STATE OF WISCONSIN
COURT OF APPEALS
DISTRICT II

Case No. 2017AP002288

STATE OF WISCONSIN,

Plaintiff-Respondent,

v.

STEVEN A. AVERY, SR.,

Defendant-Appellant.

DEFENDANT-APPELLANT'S MOTION TO STAY APPEAL AND REMAND THE CAUSE FOR NEW SCIENTIFIC TESTING

The Defendant-Appellant, Steven Avery ("Mr. Avery"), by his undersigned attorneys, Kathleen T. Zellner and Steven G. Richards, hereby moves this Court pursuant to Wisc. Stat. § 974.07(2)(c) and the trial court's Order on Preservation of Blood Evidence and Independent Defense Testing of April 4, 2007 to stay this appeal and remand the cause for new DNA testing of suspected human skeletal remains recovered from the Manitowoc County Gravel Pit. (395).[1] In support of this motion, Mr. Avery states as follows:

[1] Citations to the record on appeal appear with the document number before the colon and the page number after the colon. A citation to 429:16, for instance, refers this Court to page 16 of document 429.

A. Previous Examinations of Human Skeletal Remains Located in Mr. Avery's Burn Pit, the Dassey-Janda Burn Barrel, and the Manitowoc Gravel Pit

1. The State relied upon the testimony of DNA analyst Sherry Culhane ("Ms. Culhane") of the Wisconsin State Crime Lab ("WSCL"), who testified that Item BZ, from Mr. Avery's burn pit, which she identified as "tissue close to the bone," produced a partial DNA profile of Teresa Halbach ("Ms. Halbach"). (699:158–59). Specifically, the profile produced from BZ was limited to "seven loci" that were consistent with Ms. Halbach's DNA profile. (11:2). The only other attempted identification of Ms. Halbach from the remains was by Dr. Simley, a forensic odontologist, who could not make a "positive identification" based upon the tooth fragments presented to him for identification. (706:89–91). Prosecutor Kenneth Kratz ("Prosecutor Kratz"), recognizing the weakness of Dr. Simley's identification testimony, told the jury in his closing, "Mr. Simley [*sic*], although unwilling because of his scientist nature, make 100 percent match, used these words, it's as close to a positive match as you can get, using one tooth." (715:102). Prosecutor Kratz inaccurately described the item as a tooth when it was actually a "root fragment." (706:91).

2. Forensic anthropologist Dr. Leslie Eisenberg ("Dr. Eisenberg"), was unable to identify the bones fragments behind Mr. Avery's garage as anything other than those of an adult female, "no older than between 30 to 35 years of age." (706:137–38). Dr. Eisenberg also identified human bones from the Dassey-Janda

burn barrel, but she did not offer an opinion that the bones were female or of a certain age. (706:228).

3. Dr. Eisenberg testified that there was a "possible" human pelvic bone in the Manitowoc Gravel Pit. (707:10–11). Dr. Eisenberg was never questioned about two other bones piles with multiple human bones identified by her, which were present in the Manitowoc Gravel Pit. The Master Index of Gravel Pit Bones attached and incorporated herein as **Group Exhibit 1**. The Map of Gravel Pit Bone Piles is attached and incorporated herein as **Exhibit 2** to this motion.

4. On January 12, 2007, a report about DNA analysis was issued by the FBI laboratory. (247:6–10). The FBI DNA testing attempted on the bones was unsuccessful due to the degraded condition of the submitted bone fragments. At trial, the parties entered a stipulation, which stated:

> The parties are agreed that the bone fragments identified as human from the burn pit behind Steven Avery's garage, bone fragments identified as human from burn barrel number two behind the residence of Barb Janda, and bone fragments suspected as possible human bones from the quarry pile . . . south of the Avery Salvage Yard, were sent to the FBI Laboratory in Quantico, Virginia, on November 2nd, 2006, November 7th, 2006, and December 19th, 2006, to attempt further DNA analysis. If called to testify, Dr. Leslie McCurdy, of the FBI DNA Analysis Unit, would testify that due to the condition of the submitted bone fragments, no DNA examinations could be conducted.

(707:50–51).

B. Previous Court Orders Providing for DNA Testing

5. On April 4, 2007, the trial court[2] entered an order for the Preservation of Blood Evidence and Independent Defense Testing. This order contemplates and allows future DNA testing by Mr. Avery as DNA technology improves. (395:1–3).

6. On November 23, 2016, the circuit court entered an order in agreement with the parties' stipulation for further scientific testing of certain items. (581; 582). The November 23, 2016 order relied in part upon the April 4, 2007, Order on Preservation of Blood Evidence and Independent Defense Testing. (582:1). Along with certain items of blood evidence, the parties agreed and the circuit court ordered reexamination of non-blood items of evidence; specifically, the order allowed retesting of Item C, the Toyota key recovered from Mr. Avery's bedroom and Item FL, a bullet fragment recovered from Mr. Avery's garage. (582:2; 581:2).

7. On September 18, 2017, a meeting took place in Madison, Wisconsin, where current post-conviction counsel and the State agreed to further testing of crime scene evidence. Among other items of evidence, it was agreed that a microscopic examination would be conducted of the suspected human pelvic bone found in the Manitowoc Gravel Pit. The parties agreed a microscopic examination of the pelvic bone by Dr. Eisenberg and Dr. Steven Symes, Mr. Avery's forensic anthropologist, to determine if the bone was human. Clearly, by agreeing to this

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[2] For purposes of this motion, Mr. Avery shall refer to the Manitowoc County Circuit Court that heard his trial as the "trial court." Mr. Avery shall refer to the specially assigned Sheboygan County Circuit Court that ruled on his most recent § 974.06 motion as the "circuit court."

examination, the State recognized that the outcome of this examination was material and relevant to the larger issue in the case about the location of the murder and mutilation of Ms. Halbach's body. Prior to the parties being able to complete this microscopic examination, the circuit court, without awareness of the parties' agreement, dismissed Mr. Avery's Motion for Post-Conviction Relief. (640:1–5). The circuit court's action in dismissing the appeal and denying Mr. Avery's Motion to Reconsider and its supplements is an issue in Mr. Avery's pending appeal.

C. Location of the Bones was Critical to the State's Prosecution of Mr. Avery for the Murder of Ms. Halbach

8. The location of the bones in Mr. Avery's burn pit was critical to the successful prosecution of Mr. Avery for the intentional murder of Ms. Halbach. In his closing, Prosecutor Kratz told the jury the following:

> We could start with the moment or with the visual or with the image of that man, Steven Avery, standing outside of a big bonfire, with flames over the roof, or at least over the garage roof, and the silhouette of Steven Avery, with the bonfire in the background and the observation made by some witnesses. . . . And that moment by the way, although dramatic and although important, should tell the whole story.

(715:35)

9. The State's theory intertwined the evidence supporting the intentional murder of Ms. Halbach with the evidence supporting the charge of mutilation of her body. The jury found Mr. Avery not guilty of the mutilation charge presumably because the evidence was insufficient to prove that charge beyond a reasonable doubt. However, the jury found Mr. Avery guilty of intentional murder, which the

State contended occurred in Mr. Avery's garage and was immediately followed by the burning and mutilation of Ms. Halbach's body in Mr. Avery's burn pit. (715:15). The jury may have believed there was a reasonable doubt about the State's contention that Mr. Avery chopped up the bones with a shovel or some other detail in the State's story so the jury acquitted him on the mutilation charge. However, regardless of the acquittal on the mutilation charge, the potential identification of Ms. Halbach's bones in the Manitowoc Gravel Pit is relevant and material evidence on the issues of the location of the murder, the mutilation of the body, and planting evidence to frame Mr. Avery for the murder.

10. Prosecutor Kratz claimed in his closing that the events which proved intentional murder were intertwined with the alleged events which proved the mutilation of the body. The unifying theme, according to the State, was the location of these alleged events which were linked exclusively to Mr. Avery. According to the State, the murder allegedly occurred in Mr. Avery's garage and the mutilation in his burn pit. Prosecutor Kratz told the jury the events at these two locations told "the whole story" and only one person committed this crime. (716:119).

11. At Mr. Avery's trial, his trial defense counsel, Jerome Buting, stressed the importance of the bones found in the Manitowoc Gravel Pit when he said:

> [I]f that body was burned somewhere and then moved and dumped on Mr. Avery's burn pit, then Steven Avery is not guilty, plain and simple. . . . Now that is why the State has gone to such trouble avoiding the fact that the bones were moved, that's why you heard nothing about it here. Because it does not fit with their theory that Avery is guilty.

(715:148–49).

12. Prosecutor Kratz stated in his rebuttal at trial: "These bones in the quarry, I'm going to take 20 seconds to talk about, because the best anybody can say is that they are possible [*sic*] human." (716:78). Prosecutor Kratz acknowledged the importance of having the bones identified as human, but he dismissed the defense claim that the bones were human because of the lack of scientific verification for that claim.

13. Therefore, the identification of the Manitowoc Gravel Pit bone fragments as Ms. Halbach's is relevant and material because it would prove the murder and mutilation did not occur in a location tied exclusively to Mr. Avery. No reasonable trier of fact could conclude that, if Mr. Avery murdered and mutilated Ms. Halbach in the Manitowoc Gravel Pit that he would move her bones to his own burn pit and thereby incriminate himself.

14. If the new DNA testing identifies Ms. Halbach's bones in the Manitowoc County gravel pit, two inferences are reasonable, namely, Mr. Avery is not the murderer and the bones recovered from Mr. Avery's burn pit were planted. There is a reasonable probability this new evidence would undermine confidence in the jury's verdict.

D. ANDE Rapid DNA Identification System Testing is Now Available to Test the Manitowoc Gravel Pit Bones to Determine their DNA Identity

15. New DNA testing called the ANDE Rapid DNA Identification ("ID") system has been successfully used in a number of ways, including to identify charred and calcined bones. Dr. Richard Selden ("Dr. Selden") pioneered and developed the

ANDE Rapid DNA ID System. Dr. Selden's affidavit is attached and incorporated herein as **Exhibit 3** to this motion. A copy of Dr. Selden's curriculum vitae is attached and incorporated herein as **Exhibit A** to Dr. Selden's affidavit.

16. On June 4, 2018, the ANDE Rapid DNA ID system received National DNA Index System ("NDIS") approval from the FBI. The approval allows all accredited forensic DNA laboratories to utilize the ANDE system for the processing of buccal swabs and to submit DNA ID data to the Federal DNA database ("CODIS") and to search CODIS with data generated from the ANDE system. The FBI has publicly stated that it intends to allow NDIS-approved Rapid DNA systems to be utilized to test arrestees while in custody in police booking stations as required by the Federal Rapid DNA act of 2017 (passed unanimously in the House of Representatives and Senate).

17. The ANDE Rapid ID system has also been successfully used to identify DNA from calcined and charred bones. A recent application of the system has been successful in identifying victims from the November 2018 Camp Fire in Butte County, California. Working under the authority of the Sheriff-Coroner of Butte County and in close collaboration with the Coroner of Sacramento County, the ANDE system successfully generated DNA IDs from approximately 85% of the cases, most of which were generated within seven days. The wildfire victims' bones were in a highly degraded condition from the fire, as are the bone samples in the instant case from the Manitowoc Gravel Pit.

18. On December 6, 2018, current post-conviction counsel contacted Dr. Selden on behalf of Mr. Avery for the review of photographs and laboratory reports in Mr. Avery's 2007 criminal case. The items Dr. Selden reviewed are as follows:

A. Forensic Anthropology photos depicting bones recovered from quarry piles south of the Avery salvage yard (attached and incorporated herein as **Group Exhibit C** to Dr. Selden's affidavit):
   i. PA150009.jpg
   ii. PA150010.jpg
   iii. PA150011.jpg
   iv. PA150012.jpg
   v. PA150013.jpg
   vi. PA150014.jpg
   vii. PA150015.jpg
   viii. PA150016.jpg
   ix. PA150018.jpg
   x. PA150020.jpg
   xi. PA150021.jpg
   xii. PA150022.jpg
   xiii. PA150023.jpg
   xiv. PA150025.jpg
   xv. PA150027.jpg
   xvi. PA150028.jpg
   xvii. PA150029.jpg
   xviii. Fragments of possible cut human bone Tag #8675.jpg
   xix. Reverse side of sacroiliac area.jpg
   xx. Right sacroiliac area N.B. vertical cuts on either side of artic.jpg

b. Stipulation at trial that the FBI conducted no DNA examination of the possibly human bones from the quarry pile south of the Avery salvage yard due to the degraded condition of the bone fragments (labeled R. 707:50–51) (attached and incorporated herein as **Exhibit D** to Dr. Selden's affidavit).

c. FBI DNA analysis reports (labeled R. 247:6–10) (attached and incorporated herein as Selden Affidavit **Exhibit E** to Dr. Selden's affidavit

19. Each of the above-listed items of evidence was recovered from the Manitowoc County gravel pit. (*See,* **Group Exhibit 1** and **Exhibit 2**).

20. Based upon Dr. Selden's review of the items listed above, and his education, training and experience, it is his opinion, to a reasonable degree of scientific certainty, that there is a "reasonable likelihood of more accurate and probative results" being obtained from these samples if processed using ANDE Rapid DNA technologies which would reveal the DNA ID of these bones. The condition of the bones, as depicted in the forensic anthropology photos, are consistent with the bones from which Dr. Selden has recently successfully obtained DNA IDs in the November 2018 California Camp Fire.

21. Dr. Selden proposes that the bones depicted in the photographs in paragraph 11 as well as any other relevant bones and burned matter from the crime scene that the parties agree upon, be processed using Rapid DNA ID system at his facility in Waltham, Massachusetts. The techniques are straightforward, and Dr. Selden would welcome observation by any representative of the State of Wisconsin and current post-conviction counsel.

22. Dr. Selden will not fully consume any sample, ensuring material is available for later analyses.

E. Statutory Authority and Case Law Support for the ANDE Rapid DNA ID System Testing of the Manitowoc Gravel Pit Bones

23. Wis. Stat. § 974.07(2) states as follows:

> a. The evidence is relevant to the investigation or prosecution that resulted in the conviction, adjudication, or finding of not guilty by reason of mental disease or defect.
> b. The evidence is in the actual or constructive possession of a government agency.

c. The evidence has not previously been subjected to forensic deoxyribonucleic acid testing or, if the evidence has previously been tested, it may not be subjected to another test using a scientific technique that was not available or was not utilized at the time of the previous testing and that provides a reasonable likelihood of more accurate and probative results.

24. Mr. Avery meets the requirements of Wis. Stat. § 974.07(2)(c), because, as stated above, the bones were submitted to the FBI for testing in 2006 but the testing was not attempted due to the charred and calcined condition of the bones. Rapid DNA ID testing was not available in 2006, but now provides a reasonable likelihood of "more accurate and probative results." As discussed previously, the State clearly believed that the identification of the Manitowoc Gravel Pit bones was material and relevant because of the prior FBI testing, and the September 18 agreement between the parties to further examine the human pelvic bone microscopically.

25. As demonstrated by the trial court's April 4, 2007, order, Mr. Avery was given the authority at "any time" to submit items of evidence for DNA testing. (395:2).

26. The Wisconsin Supreme Court has established that new evidence can provide the basis for a new trial in the interest of justice. In *State v. Armstrong*, the court ordered a new trial in the interest of justice because new DNA tests established that biological evidence asserted by the State at trial as having come from Armstrong could not have come from him. *State v. Armstrong,* 2005 WI 119, 156. Because "the jury was not given an opportunity to hear important testimony

that bore on an important issue in the case," the court found that "the real controversy was not fully tried" and thus ordered a new trial. *Id.* at ¶ 181. See also *Hicks*, 202 Wis. 2d 161 (a new trial was necessary in the interest of justice because the jury did not hear important DNA evidence and heard evidence which was later shown to be inconsistent with the DNA evidence). Similarly, in *Garcia v. State*, the court ordered a new trial because all of the material evidence was not presented to the jury, and "the integrity of our system . . . should afford a jury the opportunity to hear and evaluate the evidence . . . ." 73 Wis. 2d 651, 655-56 (1976).

27. The State's entire prosecution of Mr. Avery was dependent upon the location of the bones being in Mr. Avery's burn pit. If Ms. Halbach's bones are confirmed to be in the Manitowoc Gravel Pit, Prosecutor Kratz's claim would be refuted that the location of the bones told "the whole story" of Mr. Avery murdering and mutilating Ms. Halbach in his garage and burn pit. Mr. Avery's request for post-conviction testing of the skeletal remains satisfies *Hicks* because the requested testing is consequential to his conviction and the production of the sought-after evidence and the potential results of the ANDE Rapid DNA ID testing would be material evidence that was not presented to the jury and would potentially mandate that a new trial be ordered in the interest of justice.

28. Current post-conviction counsel will pay for any cost incurred from the ANDE Rapid DNA ID testing by Dr. Selden.

CONCLUSION

Wherefore, undersigned counsel respectfully requests that this Court enter an order staying this appeal and remanding the cause to the circuit court for a determination as to whether an order should be entered for the ANDE Rapid ID testing by Dr. Richard Selden of the Manitowoc County Gravel Pit bone fragments, described in **Exhibit 1**.

Dated this 17th day of December, 2018.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that on December 17, 2018, a true and correct copy of Defendant-Appellant's Motion to Stay Appeal and Remand the Cause for New Scientific Testing was furnished via electronic mail and by first-class U.S. Mail, postage prepaid, to:

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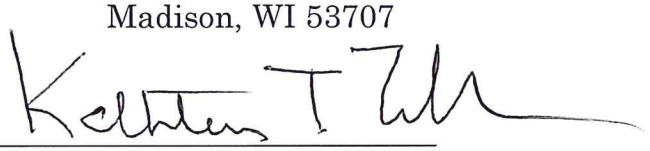


Kathleen T. Zellner

MASTER INDEX OF GRAVEL PIT PILES

CCSD Tag No.	Dr. Eisenberg's Description	Extracted from:	Coordinates	Forensic Anth. Photos	Quarry Pile No.
7411	"Calcined human bone frags; possible cut edges" (STATE 1_9280; R. 756:29)	CCSD #8658 (STATE 5677)	N44 14'44 W87 42'10 (STATE 4929)	PA150009 – PA150010	3
7412	"Human and non-human bone, non-biological; some bone not calcined; 5 of 13 burned/calcined with cut edges; most bone fragments are all cut bone fragments are human; no element ID" (STATE 1_9280; R. 756:29)	CCSD #8484 (STATE 5677)	N44 14'51 W87 41'51 (STATE 4928)	PA150011 – PA0014	1
7413	"one burned human frag[ment]" (STATE 1_9280; R. 756:29)	CCSD #8653 (STATE 5677)	N44 14'44 W87 42'10 (STATE 4929)	PA150015	3
7414	"Burned/calcined human bone fragments" (STATE 1_9280; R. 756:29)	CCSD #8653 (STATE 5677)	N44 14'44 W87 42'10 (STATE 4929)	PA150016	3
7416	"Human . . . bone fragments; human is calcined with one cut edge" (STATE 1_9280; R. 756:29)	CCSD #8652 (STATE 5677)	N44 14'44 W87 42'10 (STATE 4929)	PA150018	3

MASTER INDEX OF GRAVEL PIT PILES

CCSD Tag No.	Dr. Eisenberg's Description	Extracted from:	Coordinates	Forensic Anth. Photos	Quarry Pile No.
7419	"Cut/burned human bone" (STATE 1_9280; R. 756:29)	CCSD #8687 (STATE 5677)	N44 14'44 W87 42'08 (STATE 4928)	PA150020 – PA150023	2
7422	"2 [bone fragments] of possible human origin" (STATE 1_9280; R. 756:29)	CCSD #8662 (STATE 5678)	N44 14'44 W87 42'08 (STATE 4928)	PA150025	2
7424	"Cut sacrum frags, not likely human" (STATE 1_9280; R. 756:29)	CCSD #8657 (STATE 5678)	N44 14'44 W87 42'10 (STATE 4929)	PA150027 – PA150029	3
8675	"possible human burned cut pelvis fragments (n=7); 4 calcined bone fragments of unknown origin" (STATE 1_9280; R. 756:29)	N/A	N44 14'51 W87 41'51 (STATE 1_6869)	"Fragments of possible cut human bone Tag #8675;" "Reverse side of sacroiliac area;" "Right sacroiliac area N.B. vertical cuts on either side of artic"	1

Calumet County Sheriff's Department Case No. 05-0157-955
WI Department of Criminal Investigation Case No. 05-1776

8140	December 20, 2005		Burned and unburned non-human, non-biological, possible small undiagnostic calcined and burned human fragments; possible cut fragment of unknown origin; WCL rescreen
8148	December 20, 2005		Non-diagnostic human, non-human, fabric; rescreened at Crime Lab (Madison)
7955	January 12, 2006		Bone, dirt, non-bone; nothing diagnostic; returned to CCSD 12 January 2006
7964	January 17, 2006		Human bone (element ID), non-human non-biological; 1 shaft fragment with cut marks sent to FBI on 7 Nov 2006; pupal casings
7960	January 17, 2006		Non-human large avian unburned and bleached, PMCD
8675	January 17, 2006		Non-human unburned with 3 cut frags; burned non-biological; possible human burned cut pelvic fragments (n=7); 4 calcined bone fragments of unknown origin
8701	January 17, 2006		Non-human unburned with desiccated soft tissue
7937	January 26, 2006	D 6266 (Item 8)	Dog stool inside of bags in volatile can
7411	April 25, 2006		Calcined human bone frags; possible cut edges
7412			Human and non-human bone, non-biological; some bone not calcined; 5 of 13 burned/calcined with cut edges; most bone fragments and all cut bone fragments are human; no element ID
7413			18 non-human, one burned human frag
7414			Burned/calcined human bone fragments
7415			Non-human
7416			Human and non-human bone fragments; human is calcined with one cut edge
7418			Non-human bone
7419			Cut/burned human bone; wood
7420			Undiagnostic bone frags charred; 1 non-bone item
7421			1 small calcined bone fragment, possibly human but not diagnostic; part of small diameter shaft
7422			12 bone fragments; 2 of possible human origin, non-diagnostic
7423			4 non-human bone frags
7424			Cut sacrum frags, not likely human

CALUMET COUNTY SHERIFF'S DEPARTMENT

Complaint No.
05-0157-955

File Number

TYPE OF ACTIVITY: **Evidence Processing Duties**

DATE OF ACTIVITY: **04/10/06 and 04/11/06**

REPORTING OFFICER: **Deputy Rick Riemer**

On 04/10/06 at 0932 hours, the evidence processing began on the assorted 5-gallon pails. The individuals at the scene were DCI Special Agent RON PEVYTOE, DCI Special Agent KEVIN HEIMERL, Dr. LESLIE EISENBERG, a forensic pathologist, DCI Special Agent TOM FASSBENDER, Inv. GARY STEIER of the CALUMET COUNTY SHERIFF'S DEPARTMETN, Inv. JOHN DEDERING of the CALUMET COUNTY SHERIFF'S DEPARTMENT, HALEY (ph) KREBS, an intern working with DCI, Inv. MARK WIEGERT of the CALUMET COUNTY SHERIFF'S DEPARTMENT, Deputy JEREMY HAWKINS of the CALUMET COUNTY SHERIFF'S DEPARTMENT, and I (Deputy RICK RIEMER of the CALUMET COUNTY SHERIFF'S DEPARTMENT).

We performed the evidence processing duties in the garage area located to the north of the CALUMET COUNTY SHERIFF'S DEPARTMENT. The items were sifted on top of scaffolding that was covered with tarps. All of the scaffolding was draped with tarps. Everybody entering the building was required to wear a Tyvec suit and gloves.

At 0932 hours, Special Agent PEVYTOE and Intern KREBS began processing Item #8484. Special Agent HEIMERL and Inv. DEDERING processed Item #8658. Dr. EISENBERG and Inv. STEIER processed item #8652.

Items identified as nonhuman, such as metal objects, were placed in a ziplock bag and back into the original container. The items were sifted through with putty knives, bamboo skewers, one-eighth inch screens and also by hand.

At 1105 hours, Inv. DEDERING had checked out and rechecked in at 1115 hours.

At 1121 hours, Special Agent PEVYTOE and Intern KREBS began processing Item #8644.

At 1150 hours, Special Agent HEIMERL and Inv. DEDERING began processing Item #8653.

At 1225 hours, all personnel were out of the area except for me (Deputy RIEMER) for a lunch break. They returned at 1330 hours.

At 1350 hours, Special Agent FASSBENDER checked in. Also, at 1350 hours, Special Agent PEVYTOE and Intern KREBS processed Item #8699.

At 1460 hours, Inv. STEIER checked in.

At 1418 hours, Item #8695 was processed by Special Agent PEVYTOE, Intern KREBS and Special Agent FASSBENDER.

At 1423 hours, Item #8687 was processed by Inv. DEDERING, Special Agent HEIMERL and Inv. WIEGERT.

At 1425 hours, Item #8481 was processed by Special Agent PEVYTOE, Intern KREBS and Special Agent FASSBENDER.

At 1456 hours, Item #8654 was processed by Inv. STEIER, Dr. EISENBERG and me (Deputy RIEMER).

At 1459 hours, Item #8663 was processed by Special Agent PEVYTOE, Intern KREBS and Special Agent FASSBENDER.

At 1537 hours, Item #8684 was processed by Special Agent PEVYTOE, Intern KREBS and Special Agent FASSBENDER.

At 1558 hours, Item #8662 was processed by Inv. WIEGERT, Inv. DEDERING and Special Agent HEIMERL.

At 1615 hours, Item #8661 was processed by Special Agent PEVYTOE, Intern KREBS and Special Agent FASSBENDER.

At 1629 hours, Dr. EISENBERG and I left the scene.

At 1629 hours, Item #8659 was set up for processing by Dr. EISENBERG and me.

At 1705 hours, Item #8685 was processed by Dr. EISENBERG and me. We had checked in previously at 1700 hours.

At 1721 hours, Special Agent HEIMERL checked out.

The rest of the special agents, investigators and deputies checked out at 1750 hours on 04/10/06.

All items were placed into secure storage in the outside storage room. I (Deputy RIEMER) had the sole key for the storage area.

We began again on 04/11/06 at 0829 hours. The personnel available on 04/11/06 were Deputy JEREMY HAWKINS of the CALUMET COUNTY SHERIFF'S DEPARTMENT, Special Agent KEVIN HEIMERL, Det. DAVE REMIKER of the MANITOWOC COUNTY

SHERIFF'S DEPARTMENT, Sgt. BILL TYSON, Inv. JOHN DEDERING and me (Deputy RIEMER) of the CALUMET COUNTY SHERIFF'S DEPARTMENT.

At 0829 hours, Item #8480 was processed by Sgt. TYSON and Special Agent HEIMERL, Item #8651 was processed by Inv. DEDERING and Det. REMIKER and Item #8698 was processed by Deputy HAWKINS and me.

At 0843 hours, Special Agent TOM FASSBENDER checked in and assisted Deputy HAWKINS and me on Item #8698.

At 0916 hours, Sgt. TYSON checked out for court.

At 0927 hours, Inv. DEDERING checked out returning at 0941 hours.

At 0955 hours, Det. REMIKER checked out and returned at 1000 hours.

At 1017 hours, Special Agent HEIMERL checked out and returned at 1024 hours.

At 1025 hours, Item #8686 was processed by Deputy HAWKINS and me.

At 1030 hours, Sgt. TYSON checked back in.

At 1041 hours, Item #8659 was processed by Sgt. TYSON and Special Agent HEIMERL.

At 1041 hours, Deputy HAWKINS checked out and returned at 1046 hours.

At 1108 hours, Inv. DEDERING and Det. REMIKER began processing Item #7963.

At 1050 hours, Special Agent FASSBENDER checked out and checked in at 1117 hours along with Inv. DEDERING, Det. REMIKER and Inv. WIEGERT.

At 1157 hours, Item #7954 began to be processed by Det. REMIKER.

At 1157 hours, Item #7958 was processed by Deputy HAWKINS and me.

At 1230 hours, Item #8650 was processed by Deputy HAWKINS and me.

At 1238 hours, Item #8656 was processed by Inv. WIEGERT, Sgt. TYSON and Special Agent HEIMERL.

At 1242 hours, Item #8649 was processed by Det. REMIKER, Special Agent FASSBENDER and Inv. DEDERING.

At 1243 hours, Deputy HAWKINS checked out along with Inv. DEDERING.

At 1323 hours, Item #8655 was processed by Inv. WIEGERT.

At 1326 hours, I checked out and returned at 1330 hours.

At 1336 hours, I checked out again returning at 1346 hours.

At 1339 hours, Deputy HAWKINS checked in.

At 1348 hours, Inv. DEDERING and Inv. WENDY BALDWIN checked in.

The following items were recovered at the scene:

- Item #1, Property Tag #7409, two glass slides originating from Item #8658, collected at 1139 hours on 04/10/06
- Item #2, Property Tag #7410, a bobby pin from Item #8658, collected at 1140 hours on 04/10/06
- Item #3, Property Tag #7411, possible bone fragments from Item #8658, collected at 1151 hours on 04/10/06
- Item #4, Property Tag #7412, possible bone fragments from Item #8484, collected at 1155 hours on 04/10/06
- Item #5, Property Tag #7413, non-human bone fragments from Item #8653, collected at 1421 hours on 04/10/06
- Item #6, Property Tag #7414, bone fragments from Item #8653, collected at 1422 hours on 04/10/06
- Item #7, Property Tag #7415, suspected non-human bones from Item #8652, collected at 1404 hours on 04/10/06
- Item #8, Property Tag #7416, suspected human bone fragments from Item #8652, collected at 1502 hours on 04/10/06
- Item #9, Property Tag #7417, red coagulated substance, charred from Item #8663, collected at 1534 hours on 04/10/06
- Item #10, Property Tag #7418, suspected non-human bone fragments from Item #8687, collected at 1556 hours on 04/10/06
- Item #11, Property Tag #7419, suspected human bone fragments from Item #8687, collected at 1556 hours on 04/10/06
- Item #12, Property Tag #7420, suspected charred item resembling bone from Item #8654, collected at 1623 hours on 04/10/06
- Item #13, Property Tag #7421, unidentified suspected bone from Item #8661, collected at 1707 hours on 04/10/06

- Item #14, Property Tag #7422, suspected non-human bone fragments from Item #8662, collected at 1720 hours on 04/10/06
- Item #15, Property Tag #7423, non-human bone fragments from Item #8657, collected at 1738 hours on 04/10/06
- Item #16, Property Tag #7424, bone fragments from Item #8657, collected at 1738 hours on 04/10/06
- Item #17, Property Tag #7425, fibers from the sifting of Item #8480, collected at 0845 hours on 04/11/06
- Item #18, Property Tag #7426, bone fragments from sifting of Item #8698, collected at 1020 hours on 04/11/06
- Item #19, Property Tag #7427, bone fragments from sifting of Item #8480, collected at 1037 hours on 04/11/06
- Item #20, Property Tag #7428, bone fragments from sifting of Item #8681, collected at 1111 hours on 04/11/06
- Item #21, Property Tag #7429, bone fragments from sifting of Item #7963, collected at 1140 hours on 04/11/06
- Item #22, Property Tag #7430, bone fragments from sifting of Item #8686, collected at 1141 hours on 04/11/06
- Item #23, Property Tag #7431, bone fragments from sifting of Item #8659, collected at 1206 hours on 04/11/06
- Item #24, Property Tag #7432, bone fragments from sifting of Item #8656, collected at 1318 hours on 04/11/06
- Item #25, Property Tag #7433, bone fragments from sifting of Item #8655, collected at 1348 hours on 04/11/06
- Item #26, Property Tag #7434, bone fragments from sifting of Item #8650, collected at 1357 hours on 04/11/06
- Item #27, Property Tag #7435, bone fragments from sifting of Item #8655, collected at 1405 hours on 04/11/06

All items were properly labeled and turned over to the evidence custodian.

It should be noted several digital images were taken of the processing of these items.

Deputy Rick Riemer
Calumet Co. Sheriff's Dept.
RR/bdg

TRANSMITTAL OF CRIMINAL EVIDENCE

DJ-LE-101 (1/92)

Complete this form, place in an envelope addressed to the State Crime Laboratory and attach to outside of package when mailing evidence. Keep a copy of this transmittal for your files.

WISCONSIN DEPARTMENT OF JUSTICE
STATE CRIME LABORATORY-MADISON
4706 University Avenue

M05-2467 - 19

Calumet County Sher
05-0157-955

M 11/21/2005

Submitting Agency		Your Case No.
Calumet County Sheriff's Department		05-157955
City of Agency	County	Date Transmitted
206 Court St. Chilton, WI 53014	Calumet	11-21-05
Offense Committed in City/Town/Village	County	Offense Date
Town of Gibson	Manitowoc	10-31-05
Criminal Offense (in drug cases; ie, Possession, Possession with Intent, Delivery)		Trial Date (if known)
Missing/Endangered Individual Homicide		unknown

Victim(s)	Teresa M. Halbach	Sex/Race	F/W	Date of Birth 03-22-80 Age 25
Suspect(s)	Steven A. Avery	Sex/Race	M/W	Date of Birth 07-09-62 Age 43
Suspect(s)		Sex/Race		Date of Birth Age

Agency Code	Quantity	Item Description and Source
✓7954	1	Burnt material Below the Berm S/E of red garage
✓8656	1	Debris pile N44 14'44 W87 42'10
✓8699	1	Debris pile N44 14'53 W87 41'51
✓8484	1	Debris pile N44 14'51 W87 41'51
✓8659	1	Debris pile N44 14'44 W87 42'10
✓8687	1	Debris pile N44 14'44 W87 42'08
✓8685	1	Debris pile N44 14'44 W87 42'08
✓8684	1	Debris pile N44 14'44 W87 42'08
✓8662	1	Debris pile N44 14'44 W87 42'08
7609 X	1	Marlin Mod 60 ss .22 Cal Semi-Auto SN 04229713 Res S/E of new shop
647 X	1	Glenfield Mod 60 .22 Cal Rifle SN 27323959 Back bedroom of 12932 Avery Rd.
648 X	1	Conn Valley Arms Hawken .50 Cal Black Powder Rifle SN 86373055 Back bedroom of 12932 Avery Rd.
✓8698	1	Debris pile N44 14'53 W87 41'51
7948 NO	1	Burnt Material South of the dugout
7947 NO	1	Burnt Material South of the dugout
641 NO	1	Rear Door off a Suzuki Samurai

Name of Submitting Officer JEREMY L. HAWKINS Phone No. 920-849-2335

TRANSMITTAL OF CRIMINAL EVIDENCE

DJ-LE-101 (1/92)

Complete this form, place in an envelope addressed to the State Crime Laboratory and attach to outside of package when mailing evidence. Keep a copy of this transmittal for your files.

WISCONSIN DEPARTMENT OF JUSTICE
STATE CRIME LABORATORY-MADISON
4706 University Avenue

M05-2467 - 19

Calumet County She
05-0157-955

M 11/21/2005

Submitting Agency		Your Case No.
Calumet County Sheriff's Department		05-157955
City of Agency	County	Date Transmitted
206 Court St. Chilton, WI 53014	Calumet	11-21-05
Offense Committed in City/Town/Village	County	Offense Date
Town of Gibson	Manitowoc	10-31-05
Criminal Offense (in drug cases; ie, Possession, Possession with Intent, Delivery)		Trial Date (if known)
Missing/Endangered Individual Homicide		unknown

Victim(s)	Sex/Race	Date of Birth	Age
Teresa M. Halbach	F/W	03-22-80	25
Suspect(s)	Sex/Race	Date of Birth	Age
Steven A. Avery	M/W	07-09-62	43
Suspect(s)	Sex/Race	Date of Birth	Age

Agency Code	Quantity	Item Description and Source
✓8481	1	Burn pile ash Northwest of red trailer Avery Property
✓ 8480	1	Burn pile ash Northwest of red trailer Avery Property
✓ 8658	1	Debris pile N44 14'44 w87 42'10
✓8651	1	Debris pile N44 14'44 w87 42'10
✓8686	1	Debris pile N44 14'44 W87 42'08
✓ 8652	1	Debris pile N44 14'44 W87 42'10
✓ 8653	1	Debris pile N44 14'44 W87 42'10
✓ 8695	1	Debris pile N44 15'16 W87 41'45
✓ 8650	1	Debris pile N44 14'44 W87 42'10
✓ 8654	1	Debris pile N44 14'44 W87 42'10
✓ 8644	1	Debris pile N44 14'46 W87 41'58
✓ 8657	1	Debris pile N44 14'44 W87 42'10
✓ 8655	1	Debris pile N44 14'44 W87 42'10
✓ 8649	1	Debris pile N44 14'46 W87 41'57
✓ 8663	1	Debris pile N44 14'44 W87 42'08
✓8661	1	Debris pile N44 14'44 W87 42'08

Name of Submitting Officer JEREMY L. HAWKINS Phone No. 920-849-2335

STATE4929

EVIDENCE/PROPERTY CUSTODY DOCUMENT
Calumet County Sheriff's Department
206 Court St Chilton WI 53014-1198

INCIDENT # 05-0157-955 | CITATION # | Page: 1 of: 4

Name and Title of Person From Whom Received: RECIEVED FROM DCI IN PRESENCE OF NICHOLAS SABLICH
[ ] Owner [ ] Other
Address:
City, State, Zip:
Phone:
Address From Where Obtained:
Reason Obtained: EVIDENCE
Time/Date Obtained: 11-11-05

ITEM NUMBER	PROPERTY TAG NUMBER	DESCRIPTION OF ARTICLES (Include: make, serial number, condition, and unusual marks or scratches)	Time Collected	Disp
1	8694	Description: COMPACT DISC (G) Location Found: NORTHWEST OF RED TRAILER BY TREE LINE	08:10	
2	8700	Description: NECKLESS (J) Location Found: N 44° 15' 07 W 87° 41' 43	10:02	
3	8695	Description: DEBRIS (K) Location Found: N 44° 15' 16 W 87° 41' 45	10:17	
4	8696	Description: FECES WITH HAIR (L) Location Found: N 44° 15' 09 W 87° 41' 44	10:30	
5	8697	Description: DEBRIS PILE CONTENTS (N1) Location Found: N 44° 14' 53 W 87° 41' 51	10:44	
6	8698	Description: DEBRIS PILE (N) Location Found: N 44° 14' 53 W 87° 41' 51	11:19	
7	8699	Description: DEBRIS PILE (M) Location Found: N 44° 14' 53 W 87° 41' 51	11:19	
8	8484	Description: DEBRIS PILE (O) Location Found: N 44 14' 51 W 87 41' 51	11:32	
9	8675	Description: DEBRIS PILE CONTENTS (O1) Location Found: N 44 14' 51 W 87 41' 51	11:36	
10	8676	Description: HAIR/FIBERS (P) Location Found: CLUB CAR SEAT IN GREEN GARAGE	12:33	
11	8677	Description: DRY RESIDUE (Q) Location Found: CLUB CAR SEAT IN GREEN GARAGE	12:50	
12	8678	Description: CONTROL SAMPLE (Q1) Location Found: CLUB CAR SEAT IN GREEN GARAGE	12:52	
13	8679	Description: BOTTLE WITH WHITE POWDER (R) Location Found: CHEV MALIBU IN GREEN GARAGE	12:54	

ITEM NUMBER	DATE	RELEASED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
1-44	11-11-05	Signature: Robert Powell Name, Title: ROBERT POWELL SPECIAL AGENT	Signature: Name, Title: NICHOLAS J. SABLICH DEPUTY	EVIDENCE
1-44	11-11-05	Signature: Name, Title: NICHOLAS J. SABLICH DEPUTY	Signature: Name, Title: DEPUTY RICK RIEMER 332	EVIDENCE
1-44	11-11-05	Signature: Name, Title: DEPUTY RICK RIEMER	Signature: Name, Title: JEREMY HAWKINS I.E.C.	T.O.T EVID CUSTODIAN.

40IN19 3/02 LOCATION 4 Fridge 2 / 43 Locker 2-1 LEDGER NUMBER 05-208

STATE_1_6869

CHAIN OF CUSTODY (Continued)

ITEM NUMBER	DATE	RELEASED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
3,6,7,8, 13,24,25, 19, 26,27-33	11-21-05	Signature: Name, Title: Jeremy Hawkins I.E.C.	Signature: Name, Title: Jennifer BASS / Deputy	Transport to Crime Lab
35-41	11-21-05	Signature: Name, Title: Jeremy Hawkins / E.C.	Signature: Name, Title: Jennifer BASS / Deputy	Transport to Crime Lab
3,6,7,8,13,24-33 35-41	11-2-05	Signature: Name, Title: Deputy	Signature: Name, Title: D. Larson Evid Tech	Evidence for Inspection
3,6-8 14,24 23-41	12/20/05	Signature: Name, Title: Deputy Rick Riemer	Signature: Name, Title: Jeremy Hawkins / E.C.	Return to Custodian
		Signature: Name, Title:	Signature: Name, Title:	
		Signature: Name, Title:	Signature: Name, Title:	
9	01/17/06	Signature: Name, Title: Jeremy Hawkins / E.C.	Signature: Barry E. Irmen Name, Title: Deputy Coroner Irmen	To Dane Co. Coroner
10	01/31/06	Signature: Name, Title: Jeremy Hawkins / E.C.	Signature: Mail Name, Title:	Sent to crime lab via mail.
3,6,7,8, 18,19,23 24,26,27, 28,29, 30,31,32 33,35,36 37,38, 39,40,41	04/10/06	Signature: Name, Title: Jeremy Hawkins	Signature: Name, Title: Deputy Rick Riemer	PROCESSING

FINAL DISPOSAL ACTION

Item #	Date	Name	Address	Relationship

FINAL DISPOSAL AUTHORITY

ITEMS _____ ON THIS DOCUMENT, PERTAINING TO THE INVESTIGATION INVOLVING

Name, Address _____ II/are

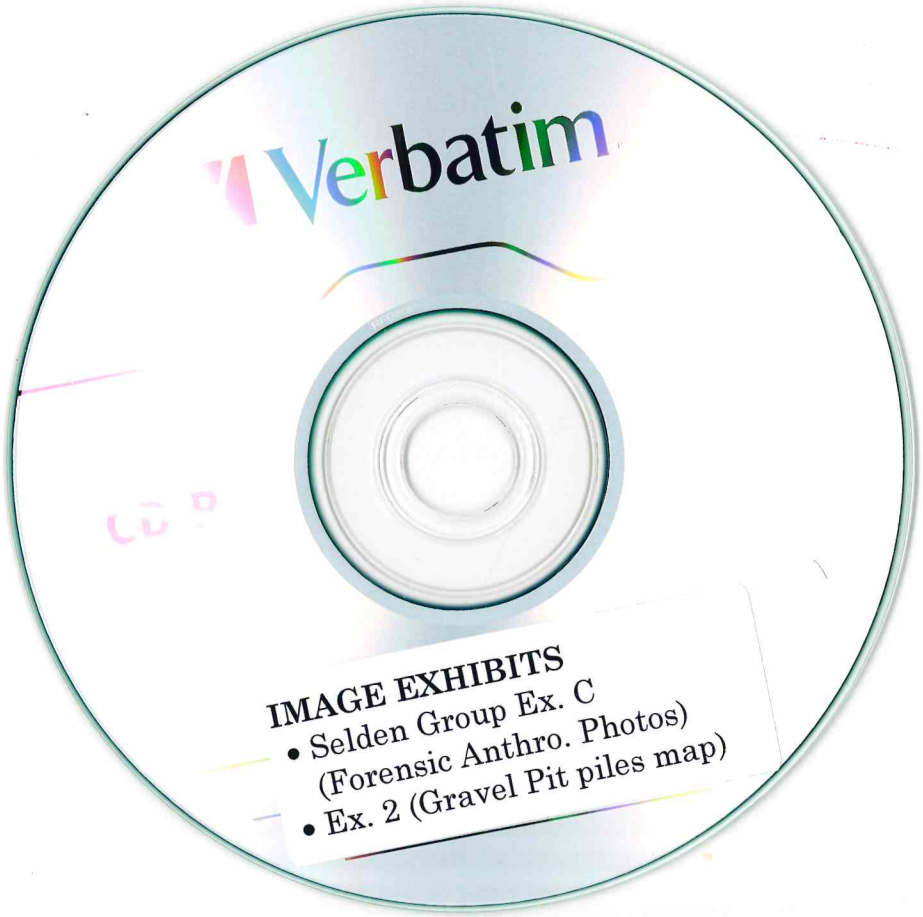
NO LONGER REQUIRED AS EVIDENCE AND MAY BE DISPOSED OF AS INDICATED ABOVE. (If articles must be retained, do not sign, but explain in seperate correspondence.)

Typed/Printed Name and Title | Signature | Date

WITNESS TO DESTRUCTION OF EVIDENCE

The article(s) listed at item number(s) _____ was/were destroyed by the evidence custodian, in my presence, on the date indicated above.

Printed Name | Signature | Date | Printed Name | Signature | Date


Verbatim
IMAGE EXHIBITS
• Selden Group Ex. C
(Forensic Anthro. Photos)
• Ex. 2 (Gravel Pit piles map)

STATE OF WISCONSIN **CIRCUIT COURT** **MANITOWOC COUNTY**

STATE OF WISCONSIN,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No. 05-CF-381
	)	
STEVEN A. AVERY, SR.,	)	Honorable Judge Angela Sutkiewicz,
	)	Judge Presiding
Defendant.	)	

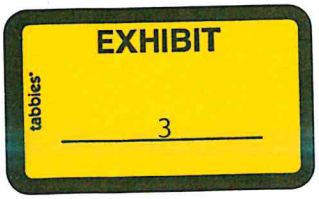
AFFIDAVIT OF RICHARD F SELDEN, MD, PhD

Now comes your affiant, Richard F Selden, MD, PhD, and under oath hereby states as follows:

1. I am of legal majority and can truthfully and competently testify to the matters contained herein based upon my personal knowledge and to a reasonable degree of scientific certainty. The factual statements herein are true and correct to the best of my knowledge, information, and belief.

2. I obtained my MD from Harvard Medical School in 1989 and my PhD in Genetics from Harvard Graduate School of Arts and Sciences in 1986. In 2004, I founded ANDE, a developer and manufacturer of Rapid DNA technologies. I have served as Director of ANDE since 2004 and was its Chief Executive Officer from 2004–October 2016. Since October 2016, I have served as Chief Scientific Officer of ANDE. A copy of my CV is attached and incorporated herein as **Exhibit A**.

3. In 2009, ANDE was awarded the contract for a competitive research and development program sponsored by a consortium of Federal agencies, including the Department of Defense (DOD), the Federal Bureau of Investigation (FBI), and the Department of Homeland



Security (DHS). The result of the program was the development of an automated rapid human DNA identification capability that minimizes analytical complexity and user manipulations for field-forward biometric and forensic applications. The ANDE program achieved its objectives to deliver fully automated and integrated field-deployable systems that would rapidly generate human DNA identifications with no user manipulations after inserting a sample into the system.

4. ANDE has undergone extensive lab and field testing by DHS in partnership with the National Institute of Standards and Technology, the DOD in partnership with the Defense Forensic Science Center, and the FBI laboratory. This program resulted in the first and only field-forward, fully-automated, and integrated Rapid DNA Analysis system. The ANDE System is currently used operationally to help support public safety around the world.

5. The ANDE Rapid DNA identification system allows rapid generation of DNA IDs from a wide range of sample types. A DNA ID (also referred to as a short tandem repeat profile or DNA fingerprint) provides a unique numerical description of an individual with random match probabilities approaching one in billion to trillions. By interrogating 27 chromosomal loci, which include the 20 CODIS (Combined DNA Index System) loci selected as the standard by the FBI for use in forensic laboratories around the U.S., the random match probability for an individual may be as low as one in one trillion trillion.

6. One advantage of the system is that it enables DNA identifications to be generated from a wide range of samples in less than two hours, months or years more quickly than typically required than in conventional forensic laboratories. Furthermore, the ease of use of the ANDE system would allow dozens to hundreds of samples to be processed in days as opposed to a smaller number of samples being processed conventionally in months or years. This would allow for rapid evaluation of all of the bones in the instant case.

7. In general, the ANDE system is more sensitive than conventional laboratories. One of the major advantages of speed is that it allows review of the results and informed selection of additional samples in real time. The expedited time to result greatly has enabled us to optimize our results with a broad range of sample types. Furthermore, the 27-chromosomal locus assay utilized in the ANDE system provides more in-depth genetic ID data than anoy other extant short tandem repeat assay.

8. On June 4, 2018, the ANDE Rapid DNA ID system received National DNA Index System (NDIS) approval from the FBI. The approval allows all accredited forensic DNA laboratories to utilize the ANDE system for the processing of buccal swabs and to submit DNA ID data to the Federal DNA database (CODIS) and to search the Federal DNA database with data generated from the ANDE system. The FBI has publicly stated that it intends to allow NDIS-approved Rapid DNA systems to be utilized to test arrestees while in custody in police booking stations as required by the Federal Rapid DNA act of 2017 (passed unanimously in the House of Representatives and Senate).

9. The ANDE system processes samples in addition to buccal swabs. The system also process blood, oral epithelial samples (bottles, cigarette butts, etc.), handled objects, sexual assault forensic examination samples, saliva, and tissues including muscle, liver, brain, teeth, and bone. These samples, which are relevant to crime scenes as well as disaster victim identification, have been validated or processed by a wide range of laboratories (*See* list of government entities that have used or validated the technology, attached and incorporated herein as **Exhibit B**).

10. With respect to disaster victim identification, we have experience in a range of settings. We have participated in a number of disaster victim identification exercises sponsored by the Department of Homeland Security and other federal agencies. We have also collaborated

extensively with the body farm at the University of Tennessee to optimize protocols for tissue sampling, particularly of teeth and bone. We also have successfully processed bones that are decades old.

11. In November 2018, we responded to the November 2018 Camp Fire in Butte County, California, the most devastating fire in the history of that state. Our involvement with this disaster relief effort began with my examination of photographs of bones to determine their likelihood for yielding DNA identifications. Working under the authority of the Sheriff-Coroner of Butte County and in close collaboration with the Coroner of Sacramento County, the ANDE system successfully generated DNA IDs from approximately 85% of the cases, most of which were generated within seven days. Furthermore, this data has allowed dozens of the victims to be identified, the most rapid DNA identification in a disaster in history.

12. The wildfire victims' bone samples that we successfully processed were in a highly degraded conditions. Samples from the highly degraded remains included bones. In some cases, the remains consisted entirely of extremely charred and calcined bone fragments.

13. On December 6, 2018, I was contacted by Kathleen Zellner on behalf of Steven Avery for the review of photographs and laboratory reports in Mr. Avery's 2005 criminal case. Ms. Zellner has provided me several documents for review; they are described as follows:

a. Forensic Anthropology photos depicting bones recovered from quarry piles south of the Avery salvage yard (attached and incorporated herein as **Group Exhibit C**):
   i. PA150009.jpg
   ii. PA150010.jpg
   iii. PA150011.jpg
   iv. PA150012.jpg
   v. PA150013.jpg
   vi. PA150014.jpg
   vii. PA150015.jpg
   viii. PA150016.jpg
   ix. PA150018.jpg

x. PA150020.jpg
xi. PA150021.jpg
xii. PA150022.jpg
xiii. PA150023.jpg
xiv. PA150025.jpg
xv. PA150027.jpg
xvi. PA150028.jpg
xvii. PA150029.jpg
xviii. Fragments of possible cut human bone Tag #8675.jpg
xix. Reverse side of sacroiliac area.jpg
xx. Right sacroiliac area N.B. vertical cuts on either side of artic.jpg

b. Stipulation at trial that the FBI conducted no DNA examination of the possibly human bones from the quarry pile south of the Avery salvage yard due to the degraded condition of the bone fragments (labeled R. 707:50–51) (attached and incorporated herein as **Exhibit D**).
c. FBI DNA analysis reports (labeled R. 247:6–10) (attached and incorporated herein as **Exhibit E**).

14. Based upon my review of Exhibits C and D, the FBI laboratory did not attempt to develop any DNA identification from the remains recovered from the quarry piles south of the Avery salvage yard. I believe there is value in applying this new technology to such samples that have previously been deemed of high importance.

15. Based upon my review of the forensic anthropology photos in Group Exhibit B, it is my opinion to a reasonable degree of scientific certainty that there is a "reasonable likelihood of more accurate and probative results" that the samples would generate DNA identifications if processed using ANDE Rapid DNA technologies. The condition of the bones, as depicted in the forensic anthropology photos, are consistent with the bones from which we have recently successfully obtained DNA IDs in the devastating November 2018 California Camp Fire.

16. I propose that the bones be processed using Rapid DNA technology at our facility in Waltham, Massachusetts. Our techniques are straightforward and I would welcome observation by any representative of the State of Wisconsin. Furthermore, we would not fully consume any sample, ensuring material is available for later analyses..

17. The service I can provide in this case is an impartial scientific analysis that has a reasonable likelihood of identifying the recovered bones from the Manitowoc County Gravel Pit.

FURTHER AFFIANT SAYETH NAUGHT

Richard F Selden, MD, PhD

State of Illinois
County of DuPage

Subscribed and sworn before me
this 17th day of December, 2018

OFFICIAL SEAL
KURT W KINGLER
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:10/06/20

Notary Public

CURRICULUM VITAE

RICHARD F SELDEN

ANDE Corporation
266 Second Avenue
Waltham, MA 02154

EDUCATION:

Harvard College
1976-1980, A.B. in Biology, Cambridge, Massachusetts

Harvard University Graduate School of Arts and Sciences
1980-1981, A.M. in Biology, Cambridge, Massachusetts
1981-1986, Ph.D. in Genetics, Cambridge, Massachusetts

Harvard Medical School
1981-1989, M.D.

Massachusetts General Hospital
1981-1986, M.D.-Ph.D. student, Department of Molecular Biology
1986-1988, Research fellow in the Department of Molecular Biology
1989-1992, Resident in Pediatrics

ACADEMIC APPOINTMENTS:

Harvard Medical School
Instructor in Pediatrics, January, 1989-1992

INDUSTRIAL POSITIONS:

ANDE
Founder and Director, 2004-present
Chief Executive Officer, 2004—October, 2016
Chief Scientific Officer, October 2016—present

Transkaryotic Therapies Inc.
Founder and Chairman, Board of Scientific Advisors, Director 1988--2003
Chief Scientific Officer, 1988--2003
President and Chief Executive Officer, 1994—2003

AWARDS AND HONORS:

1976 National Merit Scholar
1980 Magna cum laude degree in biology, Harvard College

1980 Summa cum laude thesis in biology, Harvard College
1986 Soma Weiss Assembly Speaker, Harvard Medical School
1986 Diabetes Research and Education Foundation Award
1989 Cum laude degree in medicine, Harvard Medical School
2002 Ernst & Young New England Entrepreneur of the Year in the category Biotechnology/Pharmaceuticals
2017 R&D 100 Award for the development of the ANDE Rapid DNA system
2018 Not Impossible Award for ANDE Rapid DNA Identification Technology

MAJOR COMMITTEE ASSIGNMENTS:

1981-1985	Harvard-M.I.T. Department of Health Sciences and Technology, Curriculum Committee
1987-1990	American Diabetes Association, Committee on Research Review
1998-2003	Conservation Commissioner, Town if Truro, MA
2014-	Conservation Commissioner, Town of Lincoln, MA
2015-	Member, Community Preservation Commission, Town of Lincoln, MA

MAJOR RESEARCH INTERESTS:

1. Forensic human identification
2. Point-of-care DNA-based clinical diagnostics
3. Microfluidics
4. Highly multiplexed amplification and sequencing

TEACHING EXPERIENCE:

1977-1982	Conference leader and lecturer on biochemistry, biology, and cell biology, Harvard College
1983	Conference leader on molecular genetics, Harvard Medical School
1985-1986	Director of courses on cell biology, Northeastern University
1986-1987	Instructor in biology (Endocrinology), Harvard College

TEACHING AWARDS:

1981	Cited as outstanding conference leader in biology, Harvard College

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7. Selden, RF, Skoskiewicz, MJ, Burke Howie, K, Russell, PS, Goodman, HM. Regulation of human insulin gene expression in transgenic mice. Nature, 1986; 321:525-8.

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9. Selden, RF, Burke Howie, K, Rowe, ME, Goodman, HM, Moore, DD. Human growth hormone as a reporter gene in regulation studies employing transient gene expression. Mol Cell Biol. 1986; 6:3173-9.

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11. Selden, RF, Skoskiewicz, MJ, Burke Howie, K, Russell, PS, Goodman, HM. Implantation of genetically-engineered fibroblasts into mice: Implications for gene therapy. Science 1987; 236:714-8.

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ANDE Corporation

Partial list of jurisdictions using ANDE technology:

Kentucky State Police
State of Utah – Office of the Attorney General
City of Miami Beach Police Department
New Castle County Police DE
US Department of Homeland Security
University of Rome
Houston Police Department
US Department of Defense
US Department of Justice
The Henry C Lee Institute of Forensic Science
Butte County Sheriff's Office CA
Sacramento County Coroner's Office CA

In addition to the FBI's National DNA Index System approval, the ANDE system has been validated in a significant number of other local and national jurisdictions as part of their operations and approval processes. While agencies do not generally publish results that may be interpreted as commercial endorsements, we can publicly state that these validations include:

US federal government agencies including:
    US Department of Defense Fielding and Deployment Release approval
US states
Academic review and approval organizations in Europe and Asia
US aligned military forces and allies
National oversight organizations in Europe and Asia

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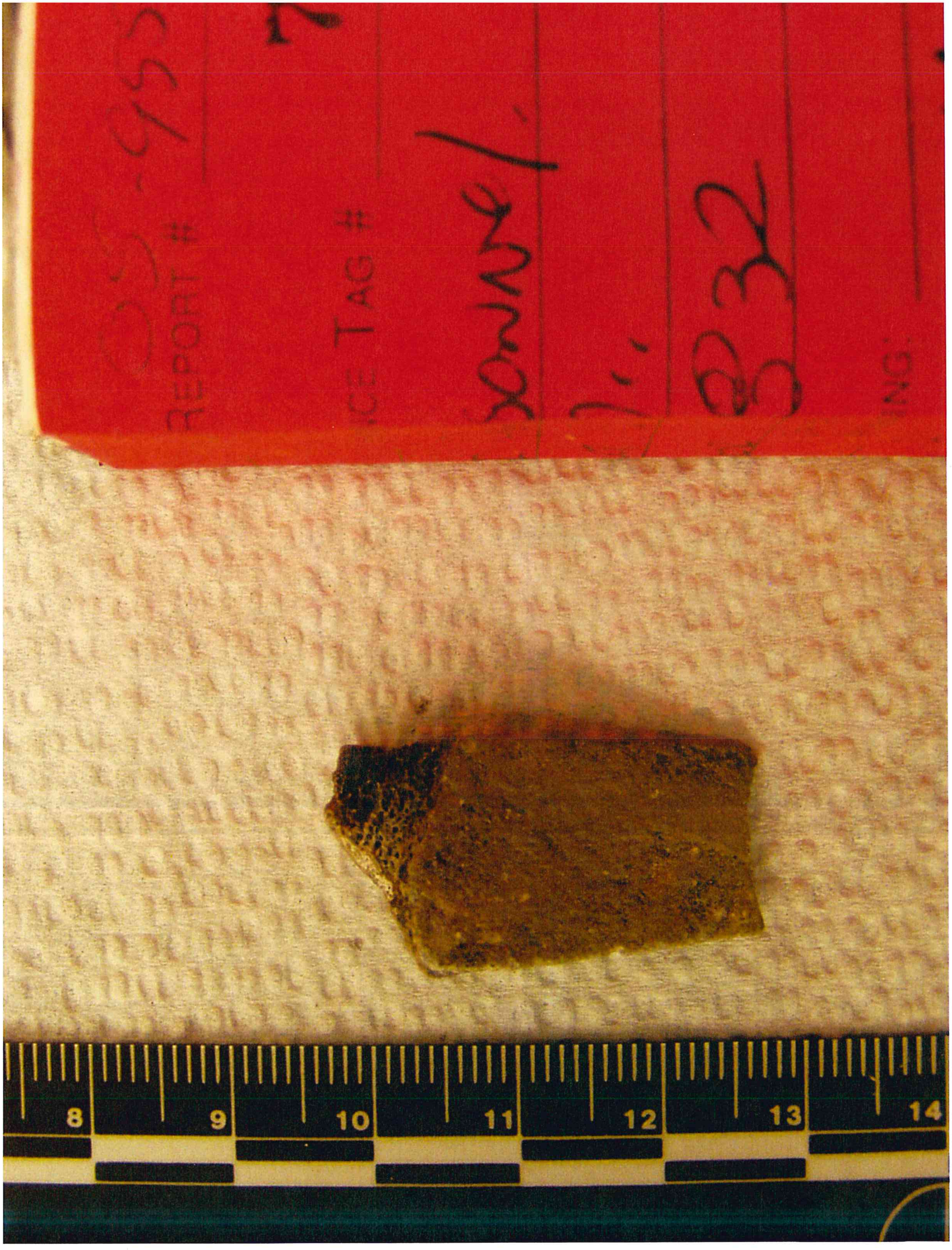
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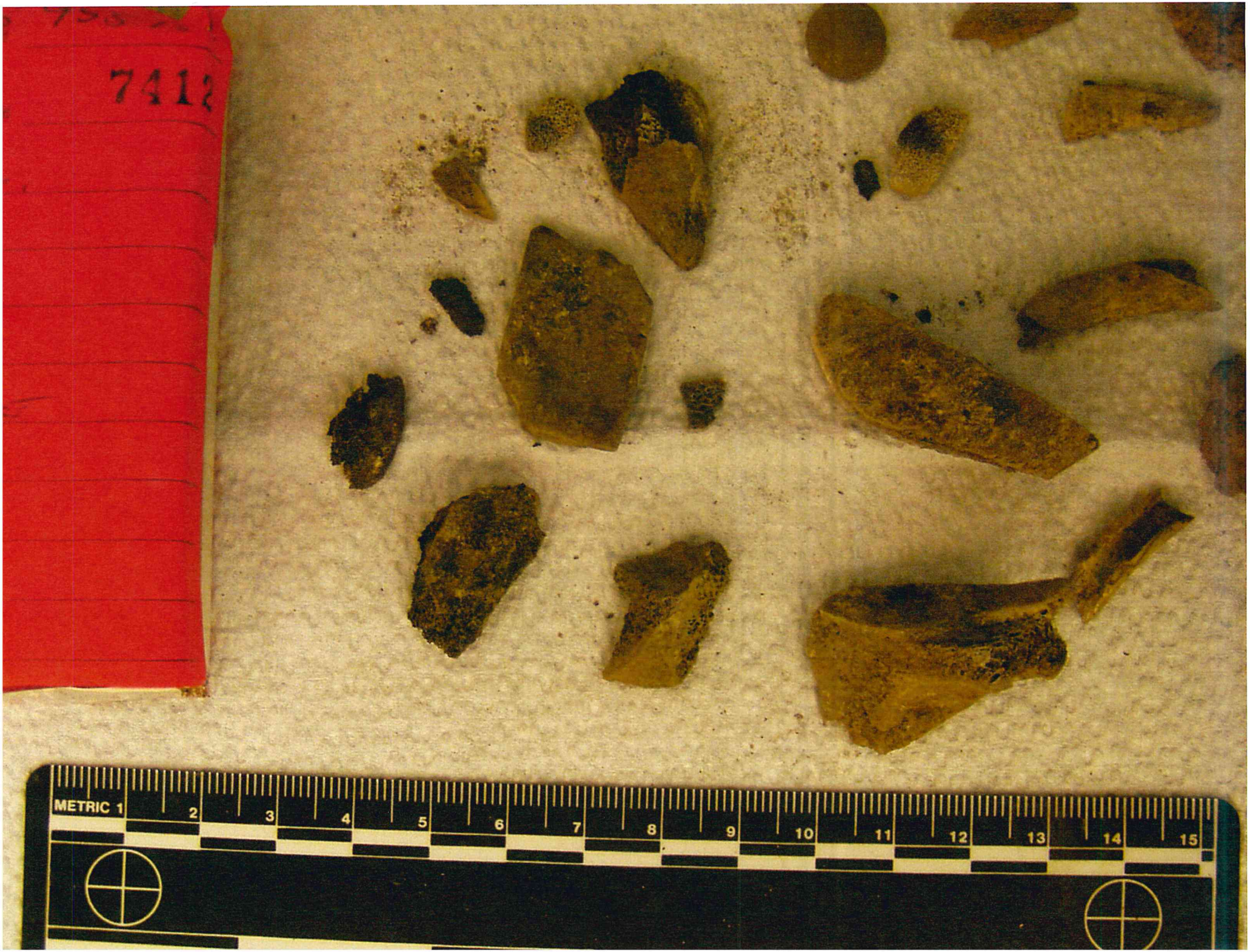
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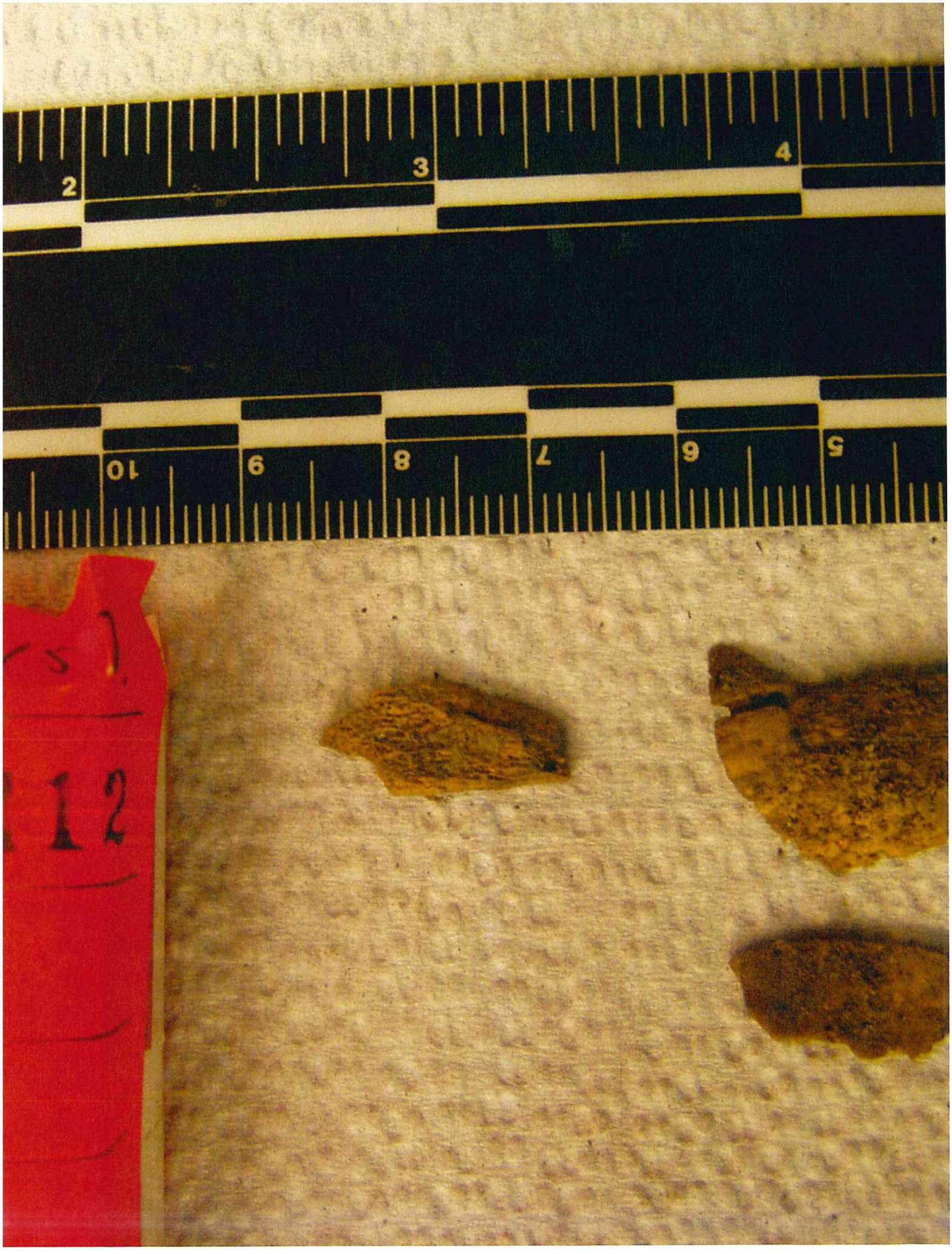
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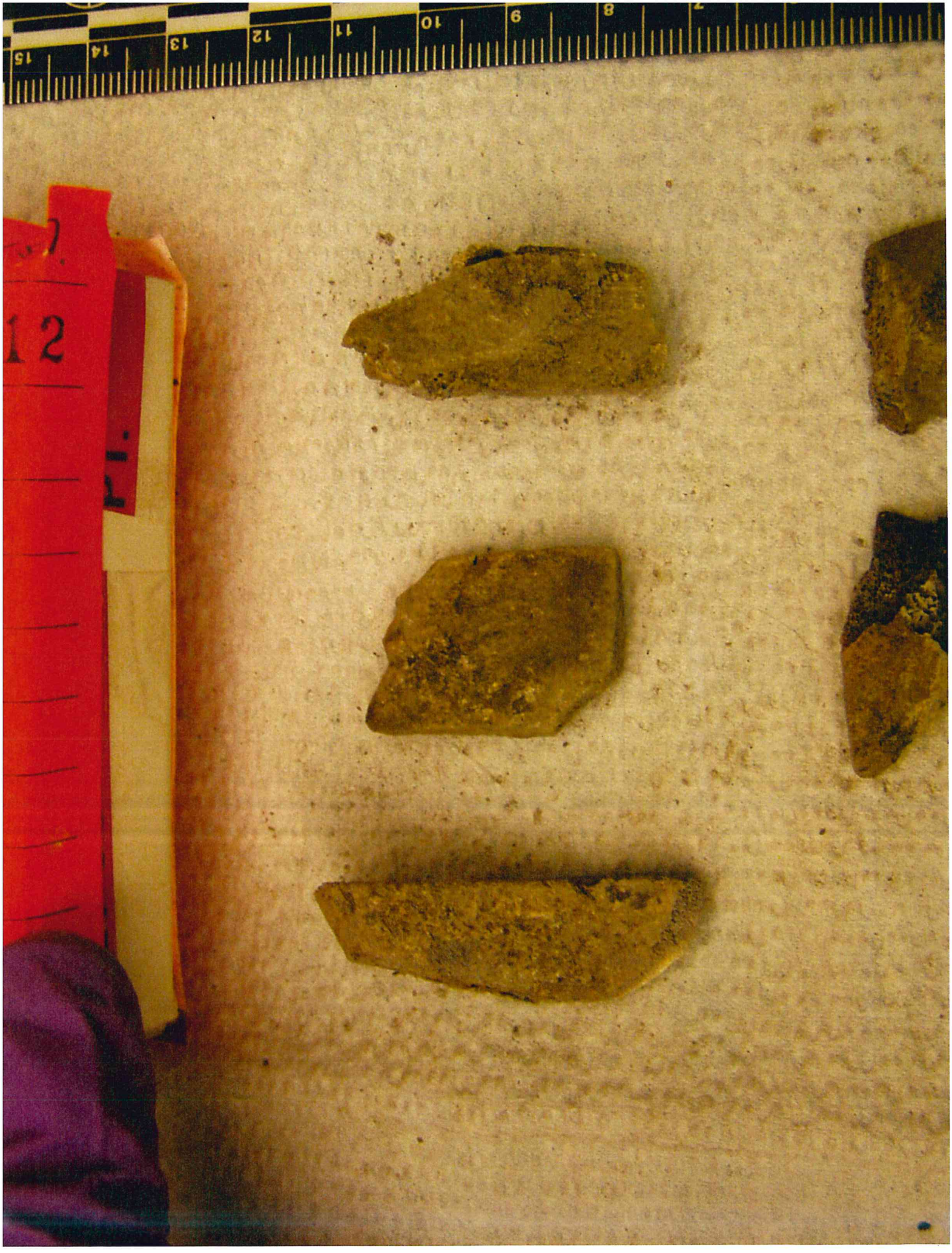

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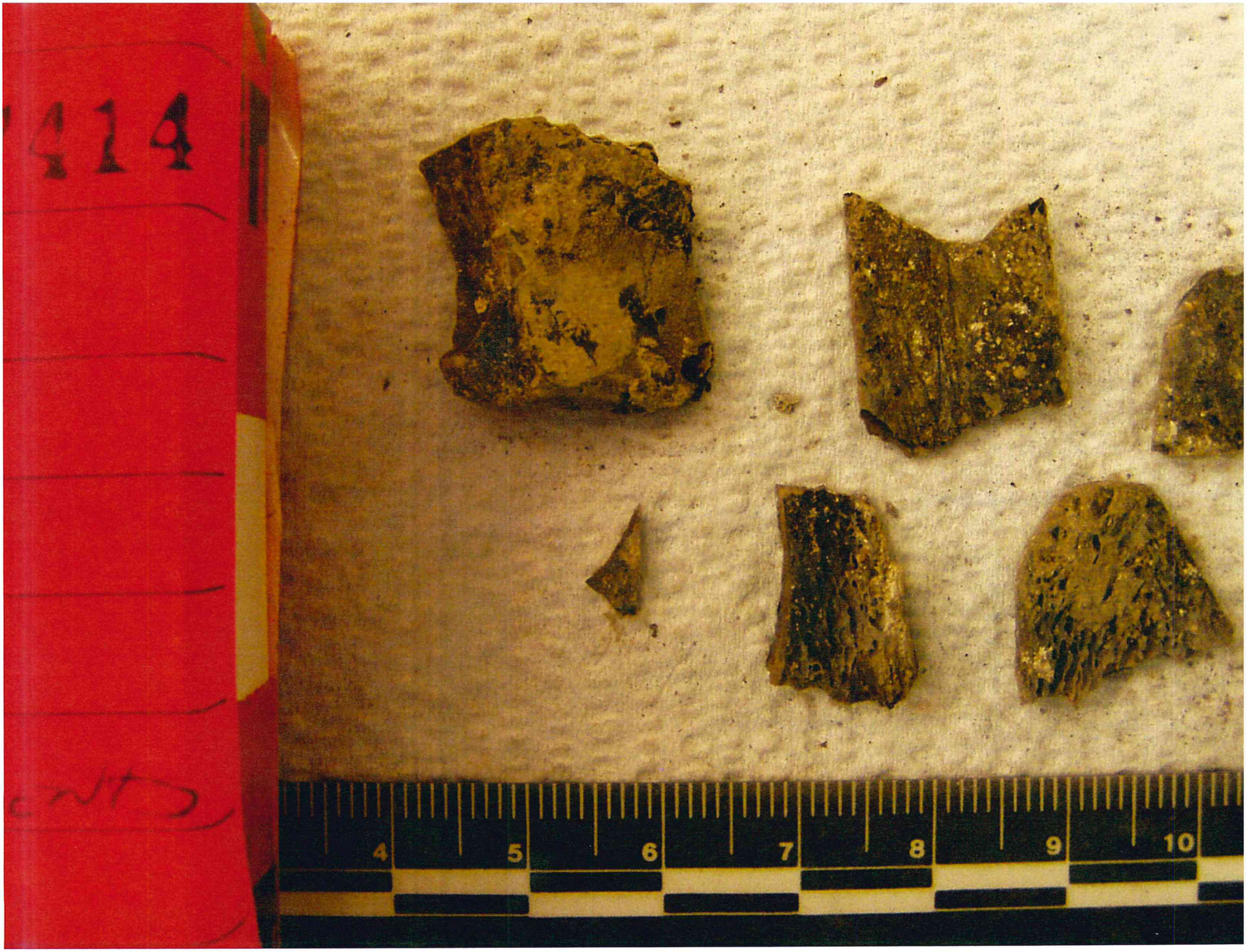
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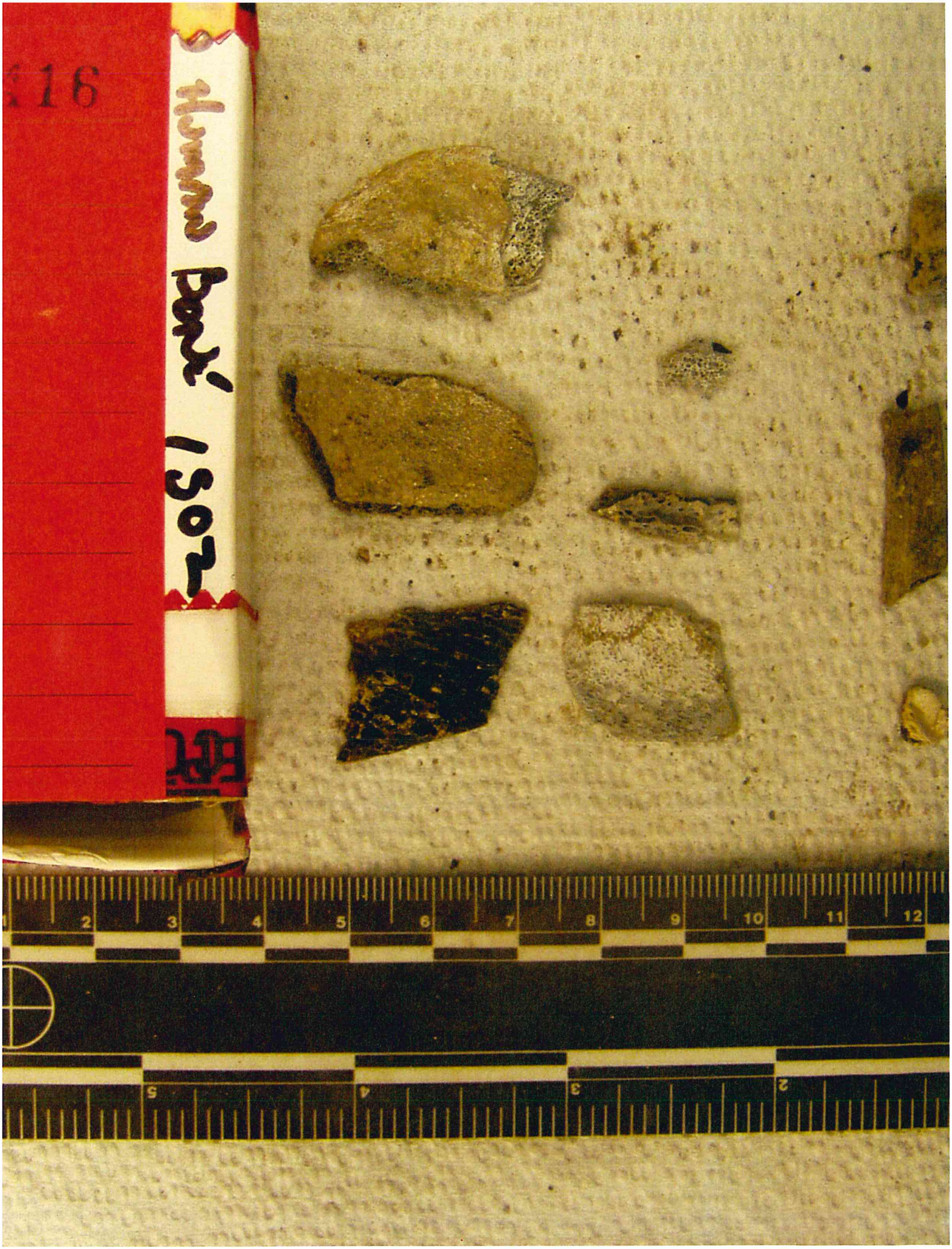

Human Bone 1507

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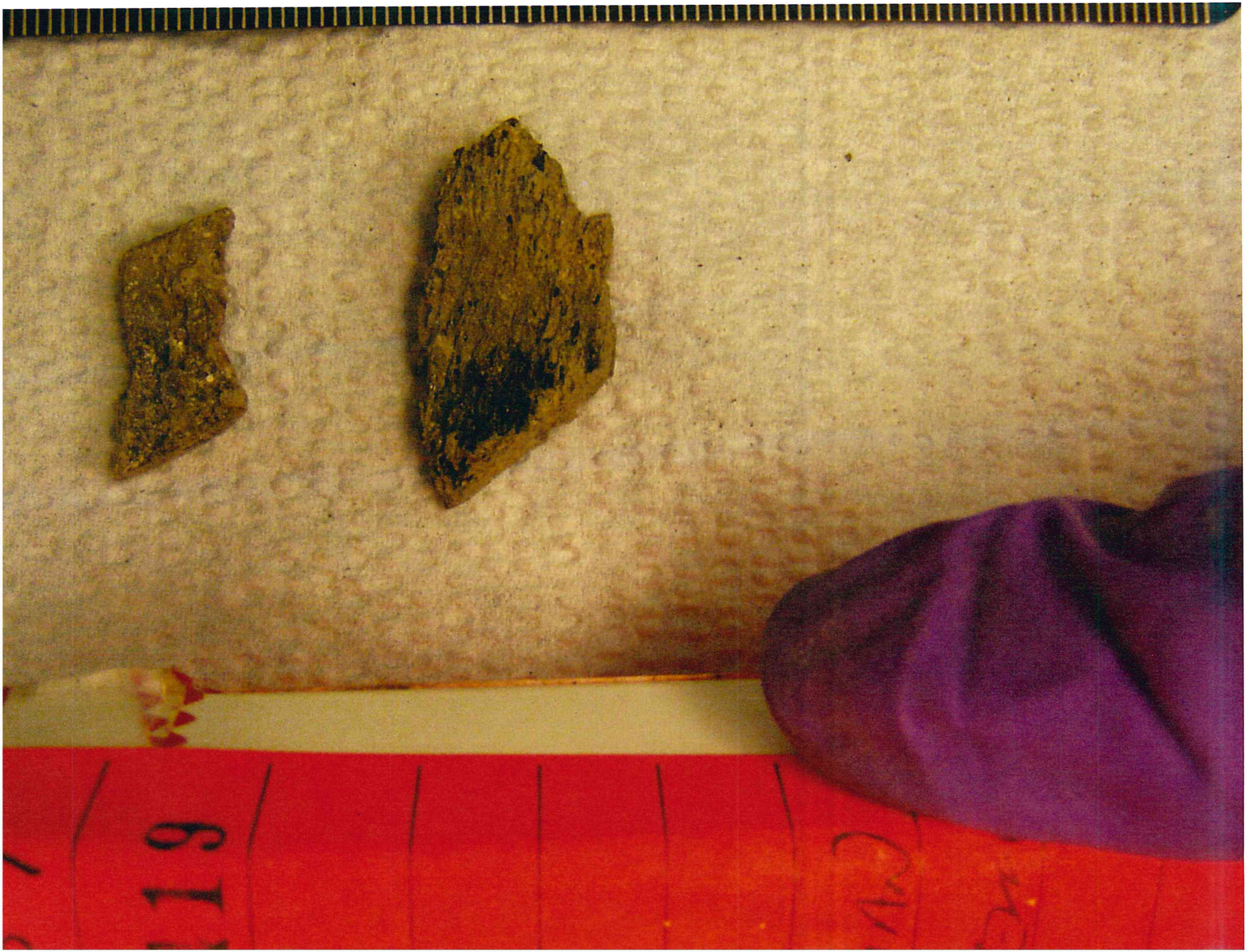


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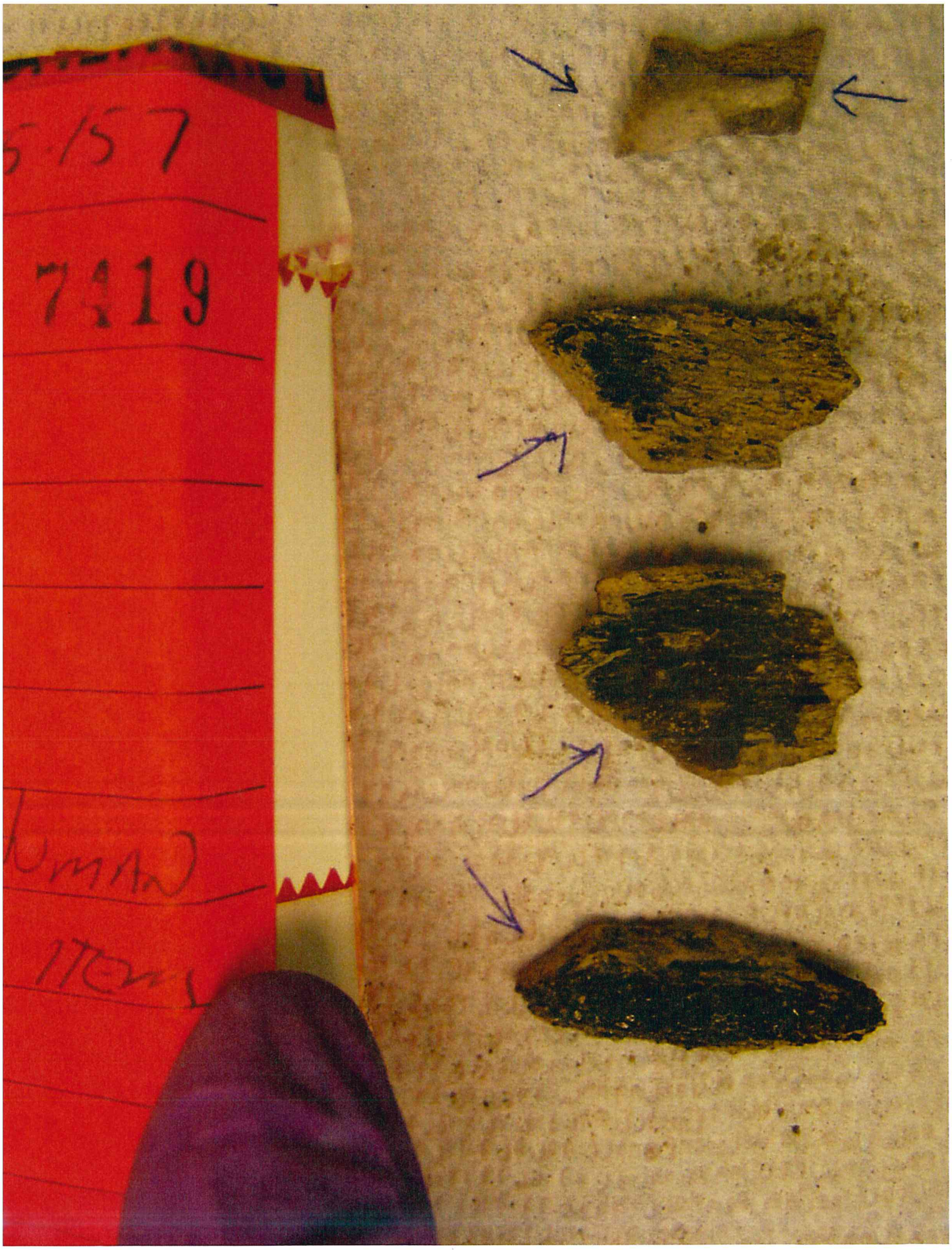
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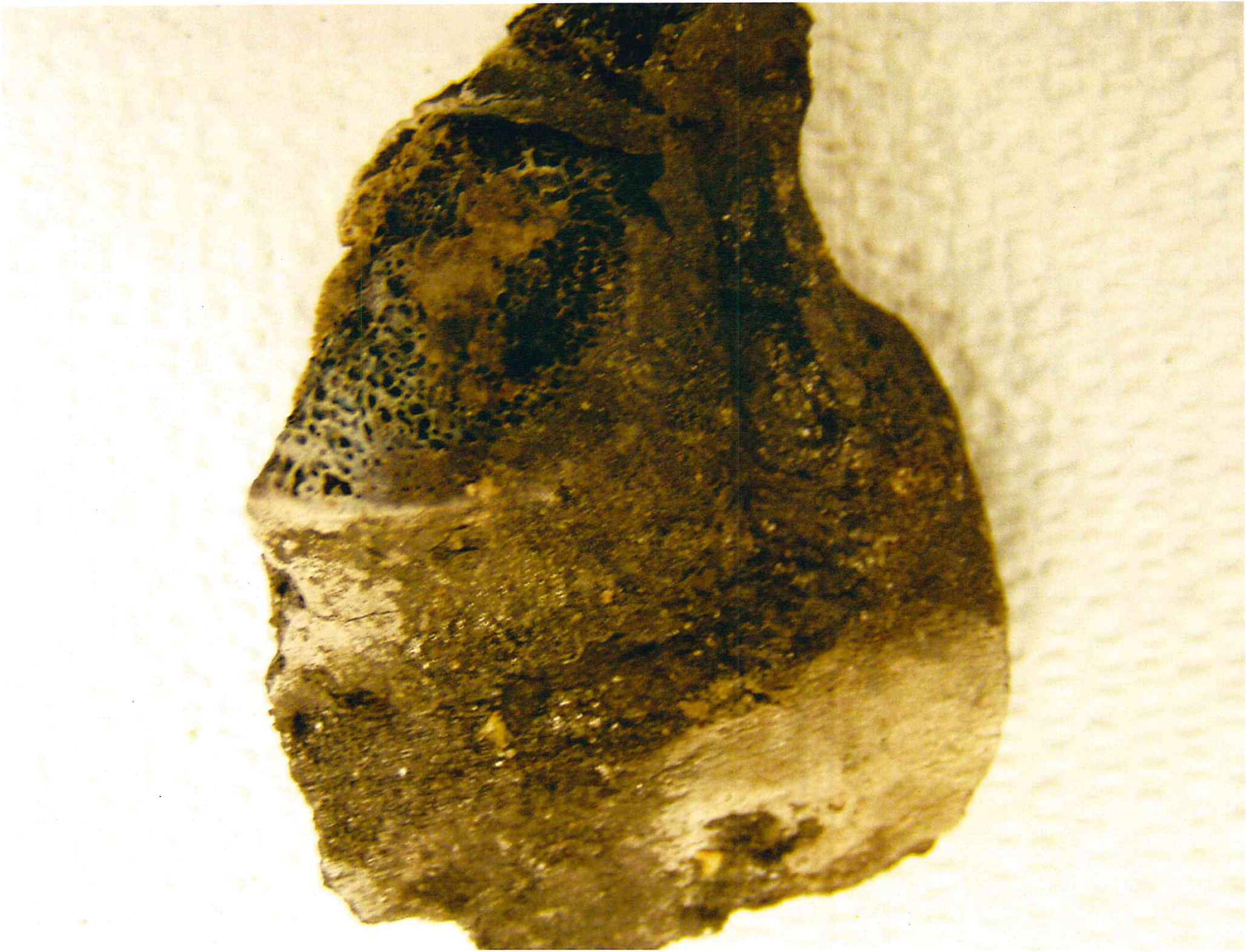

STATE OF WISCONSIN : CIRCUIT COURT : MANITOWOC COUNTY
BRANCH 1

STATE OF WISCONSIN,

PLAINTIFF,

vs.

STEVEN A. AVERY,

DEFENDANT.

JURY TRIAL
TRIAL - DAY 14
Case No. 05 CF 381

DATE: MARCH 1, 2007

BEFORE: Hon. Patrick L. Willis
Circuit Court Judge

APPEARANCES: KENNETH R. KRATZ
Special Prosecutor
On behalf of the State of Wisconsin.

THOMAS J. FALLON
Special Prosecutor
On behalf of the State of Wisconsin.

NORMAN A. GAHN
Special Prosecutor
On behalf of the State of Wisconsin.

DEAN A. STRANG
Attorney at Law
On behalf of the Defendant.

JEROME F. BUTING
Attorney at Law
On behalf of the Defendant.

STEVEN A. AVERY
Defendant
Appeared in person.

TRANSCRIPT OF PROCEEDINGS

Reported by Diane Tesheneck, RPR

Official Court Reporter

(Jury present.)

THE COURT: You may be seated. Mr. Strang, I understand that the defense wishes to move admission of some exhibits.

ATTORNEY STRANG: I do. I move admission of Exhibit 401, which was the skeleton diagram tag 7964, and Exhibit 402, which was a schematic map of the Avery Salvage yard, and then the quarry pile site. I also used, for demonstrative purposes, a third image of a skeleton. And it matters not to me whether that's marked and admitted or not. It was used simply for demonstrative purposes.

THE COURT: Any objection to admission of the marked exhibits?

ATTORNEY FALLON: I have no objection to the admission of 401 and 402 and nor do I think it's necessary for us to produce a photograph of the exhibit counsel used for demonstrative purposes, so.

THE COURT: Very well, 401 and 402 will then be deemed admitted.

Members of the jury at this time I believe the parties have a stipulation to present to the jury. Mr. Fallon.

ATTORNEY FALLON: Yes, thank you, Judge. The parties are agreed that bone fragments

identified as human from the burn pit behind Steven Avery's garage, bone fragments identified as human from burn barrel number two behind the residence of Barb Janda, and bone fragments suspected as possible human bones from the quarry pile in the Radandt gravel pit south of the Avery Salvage Yard, were sent to the FBI Laboratory in Quantico, Virginia, on November 2nd, 2006, November 7th, 2006, and December 19th, 2006, to attempt further DNA analysis. If called to testify, Dr. Leslie McCurdy, of the FBI DNA Analysis Unit, would testify that due to the condition of the submitted bone fragments, no DNA examinations could be conducted.

THE COURT: And, Mr. Strang, is that an accurate statement of the parties stipulation?

ATTORNEY STRANG: It is. That's the stipulation as to Dr. McCurdy's testimony, were he called.

THE COURT: Thank you. Members of the jury, you may take those facts as established. And at this time, then, the State may call its next witness.

ATTORNEY KRATZ: Thank you, Judge, the State calls Curtis Thomas to the stand.

CURTIS THOMAS, called as a witness

FBI Laboratory

2501 Investigation Parkway
Quantico, Virginia 22135

REPORT OF EXAMINATION

To: Milwaukee
Squad 6, GBRA
SA Gerald E. Mullen

Date: January 12, 2007

Case ID No.: 62D-MW-44363 – 51

Lab No.: 061108009 PM PV
061114006 PM PV
061227012 PM PV

Reference: Communications dated November 2, 2006, November 7, 2006, and December 19, 2006

Your No.:

Title: STEVEN AVERY;
TERESA HALBACH - VICTIM (DECEASED)
DOMESTIC POLICE COOPERATION

Date specimens received: November 8, 2006, November 14, 2006, and December 27, 2006

The following items were submitted under cover of communication dated November 2, 2006, assigned Laboratory number 061108009, and received in the DNA Analysis Unit II:

Q11	Bone fragment (1B5 E04033363)
Q12	Bone fragment (1B5 E04033363)

The following items were submitted under cover of communication dated November 7, 2006, assigned Laboratory number 061114006, and received in the DNA Analysis Unit II:

Q13	Bone fragment (1B6, E04033388)
Q14-Q14.8	Bone fragments (1B6, E04033388)

(6)

The following items were submitted under cover of communication dated December 19, 2006, assigned Laboratory number 061227012, and received in the DNA Analysis Unit II:

Q15-Q45 Thirty-one bone fragments (1B7, E04033589)

Remarks:

Due to the condition of the submitted Q11, Q12, Q13, Q14-Q14.8, and Q15-Q45 bone fragments, no mitochondrial DNA (mtDNA) examinations were conducted.

The submitted items will be returned under separate cover along with the processed DNA generated from the samples. The processed DNA can be found in a package marked PROCESSED DNA SAMPLES: SHOULD BE REFRIGERATED/FROZEN. It is recommended that these samples be stored in a refrigerator/freezer and isolated from evidence that has not been examined.

Leslie D. McCurdy, Ph.D.
DNA Analysis Unit II
(703) 632-7601

This report contains the opinions/interpretations of the examiner(s) who issued the report.

061108009 PM PV

For Official Use Only

/7)

7-1 (Rev. 5-13-99)

FBI LABORATORY

FEDERAL BUREAU OF INVESTIGATION
QUANTICO, VA 22135

To: Milwaukee
Squad 6, GBRA
SA Gerald E. Mullen

Date: January 17, 2006

Case ID No.: 62D-MW-44363

Lab No.: 051123009 PM MR

Reference: Communication dated November 16, 2005

Your No.:

Title: STEVEN AVERY;
TERESA HALBACH - VICTIM (DECEASED)
DOMESTIC POLICE COOPERATION - HOMICIDE

Date specimens received: November 23, 2005

The items listed below were examined in the DNA Analysis Unit II:

Q1 Charred remains (1B2, E03635309)

K1 Buccal swabs from KAREN HALBACH (1B1, #CD, E03635310)

This report contains the results of the mitochondrial DNA examinations.

1- Investigator Mark Wiegert
Calumet County Sheriff's Office
206 Court Street
Chilton, WI 53014

(8)

Results of Examinations:

Mitochondrial DNA (mtDNA) sequences were obtained from the Q1 charred remains and the K1 buccal swab identified as coming from KAREN HALBACH, the identified mother of TERESA HALBACH. The mtDNA sequences obtained from Q1 and K1 are the same, with the exception of position 320. At this position, the presence of a cytosine (C) was observed in the Q1 charred remains. In specimen K1, evidence both a cytosine (C) and a thymine (T) was characterized at position 320.

Due to the closely related sequences obtained from specimens Q1 and K1, TERESA HALBACH cannot be excluded as the source of the Q1 charred remains.

Searching the mtDNA population database currently available to the FBI Laboratory (CODIS + Mito Popstats version 1.3, containing 5071 individuals, searching positions 16024-16365 and 73-340), the mtDNA sequence obtained from specimens Q1 and K1, including all four nucleotides, A, C, G and T, at position 320, has been observed in the following major population groups:

Database	Number of Observations	Individuals in Database	Upper Bound Frequency Estimate
African-American	0	1148	0.26%
Caucasian	0	1814	0.17%
Hispanic	0	759	0.39%

The mtDNA sequencing results are detailed below. Results are listed as differences from the published revised Cambridge Reference Sequence (rCRS).

Specimen	Q1 Remains	K1 Karen Halbach
Range	np 15998-16389	np 15998-16389
HVI	16222 T	16222 T
Range	np 49-408	np 49-408
HVII	263 G 309.1 C* 315.1 C *C8TC6-major C9TC6	263 G 309.1 C* 315.1 C 320 N *C8TC6-major C9TC6 C10TC6

No other mtDNA examinations were conducted.

(9)

Remarks:

The submitted items are retained in the FBI Laboratory. The final disposition will be addressed in a separate communication. The processed DNA will be found in a package marked PROCESSED DNA SAMPLES: SHOULD BE REFRIGERATED/FROZEN. It is recommended that these samples be stored in a refrigerator/freezer and isolated from evidence that has not been examined.

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