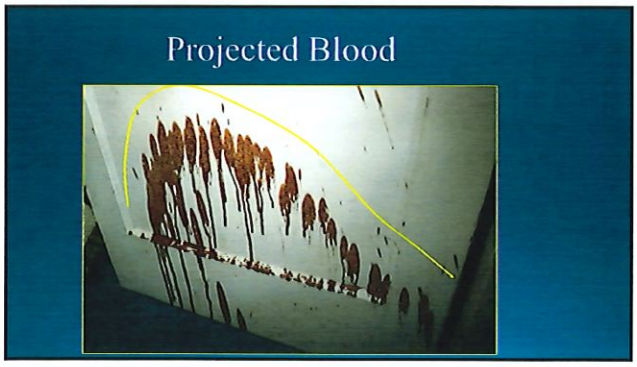

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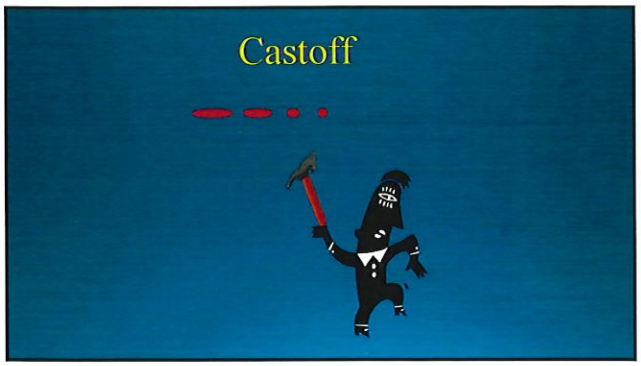

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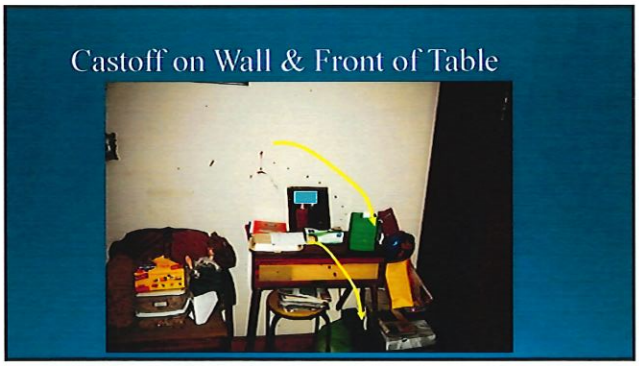

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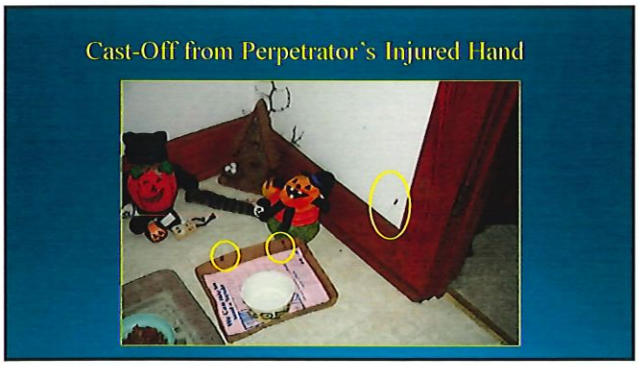

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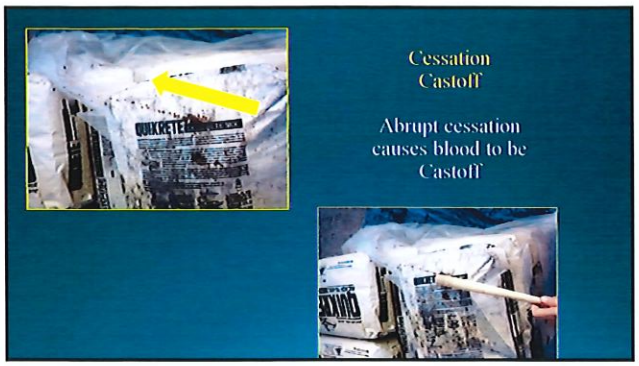

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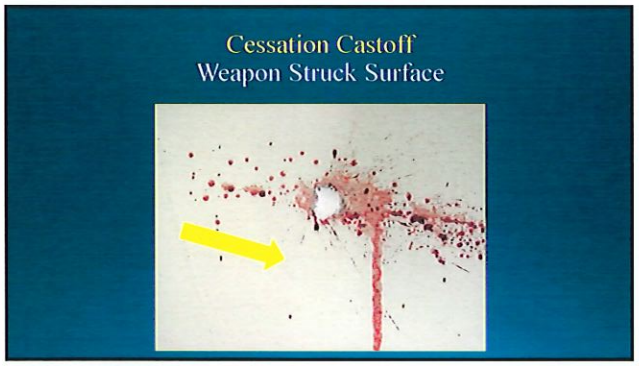

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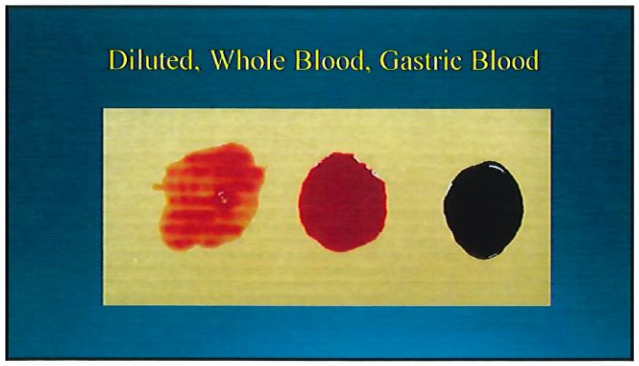

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Diluted Blood

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Diluted Blood

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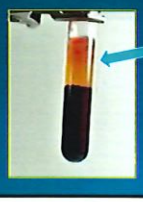
Clot Retraction & Serum Separation



Serum

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Crime Scene Reconstruction

Determination of
the actions and the events
surrounding the commission of a
crime through
analysis of the various parts.

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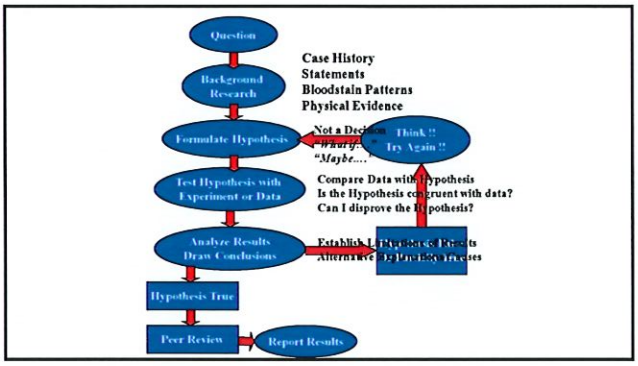

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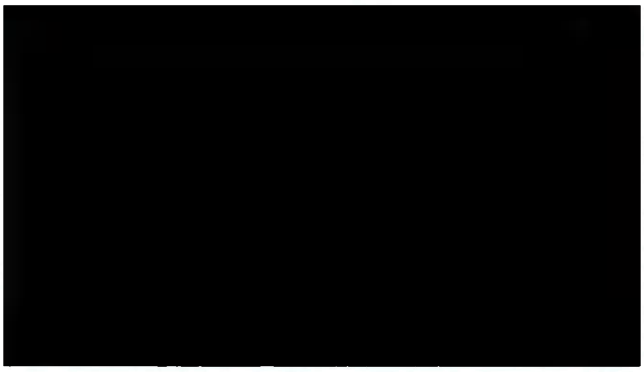

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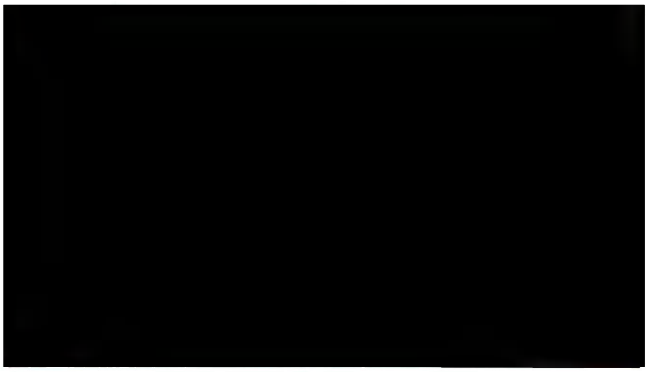

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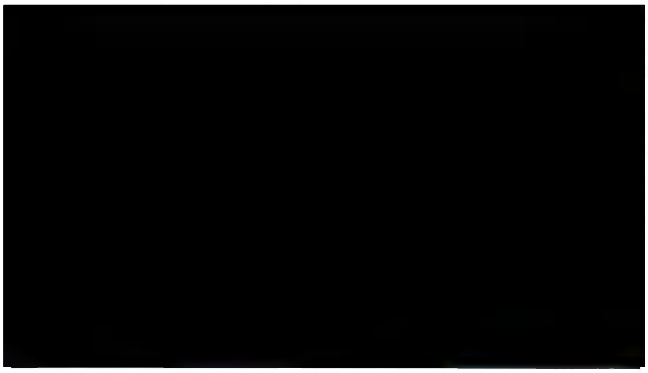

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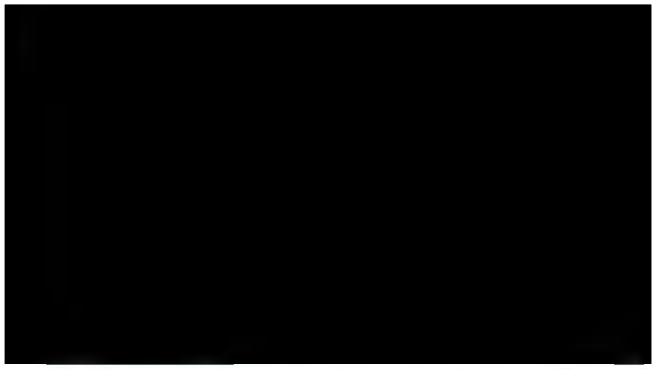

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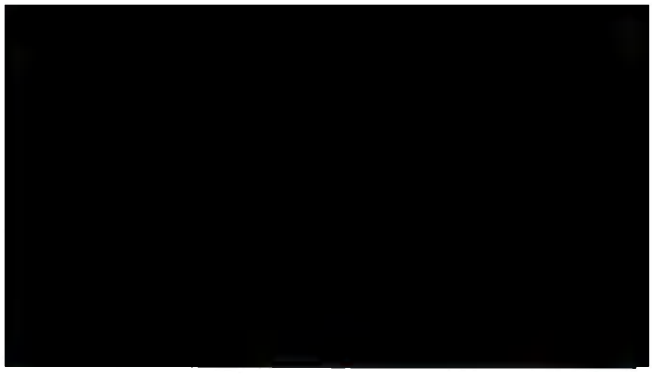

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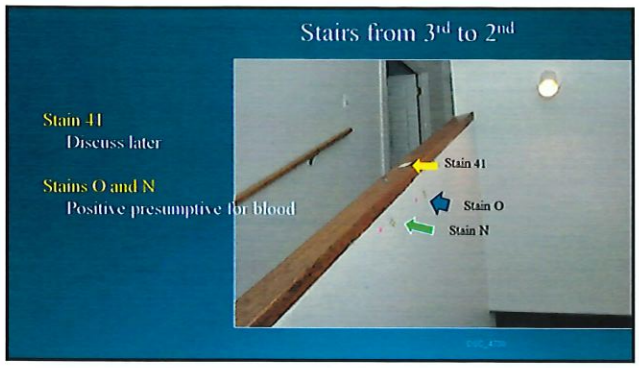

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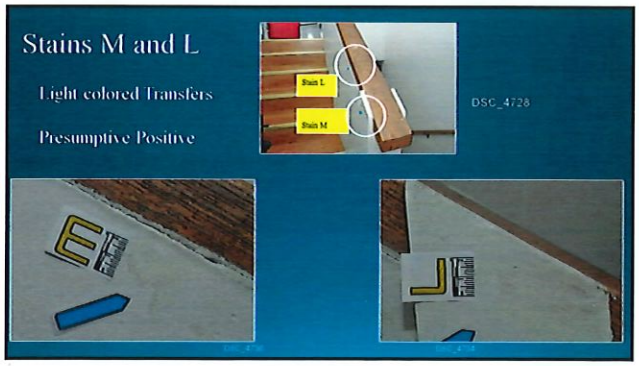

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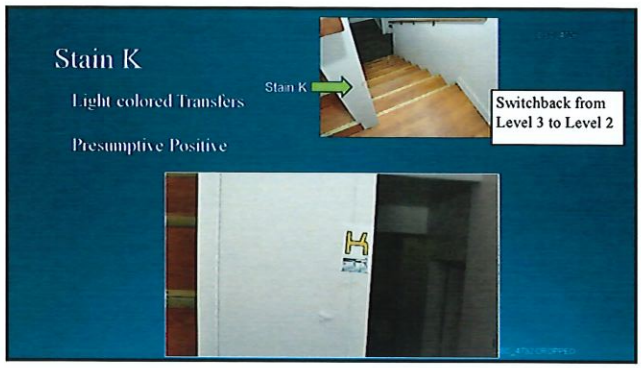

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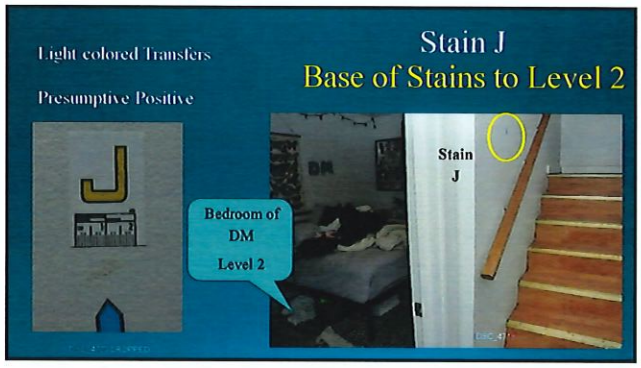

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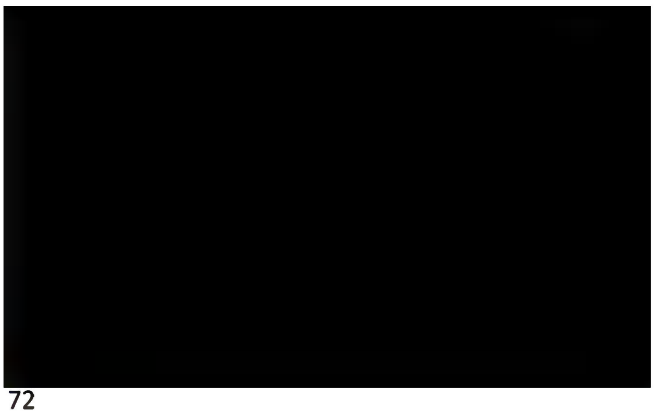

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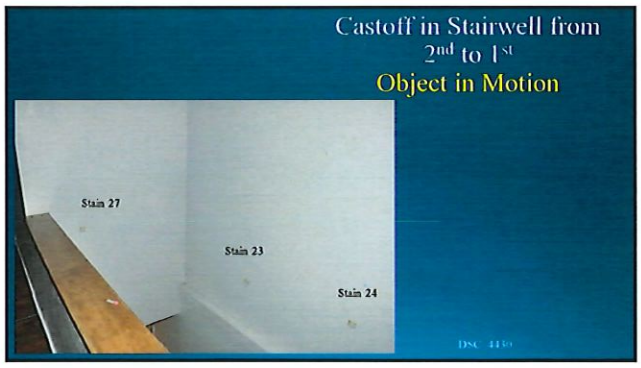

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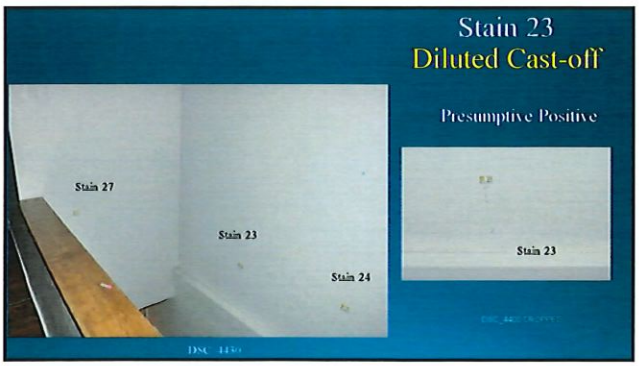

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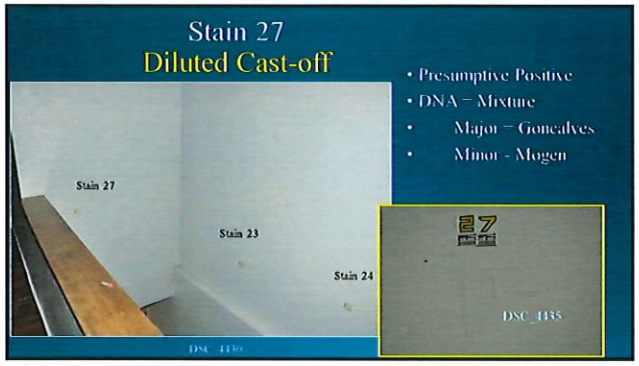

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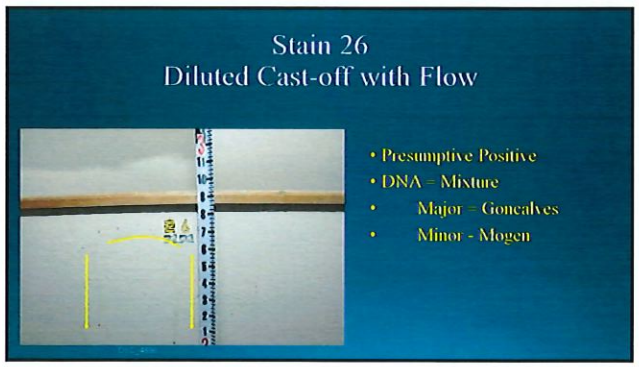

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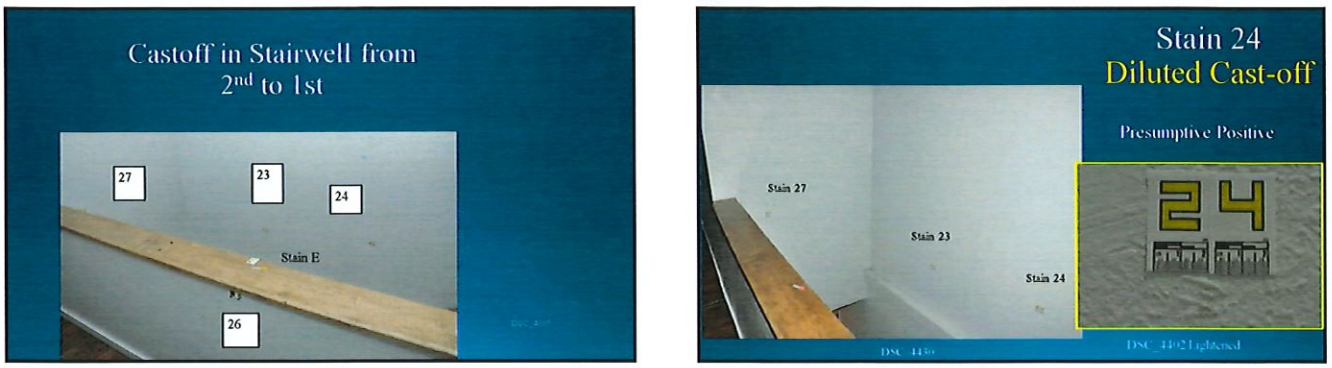

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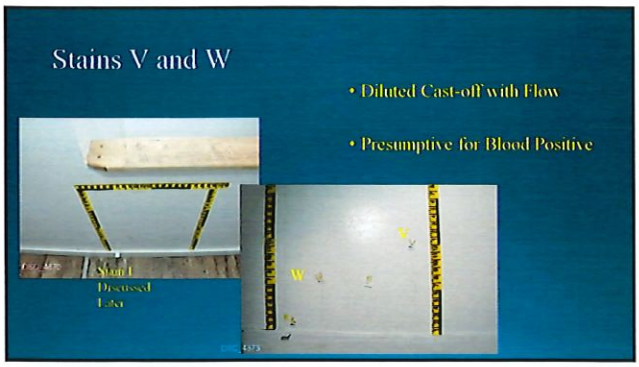

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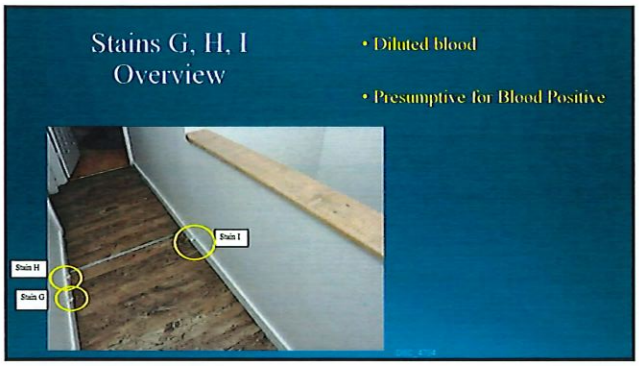

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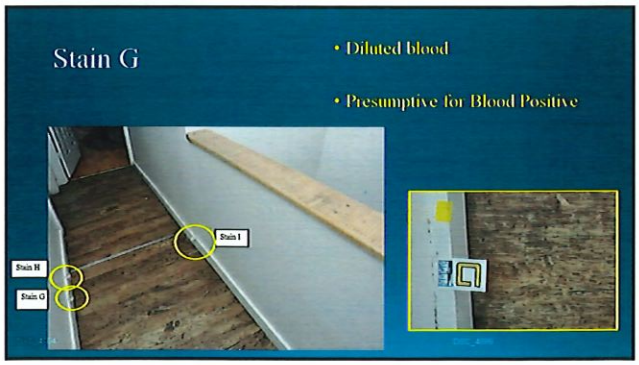

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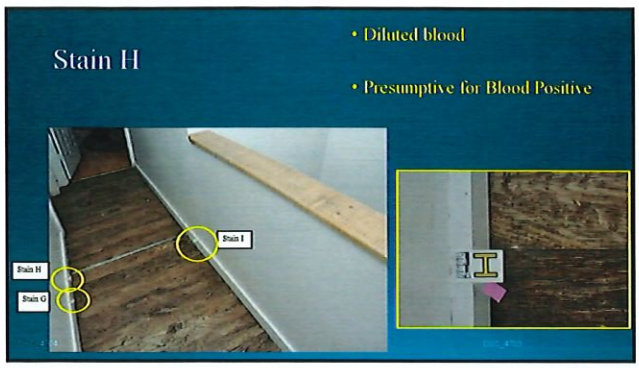

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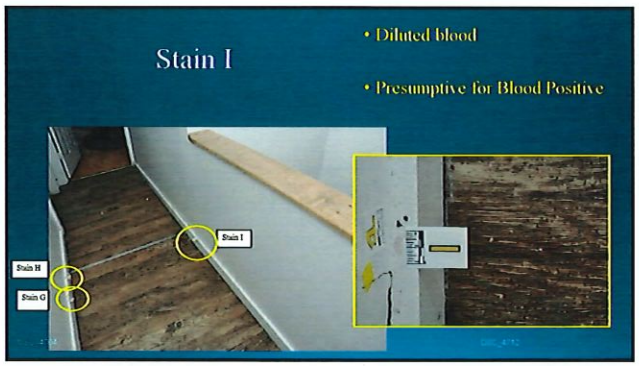

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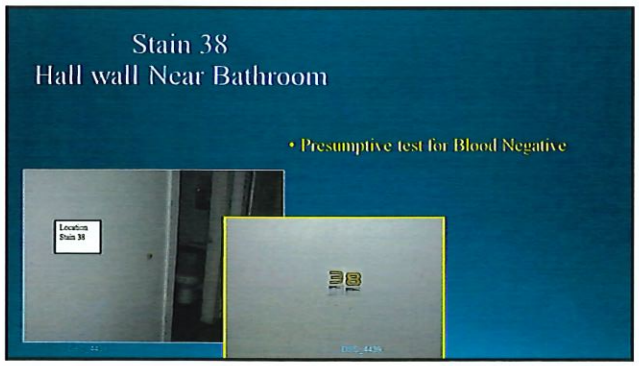

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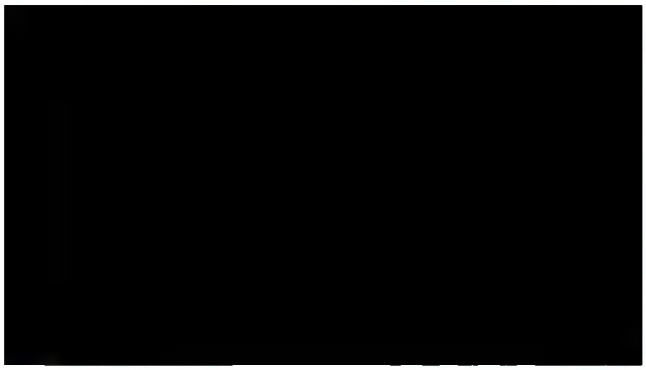

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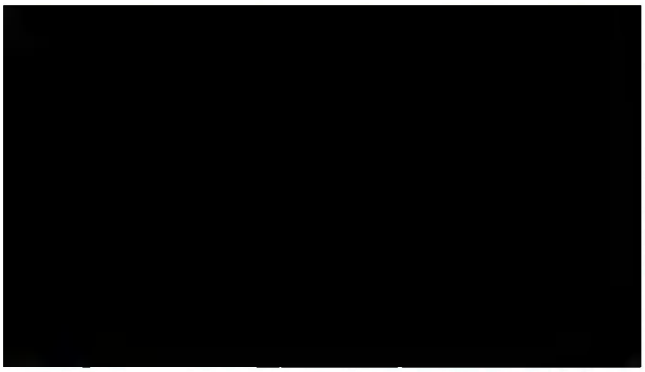

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Stain D

- Only Undiluted Blood Outside of Bedrooms
- DNA Mixture
  - Ethan Chapin major contributor

View from 2nd Level to 1st Level

121

Knife Sheath Recovered in Mogen's Bedroom

DNA from Bryan Kohberger was identified on the front strap of the knife sheath

Back was exposed to Impact spatters from Kaylee Goncalves and Madison Mogen

122

- No physical evidence to indicate that a significant time elapsed during the commission of this violent activity.
- No physical evidence to exclude a single perpetrator causing the death of these four individuals.

123

124

Would there be Blood on Perpetrator?

- Perpetrator did have blood on their person possession
  - Transferred blood on edge of Madison Mogen's bedroom door
  - Transferred blood on wooden ledge of half wall on level 2

125

Evidence that Some Measures were being taken to Remove Blood

- Diluted blood shows that blood had been diluted with another liquid

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[redacted]

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[redacted]

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[redacted]

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EXHIBIT S-10
Amended Supplemental Expert Disclosure: Tina Walthall

The State has previously disclosed Tina Walthall, Forensic Scientist III, as an expert witness in the field of forensic science, which includes, but in no way is limited to, latent prints. The State hereby incorporates its previous response and attachments filed on December 18, 2024, and is hereby supplementing its response as follows.

Walthall may explain what friction ridge skin is, what latent prints are, what exemplars are, consumption of evidence with regards to latent print processing, how items are processed for latent prints in the laboratory, how recovered prints are preserved in the laboratory, factors affecting the recovery of latent prints, how latent prints are utilized for comparison to include verification and confliction resolution processes, and the use of the Multi-Modal Biometric Identification System (MBIS).

Walthall is expected to testify about her involvement in this case in which she processed item 1 (Ka-Bar leather knife sheath with USMC logo) for latent prints. Walthall did not observe or develop and latent prints from item 1. Walthall's explanation of this can be found in Walthall's Report 2 (Bates Pages 267-268). Walthall processed other items (66, 68, and 69) for latent prints in this case as well. The report for these items can be found in Walthall's Lab Report 15 (Bates Pages 988-989).

Walthall will testify friction ridge skin is a specialized type of skin on the hands and feet that is capable of being used to establish or confirm identity. This skin consists of ridges and valleys located on the gripping surfaces of the hand and feet that form patterns. Fingerprints are classified into the following pattern types: arches, loops, and whorls. Individual ridges have features or characteristics (minutiae) that are highly discriminating

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between individuals. These features are formed prior to birth and remain relatively unchanged throughout one's life barring trauma or disease.

Friction Ridge detail refers to the features and characteristics present in friction ridge impressions. This detail may be described as level 1 (direction of ridge flow), level 2 (ridge path), level 3 (ridge shape and pore location). Friction ridge details permit comparison and subsequent identification of fingerprints.

Latent prints are impressions of friction ridge skin patterns that can be left on a surface when contact is made. The term "latent" refers to prints that are not visible prior to utilizing a development method; latent prints are often made up of various matrices, including sweat and oils that are colorless and require development with chemicals or powders to be seen. Prints at a crime scene may also be made from other materials that may coat the skin, like blood or dirt. Although latent means hidden, any prints recovered from a crime scene or from items of evidence are often referred to as latent prints.

Exemplars are intentional recordings of the friction ridge skin of an individual. These may be collected with black ink, powder/adhesive, electronic imaging, and/or other capture methods. These known exemplars can then be used for comparison against latent print evidence. Exemplars may include any/all areas of friction ridge skin from the hands or feet of an individual. Types of exemplars include fingerprints, palm prints, major case prints (tips, joints, sides of fingers), and footprints.

Items are often submitted to the laboratory for multiple types of analysis. Surfaces that require other forensic examinations (trace, biology, etc.) are evaluated to determine if latent print processing techniques will have an impact. Examiners routinely consult with scientists from other disciplines to ensure all potential evidence is considered for

preservation. Once an item is processed for latent prints, reprocessing will generally not be successful, so it is imperative that processing techniques are completed in the proper sequence.

An examiner in the laboratory uses chemical, physical, and light techniques to attempt to recover latent prints from a variety of surfaces. The techniques selected (visual, alternate light source, cyanoacrylate, dye-stain, powder, ninhydrin, etc.) are generally based on the type of surface (porous, semi-porous, or non-porous), but may also take into consideration what it is believed that the latent prints may be made of (sweat, oil, blood, etc.). Techniques are generally performed in a sequential manner from the least destructive to most. Observed or developed latent prints can be preserved by digital photography, scanning, and lifting techniques.

There are many variables that affect whether a latent print is left and able to be recovered. These variables include conditions existing before, during, and after the time the person touched or handled the surface. Pre-transfer conditions include individual subject factors (latent print's composition and a person's ability to leave latent prints). These factors differ from individual to individual and may even vary within the same individual. Factors also include deposition/transfer factors such as the surface (material, condition, texture, etc.) and how the item was handled (length of contact, pressure, area of contact, contaminants, smearing during contact etc.). Post Transfer Conditions/Environmental factors include the conditions that the latent was subjected to after it was deposited (additional handling, packaging, environmental exposure, etc.).

Latent print comparison refers to the process of analyzing latent prints and comparing them to known exemplars in attempt to determine their source. Examiners

utilize the ACE-V methodology which is a specialized version of hypothesis testing. ACE-V stands for analysis, comparison, evaluation and verification.

Analysis is the assessment and documentation of friction ridge impressions to determine suitability for comparison. This assessment includes consideration of the quality and quantity of detail, orientation, anatomical source (finger, palm, etc.), type of matrix, deposition factors, complexity, substrate considerations, environmental factors, development mediums, and preservation methods. Latent prints may be of value for comparison or may be deemed to contain insufficient detail for comparison purposes. Impressions deemed "of value" are impressions that in the opinion of the examiner, contain sufficient quantity, quality, and specificity of ridge detail to warrant a comparison. Examiners also take into consideration how discriminating the location and arrangement of features within an impression are. When quantity is low, quality must be relatively high. Whereas when quality is low, quantity must be relatively high. It is not uncommon for latent print examiners to have conflicting opinions with regards to sufficiency. Latent prints are also evaluated for their suitability for database entry (AFIS, ABIS, MBIS, etc.)

Comparison is the side-by-side, back and forth, examination of friction ridge detail between a latent print and a known print to determine whether the detail is in agreement or disagreement based upon features, sequences, and spatial relationships within the tolerance of clarity and distortion. Generally, latent prints are first compared against various known prints belonging to subjects associated with the evidence (victims, witnesses, and/or suspects if known). In the event that the latent prints are not identified or that there are no known prints available with which to compare, the prints may be entered into a computer database (MBIS) and compared to a large group of persons who have prints on file.

Evaluation is the formulation of a conclusion based upon analysis and comparison of friction ridge impressions. Conclusions that may be reached are source identification, source exclusion or inconclusive. Source identification is the examiner's opinion that two impressions originated from the same source. The observed features are in sufficient correspondence such that the examiner would not expect to see this level of agreement in impressions that came from different sources. Nor did the examiner find features in disagreement that would lead them to conclude that the impressions are from different sources. There is no scientific basis for a predetermined number of corresponding friction ridge details be present in two impressions in order to effect a source identification. Source exclusion is an examiner's conclusion that two impressions did not originate from the same source. The observed features are in disagreement such that the examiner would not expect them to have originated from the same source. Inconclusive is an examiner's inability to reach a conclusion of source identification or exclusion. Inconclusive may be due to lack of quantity or quality of detail in the latent or known impression.

Verification is the independent examination by another qualified analyst using the ACE methodology to either support or refute the conclusions of the original examiner. ISPFS requires verification of all conclusions rendered in a case (value determinations, identifications, exclusions and inconclusives). Routine verification is considered "open". This means the verifier conducts independent analysis but has access to the original analyst's notes and images. Blind verification, in which the verifier has no knowledge of or access to the original analyst's conclusion, may be performed in cases of single identifications generated from a database, as a means of conflict resolution, or as an additional quality measure for complex impressions.

The decision made at the evaluation step is an examiner's opinion based on their personal observations. These observations may be influenced by training, experience, risk tolerance, bias and many other factors. Once this decision is made, the case is sent to another qualified analyst for verification. It is not uncommon for analysts to have different opinions and come to differing conclusions during the ACE-V process. ISPFS has a conflict resolution policy for navigating and documenting such instances. Analysts are encouraged to resolve differing opinions by re-examination and/or discussion to arrive at a mutually agreed upon conclusion that is supported by the observed data. When this cannot be achieved, a blind verification by an additional analyst may be conducted. If blind verification does not result in a resolution, a consensus opinion or administrative opinion may be sought.

The Multi-Modal Biometric Identification System (MBIS) is the general term referring to any system that contains a database of ten-print, latent prints and palm prints. MBIS also includes software that is utilized to search available databases. Idaho is a member of the Western Identification Network and is able to search the databases of WIN central site members and the FBI. MBIS allows for searching latent prints against known fingerprint and palm print database records. The system can also be used to search latent prints against other latent prints.

EXHIBIT S-11
Amended Supplemental Expert Disclosure: Katherine White

The State has previously disclosed Katherine White (formerly Dace), Forensic Scientist III, as an expert witness in the field of biology and DNA, which includes, but in no way is limited to, DNA extraction, quantification, amplification, analysis and interpretation/analysis (including but not limited to STR data, Y-STR data; and STRmix probabilistic genotyping), forensic biology, serology, which includes, but in no way is limited to, examination of evidence for the presence of biological fluids, and trace evidence. The State hereby incorporates its responses and attachments filed on December 18, 2024, and February 16, 2025, and is hereby supplementing those responses as follows.

White may testify about Deoxyribonucleic acid (DNA) which is a genetic material contained in cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials such as blood, semen, and saliva or may be left on an item when it is handled. Biological evidence and possible/potential DNA evidence is collected for preservation and may be sent for further testing by qualified analysts.

DNA can be collected by swabbing an item or by taking a cutting directly from an item. Reference DNA samples can be collected directly from individuals. DNA can be used to identify individuals, link individuals to crime scenes, link crime scenes, as well as exclude individuals from DNA profiles that we obtain. There are four steps to DNA analysis:

1. Extraction: add chemicals to break open all the cells to release the DNA.
2. Quantification: amount of DNA is measured within each sample.
3. Amplification: copy the specific locations of DNA using polymerase chain reaction.

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4. Developing a DNA profile: visualize the DNA profile, which look like peaks on a graph.

Comparisons can be between evidence and reference samples to include or exclude an individual from a single source or mixture DNA profile. For exclusions to single source profiles, the exclusion can be made by visually comparing DNA profiles. For mixture samples, a software tool (STRmix) can be used to aid in this comparison.

White may explain how reference samples can be used for comparison and how an individual may be excluded as a contributor to a DNA mixture profile. White was able to exclude a suspect as the source of the DNA profile previously obtained from item 1.1. This conclusion is explained in White's Report 6 (Bates Pages 607-626). White was the analyst tasked with performing presumptive testing, swabbing, and examinations on several items taken from 127 Parkside Ave, Blakeslee, PA (Pennsylvania State Police Department) which was taken from trash from the Kohberger residence, at 119 Lamsden Dr., Albrightsville, PA. White forwarded several of these items forward for DNA analysis. White is anticipated to explain what presumptive testing is, as well as the purpose and process of swabbing and examining evidence. Further details regarding the processing of items from the trash pull can be found in White's Report 16 (Bates Pages 5662-5683).

EXHIBIT S-12
Amended Supplemental Expert Disclosure: Stephanie Wilt

The State has previously disclosed Stephanie Wilt, Forensic Scientist, as an expert witness in the field of forensic biology and DNA, which includes, but in no way is limited to, DNA extraction and quantification. The State hereby incorporates its previous responses and attachments filed on December 18, 2024, and its hereby supplementing those responses as follows.

Wilt can be expected to testify about trace evidence, as well as the presumptive testing for the presence of blood. A presumptive blood test is a preliminary screening test used to indicate the possible presence of blood. Presumptive testing is performed by taking a small sample of a suspected bloodstain and adding chemicals (Orthotolidine). If a color change occurs within 1 minute, the stain is presumptive positive. If no color change occurs, the stain is presumptive negative.

Additionally, Wilt may discuss lab protocols and procedures including collection (including swabbing), examination, consumption, and the disposition of evidence. Examining evidence is done to identify biological stains or material present on items and collect samples for DNA. Consumption of evidence is using an entire sample for DNA testing. This is typically utilized when a low-level of DNA is anticipated.

More specifically, Miller will provide an explanation of what DNA is, how DNA can be collected, and how DNA can be used. Wilt can also discuss DNA to the following extent:

Deoxyribonucleic acid (DNA) is genetic material contained in cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials

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such as blood, semen, and saliva or may be left on an item when it is handled. Biological evidence and possible/potential DNA evidence is collected for preservation and may be sent for further testing by qualified analysts. DNA can be collected by swabbing an item or by taking a cutting directly from an item. Reference DNA samples can be collected directly from individuals. DNA can be used to identify individuals, link individuals to crime scenes, link crime scenes, as well as exclude individuals from DNA profiles that we obtain.

Wilt will also testify about what trace evidence is, and how it is collected for analysis. Trace biological evidence includes skin cells or hair. Skin cells are collected by swabbing areas of interest and hairs can be collected by manually removing them from an item. Wilt will testify that she swabbed item 1 (KA-BAR knife sheath) for DNA collection. Wilt's testimony will include how the item was examined, what observations were made prior to collection, and how the different areas of item 1 were swabbed separately (item 1.1: swab of front strap; item 1.2 swab of edges on handle portion; item 1.3 swab of edges on blade portion; item 1.4 swabs of stains on back). Wilt will testify that she forwarded the swabs from item 1 along for DNA analysis. Wilt's involvement regarding item 1 can be found in Report 1 (Bates Pages 265-266). Report 1 contains several photos of item 1 that may be used to aid Wilt's testimony. Wilt swabbed many items for DNA analysis in this case, which items are described in Report 3 (Bates Pages 492-506), Report 8 (Bates Pages 507-511), Report 9 (Bates Pages 512-523), Report 14 (Bates Pages 5647-5661), Report 22 (Bates Pages 5684-5720), Report 29 (Bates Pages 9309-9313), Report 33 (Bates Pages 14299-14309), and Report 35 (Bates Pages 14630-14640). However, the State intends to explore Report 1 during Wilt's testimony the most extensively.

EXHIBIT S-13
Amended Supplemental Expert Disclosure: Hailey Youngling

The State has previously disclosed Hailey Youngling, Forensic Scientist I, as an expert witness in the field of forensic science, which includes, but in no way is limited to, latent prints, buccal swab collection, and scene processing. The State hereby incorporates its previous responses and attachments field on December 18, 2024, and is hereby supplementing its response as follows.

Youngling may discuss the process of photographing crime scenes. The purpose of processing the crime scene is to collect as much information and evidence as possible, in as pristine a condition as possible. The process involves assessing the situation and the scene; observing the condition of the scene; documentation of the scene via photography, written observation, sketches or diagrams; searching systematically for items or materials that may have evidentiary value; collecting items in a way that will preserve them and prevent alteration, contamination and tampering; and chemical or physical processing if needed to detect evidence that is not readily visible.

Items that may have evidentiary value are identified, documented and collected. Effort is made to ensure that items are preserved as found. The type and size of packaging are determined based on the type of evidence. Cigarette butt- paper evidence envelope. Paper note/receipt- paper evidence envelope. Computer and electronics components- paper evidence envelope or paper bag, depending on size and examination(s) to be completed. Larger items, like computer towers or monitors, that do not fit into standard evidence bags, may be identified with an evidence tag. Nitrile type glove- paper evidence envelope. Vacuum dust container- paper evidence bag.

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Items may be processed for latent prints on scene or collected for future processing in the laboratory. Latent print evidence can be developed on scene by using light enhancement, powder or blood enhancing chemicals (amido black). Observed or developed prints are preserved with photography and/or tape lifting. Preserved impressions can be used for further latent print analyses.

DNA evidence may be collected at a crime scene if there is observable biological material in the form of blood, semen, saliva, hair or other tissue present. Some biological material may not be visible but may be collected for its "possible" presence. "Possible" DNA material refers to areas or items that are likely to have DNA based on the details of the case or known activities. "Potential" DNA material refers to areas or items that may have DNA based on how they may have been handled (touch DNA).

Biological/DNA material on a smaller item is generally collected by collecting the entire item (e.g. shirt, weapon, bottle). Visible biological/DNA material on a structural surface (e.g. floor, wall) or on a large object (e.g. furniture) is generally collected by using one or two sterile cotton swabs simultaneously. The swabs may be moistened with sterile water prior to sample collection. After swabbing the surface, the swabs are allowed to air dry in porous packaging. Any biological/DNA material on those swabs is preserved and can be used for future testing. Collection of "possible" and "potential" DNA are collected in the same method as described for visible DNA, using sterile water and sterile swabs.

Deoxyribonucleic acid (DNA) is genetic material contained in human cells that may be utilized for human identification. DNA may be present on an item in the form of biological materials such as blood, semen, and saliva or may be left on an item when it is handled (touch DNA). Biological evidence and possible/potential DNA evidence is

collected for preservation and may be sent for further testing by qualified DNA analysts. Crime Scene personnel do not test for DNA specifically.

Presumptive blood tests are chemical tests that are used to distinguish possible blood stains from non-blood stains. The chemical tests used are phenolphthalein or Ortho-tolidine. These tests are considered presumptive because the chemicals react to blood, which indicates the material may be blood. They are not specific for blood meaning they could react with a substance that is not blood. A small sample of a stain is collected onto a swab or filter paper, and the chemicals are applied to the sample; this leaves the source stain unaffected by chemicals. If the chemical has a color change (pink for phenolphthalein or blue/green for Ortho-tolidine) the stain is considered "presumptively" positive for blood. The stain or item may be collected for future biological testing. If a test is inconclusive, the item/stain would likely be collected for further laboratory testing. If the test is negative, the item/stain would likely NOT be collected.

Trace materials like hairs or fibers may be present at a scene or on an item. These items can be collected with forceps and/or adhesive material and packaged for potential analysis.

Shoe and tire impressions evidence may be observed or developed using chemical (amido black, leucocrystal violet, etc.) or physical methods (powder or light enhancement). Preservation methods include photography, casting and lifting.

Buccal cells are found on the inside of a person's cheek. A sterile cotton swab, or pair of swabs, is used to collect these cells as a reference DNA sample from a known individual. Buccal swab samples can be compared to unknown DNA samples from a crime scene or from an item of evidence.

Known hair samples may be collected from a subject for use as a reference sample for hair analysis or biology testing. Hairs are collected by pulling a sampling of hairs from various parts of the body and preserving them for future analyses.

Youngling will also discuss the examination of latent prints, including exemplars, print comparison, ridge detail, verification, and the Multi-Modal Biometric Identification System (MBIS). Additionally, Youngling may discuss lab protocols and procedures including the disposition of evidence.

Friction ridge skin is a specialized type of skin on the hands and feet that is capable of being used to establish or confirm their identity. This skin consists of ridges and valleys located on the gripping surfaces of the hand and feet that form patterns. Fingerprints are classified into the following pattern types: arches, loops, and whorls. Individual ridges have features or characteristics (minutiae) that are highly discriminating between individuals. These features are formed prior to birth and remain relatively unchanged throughout one's life barring trauma or disease.

Friction Ridge detail refers to the features and characteristics present in friction ridge impressions. This detail may be described as level 1 (direction of ridge flow), level 2(ridge path), level 3 (ridge shape and pore location). Friction ridge details permit comparison and subsequent identification of fingerprints.

Latent prints are impressions of friction ridge skin patterns that can be left on a surface when contact is made. The term "latent" refers to prints that are not visible prior to utilizing a development method; latent prints are often made up of various matrices, including sweat and oils that are colorless and require development with chemicals or powders to be seen. Prints at a crime scene may also be made from other materials that

may coat the skin, like blood or dirt. Although latent means hidden, any prints recovered from a crime scene or from items of evidence are often referred to as latent prints.

Exemplars are intentional recordings of the friction ridge skin of an individual. These may be collected with black ink, powder/adhesive, electronic imaging, and/or other capture methods. These known exemplars can then be used for comparison against latent print evidence. Exemplars may include any/all areas of friction ridge skin from the hands or feet of an individual. Types of exemplars include fingerprints, palm prints, major case prints (tips, joints, sides of fingers), and footprints.

Latent print comparison refers to the process of analyzing latent prints and comparing them to known exemplars in attempt to determine their source. Examiners utilize the ACE-V methodology which is a specialized version of hypothesis testing. ACE-V stands for analysis, comparison, evaluation and verification.

Analysis is the assessment and documentation of friction ridge impressions to determine suitability for comparison. This assessment includes consideration of the quality and quantity of detail, orientation, anatomical source (finger, palm, etc.), type of matrix, deposition factors, complexity, substrate considerations, environmental factors, development mediums, and preservation methods. Latent prints may be of value for comparison or may be deemed to contain insufficient detail for comparison purposes. Impressions deemed "of value" are impressions that in the opinion of the examiner, contain sufficient quantity, quality, and specificity of ridge detail to warrant a comparison. Examiners also take into consideration how discriminating the location and arrangement of features within an impression are. When quantity is low, quality must be relatively high. Whereas when quality is low, quantity must be relatively high. It is not uncommon for

latent print examiners to have conflicting opinions with regards to sufficiency. Latent prints are also evaluated for their suitability for database entry (AFIS, ABIS, MBIS, etc.)

Comparison is the side-by-side, back and forth, examination of friction ridge detail between a latent print and a known print to determine whether the detail is in agreement or disagreement based upon features, sequences, and spatial relationships within the tolerance of clarity and distortion. Generally, latent prints are first compared against various known prints belonging to subjects associated with the evidence (victims, witness, and/or suspects if known). In the event that the latent prints are not identified or that there are no known prints available with which to compare, the prints may be entered into a computer database (MBIS) and compared to a large group of persons who have prints on file.

Evaluation is the formulation of a conclusion based upon analysis and comparison of friction ridge impressions. Conclusions that may be reached are source identification, source exclusion or inconclusive. Source identification is the examiner's opinion that two impressions originated from the same source. The observed features are in sufficient correspondence such that the examiner would not expect to see this level of agreement in impressions that came from different sources. Nor did the examiner find features in disagreement that would lead them to conclude that the impressions are from different sources. There is no scientific basis for a predetermined number of corresponding friction ridge details be present in two impressions in order to effect a source identification. Source exclusion is an examiner's conclusion that two impressions did not originate from the same source. The observed features are in disagreement such that the examiner would not expect them to have originated from the same source. Inconclusive is an examiner's inability to reach a conclusion of source identification or exclusion. Inconclusive may be

due to lack of quantity or quality of detail in the latent or known impression.

Verification is the independent examination by another qualified analyst using the ACE methodology to either support or refute the conclusions of the original examiner. ISPFS requires verification of all conclusions rendered in a case (value determinations, identifications, exclusions and inconclusives). Routine verification is considered "open". This means the verifier conducts independent analysis but has access to the original analyst's notes and images. Blind verification, in which the verifier has no knowledge of or access to the original analyst's conclusion, may be performed in cases of single identifications generated from a database, as a means of conflict resolution, or as an additional quality measure for complex impressions.

The decisions made at the evaluation step is an examiner's opinion based on their personal observations. These observations may be influenced by training, experience, risk tolerance, bias and many other factors. Once this decision is made, the case is sent to another qualified analyst for verification. It is not uncommon for analysts to have different opinions and come to differing conclusions during the ACE-V process. ISPFS has a conflict resolution policy for navigating and documenting such instances. Analysts are encouraged to resolve differing opinions by re-examination and/or discussion to arrive at a mutually agreed upon conclusion that is supported by the observed data. When this cannot be achieved, a blind verification by an additional analyst may be conducted. If blind verification does not result in a resolution, a consensus opinion or administrative opinion may be sought.

The Multi-Modal Biometric Identification System (MBIS) is the general term referring to any system that contains a database of ten-print, latent prints and palm prints.

MBIS also includes software that is utilized to search available databases. Idaho is a member of the Western Identification Network and is able to search the databases of WIN central site members and the FBI. MBIS allows for searching latent prints against known fingerprint and palm print database records. The system can also be used to search latent prints against other latent prints.