

DISTRICT COURT, LA PLATA COUNTY, COLORADO 1060 East Second Avenue Durango, Colorado 81301	DATE FILED: September 20, 2018 1:56 PM FILING ID: BC71B25BFE04B CASE NUMBER: 2017CR343
THE PEOPLE OF THE STATE OF COLORADO, Plaintiff, v. MARK REDWINE, Defendant	σ COURT USE ONLY σ
Douglas K. Wilson, Colorado State Public Defender John Moran, Attorney No. 36019 Justin Bogan, Attorney No. 33827 Deputy Public Defender 175 Mercado Street, Suite 250, Durango, CO 81301 Phone: (970) 247-9284 Fax: (970) 259-6497 E-Mail: Justin.Bogan@coloradodefenders.us Email: John.Moran@coloradodefenders.us	Case Number: 17CR343 Division: 1
[D37] MOTION TO SUPPRESS ALL EVIDENCE PERTAINING TO SEARCH AND RESCUE CANINE CAYANNE [SIC] AND HANDLER ROY VREELAND	

Mr. Redwine moves the Court for an Order suppressing all evidence pertaining to the use of handler Roy Vreeland's dog, Cayanne. Mr. Redwine, respectfully requests that the Court suppress any and all evidence pertaining to cadaver dogs and trailing dogs, particularly those handled by Roy Vreeland, i.e., Cayanne.

I. Facts

1. Mr. Redwine is currently charged with Second Degree Murder F2, Child Abuse Knowingly/Recklessly Causing Death F2. During the course of the investigation into these charges, the La Plata County Sheriff's Department, in conjunction with other agencies, used multiple canines to aid in the investigation. One of these canine-handler teams was handler Roy Vreeland and Cayanne. The State of Colorado has yet to determine the admissibility of the results of searches by cadaver dogs, article evidence dogs and shoreline certified canines.

2. Canine Cayanne and Handler Vreeland: Cayanne was evidently utilized November 29, 2012 at the home of Dylan Redwine and his father. Cayanne is not a certified canine based on what has been provided in discovery. There are no training logs for the canine/handler team. Handler Vreeland said, “he does not keep a record of the searches that Cayanne was involved on . . .” Disco. P. 6345. There is no indication as to Cayanne’s specific breed beyond “Shepherd / Belgian Malinois mix . . .” Disco. P. 6344. Defense counsel has not been made aware of whether Cayanne and handler Vreeland were looking for decomposition scent, tracking scents, lost victim, trapped victim or incapacitated victim, etc. Discovery has some mention that Cayanne is generally given a “scent article” and commanded to find something that smells similar. Handler Vreeland represents, in addition to scent article prompted searching, he has trained Cayanne to search for cadaver.

3. Scent-Article Prompted Searching: Cayanne received what looks to be professional training for Search and Rescue with trainers Jane Adair (formerly FEMA), Chris Goodhue in Montana and Ann Wickman from Boulder Colorado. No further information on said trainers has been provided. Discovery does note that Cayanne has not been certified by any agency including American Rescue Dog Association and National Association of Search and Rescue. Cayanne, on November 19, 2012, followed a scent prompted by Dylan Redwine belongings 100 yards south from the Redwine home at 2343 County Road 500, Bayfield, Colorado. Disco. p. 6346.

4. Cadavers and Canine Cayanne: Handler Vreeland trained Cayanne to find cadavers himself. *Id.* He did so using donated “human placentas, human teeth, human blood, human hair, as well as human bone.” Disco. P. 6345. Mr. Vreeland said he read articles on cadaver searching. *Id.* The present matter is the first time Cayanne had been used in the field to search for remains.

5. November 29, 2012 Cayanne Cadaver Search: Mr. Vreeland says the FBI asked him to come out and have his dog look for cadaver scent. Disco. P. 6348. Cayanne was reportedly excited around outside stairs but did not do a standard alert (sitting and barking). *Id.* He believes the scent was weak. *Id.* Once the dog was in the house Cayanne jumped on the bed, though it was not a sign of indication just excitement. *Id.* Cayanne barked at a chest of dresser drawers. *Id.* When the drawers were removed the dog did not alert on anyone of them individually. *Id.*

Nothing of evidentiary value was removed from any of the drawers. *Id.* Cayanne later barked at a hamper. *Id.* Lastly, Cayanne indicated in front of the washing machine. *Id.* It is unclear if alert and indicate are used interchangeably by handler Vreeland. Cayanne did not alert to any of the locations where evidence of biological evidence was later developed. In sum Cayanne alerted on things where there was nothing corroborated by CBI or FBI through use of luminol, phenolphthalein and hematrace (hamper, drawers) but not in locations where actual blood and decaying human biological material was actually discovered. Cayanne and not the certified dog from Wisconsin alerted on the bed. In fact Cayanne was the only dog to alert on the bed. Cayanne did not alert in the bathroom. The certified dog did.

6. Middle Mountain Searches: Cayanne and handler Vreeland participated in searching Middle Mountain but never found anything of evidentiary value.

7. Discovery reviewed to date by undersigned counsel does not contain any of the following related to Cayanne:

- Whether, in the dog's training tests, decoys, distractants, or negative scent articles were used, and whether the dog was reliably "proofed" on nonhuman animal remains (meaning that it would reliably not alert to, for instance, porcine tissues)
- How long it takes for the scent of human decomposition to emit from the corpse
- How long the scent of human decomposition will persist in an area near the corpse, particularly when the body is moved to another area
- The effect of decomposition on reliable alerting (e.g., after skeletalization)
- How far the scent of human decomposition will migrate or carry by various media such as water or wind
- To what extent the scent of human decomposition may transfer by contact with a person
- To what extent the scent of human decomposition may transfer by contact with a nonhuman animal (e.g., a dog licks human remains and then licks another object, or a dog

ingests human remains and defecates in another area while passing some of the human remains)

- The threshold for determining the quantum or quality of scent of human decomposition necessary to reliably produce an alert
- Whether the dog handler had been certified by an entity that established industry standards of cadaver dog searching
- The timing of such certification in relation to the subject search
- The timing of any recertifications of the handler
- The number of searches run by handler and the dog in question as a team
- Whether the handler was directed to a particular location by law enforcement or other cues to the handler
- Whether the dog had been cross-trained in other areas (e.g., narcotics or bomb detection)
- The number of training tests performed by the dog and his or her accuracy ratings, identified by percentages of false positive (particularly to animal blood or nonbiological objects), false negative, true positive, and true negative
- Whether those tests were performed in a blind (i.e., handler does not know where to find the target odor but someone at the search site does, such as a detective) or double-blind (i.e., neither handler nor anyone at the scene knows if anything is to be found or where to find the target odor) setting
- The extent to which negative searching was performed (i.e., searching areas where no target scent is known to exist, so the dog understands that not every search will allow him to find his quarry)
- Reliability of a search in proportion to such factors as depth (how far buried), scent-absorbing barriers or diffusers (e.g., blanket or carpet, coffin, water, neutralizing chemicals)
- Whether repeated searches were performed by the same team, and if they proved inconclusive or exculpatory
- Whether searches were conducted by other teams, and if they proved inconclusive or exculpatory
- Will dog alert on small quantities of human blood, human hair mixed w/ other remains, human teeth and human bones?
- Has dog indicated when there was not odor of remains present?

- Handler scientific background? Zoology? College?

II. Law and Analysis

8. The Defense contends that the first step in the analysis is whether canine evidence is relevant under CRE 401. The second step in the analysis is if the canine evidence should be excluded on the basis of prejudice, confusion, or a waste of time under CRE 403. The third step in the analysis is if this evidence is admissible under CRE 702. If the Court allows canine evidence to proceed through these two hurdles, then the Court should apply some hybrid of a *Daubert* analysis as well as a multi-prong test that each dog and handler must sufficiently pass before any testimony or evidence regarding the canines could be admitted. Even if all of these tests are applied, there are still other issues that need to be addressed by the Court. The Defense respectfully requests that the Court suppress all evidence regarding Cayanne and handler Vreeland.

9. The Due Process Clauses of the United States and Colorado Constitutions guarantee every criminal defendant the right to a fair trial. *See* U.S. Const. amends. V, VI, XIV; Colo. Const. art. II, §§ 16, 23, 25. An impartial jury is a fundamental part of the constitutional right to a fair trial. *People v. Harlan*, 8 P.3d 448, 459 (Colo. 2000), overruled on other grounds in *People v. Miller*, 113 P.3d 743, 748-750 (Colo. 2005). The admission of evidence results in the deprivation of a defendant's federal and state constitutional right to due process of law where it violates principles of fundamental fairness and necessarily prevents a fair trial by an impartial jury due to its prejudicial quality. *See, e.g.*, U.S. Const. amends. V, VI, XIV; Colo. Const. art. II, §§ 16, 23, 25; *Lisenba v. California*, 314 U.S. 219, 236 (1941); *Harris v. People*, 888 P.2d 259, 263-64 (Colo. 1995); *Oaks v. People*, 150 Colo. 64, 68, 371 P.2d 443, 446-47 (1962).

10. The Colorado Supreme Court has "channeled a trial court's discretion" to admit expert testimony through the test announced in *People v. Shreck*, 22 P.3d 68, 77-79 (Colo. 2001): (1) the principles underlying the expert testimony must be reasonably reliable; (2) the expert must be

qualified to opine on such matters; (3) the expert testimony must be helpful to the jury; and (4) the evidence must satisfy CRE 403. *Martinez*, 74 P.3d at 322.

11. As part of its gatekeeping function, district courts must determine whether proffered expert testimony is reliable, relevant, helpful to the jury, and not unfairly prejudicial. *See* CRE 401-403, 702; *Shreck, supra*; *Salcedo v. People*, 999 P.2d 833 (Colo. 2000); *Brooks v People* 975 P.2d 1105, 1114 (Colo.1999). Regardless of whether the expert’s specialized knowledge is based on scientific or technical principles, or is simply grounded in experience, the focus of the inquiry is the same: namely, whether the proffered evidence is both reliable and relevant. *Shreck*, 22 P.3d at 77-79 (addressing scientific evidence); *Salcedo*, 999 P.2d at 838 (addressing experience-based specialized knowledge); *Brooks*, 975 P.2d at 1114 (addressing scent tracking by a trained police dog in hot pursuit of a suspect who left footprints in the snow, which the court considered experience-based testimony). In either case, the trial court must consider the criteria of CRE 702 and determine that (1) testimony on the subject would be useful to the jury, and (2) the witness is actually qualified to render an opinion on the subject. *See, e.g., Shreck*, 22 P.3d at 77; *Salcedo*, 999 P.2d at 838; *Brooks*, 975 P.2d at 1114.

12. “In determining whether the proposed testimony would be useful to the jury, the trial court must consider both whether the proposed testimony would be logically relevant and whether its probative value would not be ‘substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by the consideration of undue delay, waste of time, or needless presentation of cumulative evidence.’” *Salcedo*, 999 P.2d at 838 (quoting CRE 403). Any “determination that experience-based specialized knowledge is admissible under CRE 702 is inherently intertwined with a finding that the expert’s proposed testimony is both relevant under CRE 402 and not unfairly prejudicial under CRE 403.” *Id.*; *see also Martinez*, 74 P.3d at 322-323 (CRE 403, in conjunction with CRE 702, tempers broad admissibility by giving courts discretion to exclude expert testimony unless it passes more stringent standards of reliability and relevance).

13. In *Brooks*, the Colorado Supreme Court considered the admissibility of expert testimony describing the scent tracking and purported identification of a criminal defendant by a trained police bloodhound. *Brooks*, 975 P.2d at 1106. In that case, a resident called the police after discovering someone breaking into the home of his neighbor. *Id.* at 1106. The police arrived within minutes and aired a description of the burglar whom they had seen. *Id.* at 1107. A K-9 officer arrived with his bloodhound and guided him to the fleeing suspect's footprints in the snow. *Id.* The dog tracked to a garage in which a man was hiding under a car. *Id.* Other officers followed the footprints to the same location. *Id.* The suspect, who matched the description previously aired, possessed items taken from the victim's residence and tools matching toolmarks on the point of illegal entry to the burglarized house. *Id.* In other words there was significant corroborating evidence linking Mr. Brooks to the burglary he had just been witnessed perpetrating.

14. The supreme court concluded that canine "scent tracking evidence must be governed by a conventional CRE 702 and CRE 403 analysis." *Brooks*, 975 P.2d at 1106. The elements of a proper foundation for expert testimony on canine-scent tracking include whether: (1) the dog is of a breed characterized by acute power of scent; (2) the dog has been trained to follow a track by scent; (3) the dog was found by experience to be reliable in pursuing human tracks; (4) the dog was placed on the trail where the person being tracked was known to have been; and (5) the tracking efforts took place within a reasonable time, given the abilities of the animal. *Id.* at 1114. Aside from these considerations, scent-tracking evidence is considered more prejudicial than probative when it is not corroborated by other independent evidence. *Id.* The court noted that "the emphasis a court might wish to afford each of these points might vary depending on the facts of a particular case." *Id.*

15. “[A] trial court must issue specific findings as it applies the CRE 702 and 403 analyses.” *Shreck*, 22 P.3d at 70; *see also Brooks*, 975 P.2d at 1114. In *Shreck*, the Colorado Supreme Court held:

* * * [A] trial court’s CRE 702 determination **must be based upon specific findings on the record** as to the helpfulness and reliability of the evidence proffered. *Brooks*, 975 P.2d at 1114; *Campbell*, 814 P.2d at 8. The trial court **must also issue specific findings** as to its consideration under CRE 403 as to whether the probative value of the evidence is substantially outweighed by its prejudicial effect. *Brooks*, 975 P.2d at 1114; *Campbell*, 814 P.2d at 8.

Shreck, 22 P.3d at 78 (emphasis added).

16. In *Brooks*, the supreme court stated: “Because the relevant factors applicable to the [CRE 702 and 403] inquiry will likely vary depending on the particular subject matter at hand, a trial court should make findings as it applies the CRE 702 and 403 analysis, tailoring its discussion to the foundational considerations relevant to the evidence before it.” *Brooks*, 975 P.2d at 1114.

17 . In *Welsh*, the Colorado Supreme Court stated, “The trial court **must** address any appropriate objection and articulate the reasoning for its decision.” *People v. Welsh*, 80 P.3d 296, 304 (Colo. 2003)(emphasis added). “Specifically, the trial court should explain whether and how the evidence at issue is relevant to the case and, if so, to what extent that probative value might be outweighed by any unfair prejudice to the defendant.” *Id.* Failure to perform the gate-keeping task and make specific findings regarding admission, over objection, of Cayanne and handler Vreeland testimony about purported canine-scent identification, tracking, trailing, etc. would constitute an abuse of discretion, warranting reversal of convictions. *See Brooks, supra; Shreck, supra; Welsh, supra.*

18. As the proponent of the evidence, the prosecution bears the burden of establishing its admissibility. *See, e.g., People v. Ramirez*, 155 P.3d 371, 378 (Colo. 2007); *State v. Smith*, 335 S.W.3d 706, 712 (Tex. Ct. App. 2011) (as proponent of expert canine-scent testimony, the state had the burden of proving by clear and convincing evidence that the testimony was relevant and reliable). The prosecution must present testimony from handler Vreeland about purported canine-scent identification, tracking, trailing, etc. that demonstrates the evidence is reliable, relevant, or helpful to the jury. *See* CRE 401-402, 702; *Salcedo*, 999 P.2d at 840. The evidence must meet the *Brooks* factors, not pose an undue risk of misleading the jury, and must be more prejudicial than probative. *See Brooks, supra*; CRE 403.

III. Brooks Factors

19. a.) The state must establish the dogs are of a breed characterized by acute power of scent.

Cayanne's precise breed is unknown to counsel.

20. b.) The state must establish the dog was trained to follow a track by scent and, as applicable to this case, establish the dog was reliably trained and able to conduct the type of scent identification, cadaver identification, tracking, trailing etc. at issue. The United Supreme Court has held that the best indication of a dog's drug-detection reliability for purposes of probable cause to conduct a search is its performance in "controlled testing environments" as confirmed by "training records." *Florida v. Harris*, 568 U.S. 237, 246-47 (2013). Certification by a "bona fide organization" after "testing [the dog's] reliability in a controlled setting" is also important. *Id.* In *Brooks*, the bloodhound had tracked accurately in 97 percent of his training sessions. *Brooks*, 875 P.2d at 1107 (466 out of 480). Cayanne is dual trained. Her work has primarily been for people who are alive. There is no record in discovery as to whether Cayanne has ever accomplished a find outside of training. Dual trained dog evidence, based on reliable experts, is less reliable than specialized dogs.

21. The state should establish that Cayanne had reliably performed in controlled testing environments, as confirmed by training records, in any of the following areas, all of which were involved in this case: (1) detecting human cadaver scent; (2) accurately discriminating between human cadaver scent and animal or other scents; (3) scent identification and/or tracking, etc. of three different scents (two from scent articles and cadaver) by dual-trained dogs in the same areas and/or from the same objects; (4) scent identification and/or tracking, etc. from 10-day old scent.

22. c.) The state must establish the dog was found by experience to be reliable in pursuing human tracks and/or identifying cadaver scent, as applicable to this case. Mr. Redwine moves this Court to order the state present evidence establishing that Cayanne was *found by experience to be reliable* in any of the following areas, all of which were involved in this case: (1) detecting human cadaver scent; (2) accurately discriminating between human cadaver scent and animal or other scents; (3) scent identification and/or tracking, etc. of different scents by dual-trained dogs in the same areas and/or from the same objects; (4) scent identification and/or tracking, etc. The state must establish the actual percentage of the dogs' success rates versus failures in any of the aforementioned areas. (*See id.*)

23. d.) The state has the burden of showing the dog was placed on the trail where the person being tracked was known to have been. *Brooks* is distinguishable from this case in many respects, not the least of which is that *Brooks* involved a hot pursuit of a fleeing suspect by law enforcement with a reliably trained bloodhound, which actually led to the discovery of a concealed person. Mr. Redwine asserts the fourth *Brooks* factor is not relevant to the purported canine-scent identification, tracking, trailing, etc. at issue in this case, which did not involve the hot pursuit, or any pursuit, of a fleeing suspect.

24. Assuming the factor is relevant, the state cannot establish it. For example, the state lacks evidence that Mr. Redwine or a cadaver was known to have been in any pickup truck or inside

the home of Mr. Redwine. Based on counsel's review of discovery the dogs in this case never found any actual remains. None were found in the pick up truck or the home.

25. e.) The state will fail to establish that the scent-identification, tracking, trailing, etc. efforts took place within a reasonable time, given the abilities of the animal. The purported canine-scent identification, tracking, trailing, etc. took place on November 29, 2012 and many months/years later. Unlike *Brooks, supra*, this case involves purported canine-scent identification, etc. from aged scent not hot pursuit scent. The prosecution should be required to demonstrate (1) aged-scent tracking reliability; (2) whether age-scent tracking is even possible; (3) whether law enforcement agencies conduct aged-scent tracking and train their dogs to do so; (4) availability of any peer-reviewed journals concluding aged-scent trail tracking is even possible; (5) whether Cayanne certifications/training involve a track or scent identification that was aged.

26. f.) The purported scent-identification, tracking, trailing, etc. must be corroborated by other independent evidence. The state must present corroborating evidence that a cadaver was ever in Mr. Redwine's house or pickup trucks. Based on counsel's review of discovery, aside from dog sniff evidence, there is nothing to support that there was ever a cadaver in the vehicles or house.

27. Many states, including Colorado's *Brooks* holding *supra*, do not allow tracking and trailing evidence unless there is other corroborating evidence to support the alerts from the tracking and trailing dogs. *See generally* 81 A.L.R. 5th 563 (2000) and *People v. McPherson*, 85 Mich. App. 341, 271 (1978). In *McPherson*, the Michigan Court of Appeals stated that, "no authority had been presented to us, nor have we found any, which indicates that tracing dog evidence, standing alone, can support a conviction. The necessity of corroboration appears uniform." *Id* at 344. The Court further listed multiple states at that time that agreed that corroboration was necessary - Kansas, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, South Caroline, and Tennessee. *Id*. Additionally the Court noted that,

“Courts adhering to the view that bloodhound evidence is admissible concede that such evidence is to be accepted with caution and is not, under any circumstances, to be regarded as conclusive evidence of guilt. It is generally held that this class of evidence is cumulative or corroborative only. Such evidence is at best a circumstance to be considered by the jury in connection with all the other proof in the case, in determining the guilt or innocence of the accused. *It is not conclusive evidence of guilt and, standing alone, is not sufficient to sustain a conviction; there must be other and human testimony to convict.* Statements are frequently found in the cases to the effect that bloodhound evidence is of little probative value and is not looked upon with favor. A conviction resting in part upon bloodhound evidence cannot be supported where the other evidence tending to show guilt is fragmentary and unsubstantial.” *Id* (emphasis added) at 344 citing 30 Am. Jur. 2d, Evidence, sec. 1146, p. 322.

28. “[H]uman scent is easily transferred from one person or object to another, it should not be used as primary evidence. However, when used in corroboration with other evidence it has become a proven tool that can establish a connection to a crime.” 6 For. Sci. Comm. 3 (2004). “Human scent is easily transferred from one object to another so that relationships between objects and people are sometimes unknowingly established. Identifying someone at a crime scene is not an indication of complicity.” *Id*.

29. As was stated earlier, in the case of *Roscoe*, there was a plethora of physical evidence that was tested and verified by scientific means that corroborated the results of the canines. This is where *Roscoe* is distinguishable from this case. In this case, there is not a single piece of corroborating evidence that was identified. Specifically regarding the trailing dog of Roy Vreeland, there was not a single piece of physical evidence or corroborating evidence.

30. g.) Handler Vreeland is not qualified to testify as an expert. Handler Vreeland, to counsel's knowledge, does not work for any law enforcement agency. He works as a firefighter. There is nothing to suggest he has ever been qualified as an expert dog handler.

31. h.) Any probative value of the purported canine-scent-identification, tracking, trailing, etc. evidence would be greatly outweighed by its prejudicial impact. The application of CRE 702 and CRE 403 are "interrelated." *Brooks*, 975 P.2d at 1114. "A finding under CRE 403 that the nature of the proposed testimony is speculative or prejudicial, or that the link between the expertise and the hard evidence in the case is tenuous, necessarily weakens the likelihood that an opinion on the subject will be helpful to the trier of fact." *Id.*

32. In *Brooks*, an extremely well-trained dog—who tracked accurately in 97 percent of his training sessions and who also successfully tracked with confirmed finds in 214 prior cases—tracked a burglar in hot pursuit. *Brooks*, 975 P.2d at 1107-08.

33. Unreliable evidence, such as the canine-scent evidence in this case, should never reach the jury. *E.g.*, *Smith*, 335 S.W.3d at 714-16 (expert testimony on reliability of state's dog-scent lineup identification was properly excluded).

34. The prejudice of the purported canine-scent identification, tracking, trailing, etc. in this case would be huge. The Defense asserts that the canine evidence in this case is not admissible because even if the Court deems the canine evidence to be relevant, the probative value of such evidence is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence. CRE 403. The potential prejudicial effect of introducing canine evidence is high because most people in the general public believe that dog sniff evidence is infallible and that dogs are neutral fact-gatherers. The dog alerts can confuse the jury and unnecessarily bog them down, creating a mini-trial regarding the reliability of these dogs.

35. A minority of states have held that dog evidence is never admissible because it is too unreliable. *People v. Stewart*, 229 Ill.App.3d 886, 594 N.E.2d 429 (1992); *Brafford v. State*, 516 N.E.2d 45 (Ind.1987); *State v. Storm*, 125 Mont. 346, 238 P.2d 1161 (1951); *Brott v. State*, 70 Neb. 395,97 N.W. 593 (1903).

36. The Illinois Appellate Court stated that, “We have reached the conclusion that testimony as to the trailing of either a man or an animal by a bloodhound should never be admitted in evidence in any case. His guilt or innocence of a given crime however, should be established by other evidence.” *People v. Griffin*, 48 Ill. App. 2d 148, 153 (1964). The Indiana court expanded on that holding:

“...Neither court nor jury can have any means of knowing why the dog does this thing or another, in following one direction instead of another; that must be left to his instinct, without knowing upon what it is based. The information obtainable on this subject, scientific, legal, or otherwise, is not of such a character as to furnish any satisfactory basis or reason for the admission of this class of evidence... conclusions of the bloodhound are generally too unreliable to be accepted as evidence in either civil or criminal cases.” *Ruse v. State*, 115 N.E. 237, 240 (Ind. 1917).

37. The Supreme Court of Nebraska further agreed:

“There are, we know, some cases in the country which hold that this kind of evidence is competent, but it seems the judicial history of the civilized world is against them. The bloodhound is, we admit, frequently right in his conclusions, but that he is frequently wrong is a fact well attested by experience. What he does in trailing may be regarded as the declaration of a disinterested party, but, so regarded, the authorities are opposed to its admission. It is unsafe evidence, and both reason and instinct condemn it.” *Brott v. State*, 97 N.W. 593 (Neb. 1903).

38. In Arizona, the Supreme Court discussed the issue of tracking and trailing dogs and noted that:

“in those few states that do not permit the testimony, inadmissibility is not based upon an application of the Frye rule; instead, the courts base their ruling either on the fear that the jurors will be misled by folklore superstitions that attach to bloodhounds and their ability to track or upon the very lack of a scientific basis for such evidence.” *State v. Roscoe*, 145 Ariz. 212 at 220, 700 P.2d 1312, (1984) *citing* *People v. McPherson*, 85 Mich. App. 341 at 345, 271 N.W.2d 228 (1978) and *Terrell v. State*, 239 A.2d at 136).

39. It is important to note that in the case of *Roscoe*, the canine conducted four different scent identifications - (1) matching victim's scent to defendant's car; (2) matching defendant's scent to area of crime; (3) matching defendant's scent to victim's clothing; and (4) matching defendant's scent to victim's bicycle. *Id* at 218. Additionally in *Roscoe*, there was a plethora of physical evidence to corroborate these scent identifications - an eyewitness identification, carpeting fibers consistent with carpeting by victim, hair consistent with victim's hair in defendant's car, traces of human blood in defendant's car, semen in victim's mouth tested consistent with defendant's, and pubic hairs found on victim consistent with defendant's. *Id* at 216. The Court in Arizona decided that this type of canine evidence could be admissible if the State could pass proper foundational requirements and show that the results obtained from use of the dog are reliable. *Id* at 221.

IV. Cadaver Dogs

40. Regarding cadaver dogs, there is a much shorter list of cases in which the admissibility of such evidence is discussed. In New York, the use of cadaver dogs was deemed admissible after the handler gave expert testimony regarding that he was certified, the training of his dog, the reliability of his dog, and certifications the dog had. *State v. Liferi*, 230 A.D.2d 754, 646 N.Y.S.2d 172. However, in this extremely short opinion, there is no mention if whether those alerts were coupled with corroborating evidence as would be required under *Brooks*.

41. When *Brooks* was decided less was known about the specific volatile organic compounds dogs are indicating on. With cadaver dogs there has been years of research isolating the precise particles dogs are alerting to when they indicate the presence of a human decompositional event. Disco. P. 16178, Arpad A. Vass, Ph.D., *et. al.*, “Odor Analysis of Decomposing Buried Human Remains” Ph.D. J Forensic Sci, March 2008, Vol. 53, No. 2 doi: 10.1111/j.1556-4029.2008.00680.x, Available online at: www.blackwell-synergy.com. The prosecution is aware of as much because they provided Dr. Vass’ article in discovery.

42. A 2001 Maryland case *Clark*, authored before the current state of understanding about the specific volatile organic compounds emitted during human decay, indicates that cadaver dog evidence was previously generally accepted in the scientific community. Although no biological material was found at the cemetery where two cadaver dogs indicated, there was significant corroborating evidence including substantial amounts of blood and DNA evidence found where the alleged homicide happened, an eyewitness placing the defendant at the cemetery, physical evidence on the defendant’s vehicle from where his vehicle hit a headstone at the cemetery, a map in the defendant’s truck with an asterisk on that specific location at the cemetery, as well as multiple confessions from the defendant. *Clark v. State*, 781 A.2d 913 at 921-923, (Md. 2001). In the *Clark* case, Dr. Ann Marie Mires testified that in her opinion, “the alert of a cadaver dog, standing alone, is not considered sufficient to show a reasonable degree of scientific certainty that human remains were present at the location of the alert.” *Id* at 933. The Court agreed with Dr. Mires, but as stated above, there was again a plethora of corroborating evidence, so therefore the Court allowed the testimony regarding cadaver dogs. *Id* at 935.

43. Another cadaver dog is *Trejos v. State*. 243 S.W.3d 30 (Tex. App, 2007). In this case, law enforcement again found a plethora of corroborating evidence - blood on footprints in kitchen, blood in the hallway, blood on floormats and floorboard of victims car, and a confession which included the defendant telling law enforcement where defendant had dumped his wife’s body. *Id* at 37-38. The location the defendant confessed to dumping his wife’s body was where the cadaver dogs alerted. *Id* at 39. Again, there was a plethora of corroborating evidence.

44. There are states where courts admitted evidence regarding cadaver dogs, those alerts were corroborated by a plethora of scientific, physical evidence as well as confessions. In the current case, there is absolutely no physical or scientific evidence presented to corroborate any alerts from Cayanne and handler Vreeland. This case is clearly distinguishable from *Clark and Trejos*. There simply was not enough information in the *Lifrieri* case to determine how similar or different it is from the current case.

V. Cadaver Dogs and Daubert

45. Given the advancements in understanding dog scent identification of the specific volatile organic compounds emitted during a human decompositional event it is now appropriate to apply *Daubert* factors in analyzing the admissibility of dog handler testimony. “[W]e can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends on the circumstances of the particular case at issue.” *Shreck*, 22 P.3d 68, 74, citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 142 (1999). The *Daubert* factors are:

1. The testability of the scientific theory or technique;
2. Whether the theory or technique had been subjected to peer review and publication;
3. The known or potential rate of error;
4. The existence or nonexistence of maintained standards; and
5. Whether the theory or technique has general acceptance in a relevant scientific community. *Daubert v. Merrell Dow Pharmaceuticals*, 125 L.Ed.2d 469 (1993).

46. a) Whether the expert’s techniques or theory has been tested. Techniques and theories behind cadaver dogs have generally been tested. There are different agencies through which a cadaver dog can be certified and various trainings a handler and cadaver dog could attend. However, there has been a lack of any information regarding if this particular handler and canine

team are so qualified given the circumstances of this case. While other handler and canine teams provided hundreds of pages of training records, Mr. Vreeland apparently has none.

47. b.) Whether the techniques or theory have been subjected to peer review or publication.

Again, the issue of cadaver dogs and their abilities has been the subject of peer reviewed publications. However, Cayanne has not been the subject of any peer reviewed publication. Additionally, there is no evidence that the handler has ever testified in Court before or has ever been deemed an expert by any court before.

48. c.) The known or potential rate of error. Counsel cannot assess the reliability of Cayanne because of a lack of information regarding her training and a lack of repeated testing. In this case, the known or potential rate of error is completely unknown with the dog.

49. d.) The existence and maintenance of standards and controls. Again, there is a lack of information to properly assess this in regards to the two cadaver dogs in this case.

50. e.) Whether the technique or theory has been generally accepted in the scientific community.

There seems to be a consensus in the scientific community that dogs have a much better sense of smell than humans and that dogs can be trained to use that smell to detect certain odors. Zoologists have opined there is no consensus regarding what exactly the cadaver dog is smelling. Further, there is no conclusive evidence regarding what the specific chemicals of decomposition are. Additionally, there is no consensus in the scientific community as to when the odor of decomposition starts and how long that odor remains. And even if a well-trained cadaver dog alerts to the smell of decomposition in a given area, the dog cannot tell us if that smell is there for a criminal or non-criminal reason. Cadaver dogs could alert to smells of decomposition that are in a given area for innocuous reasons. This is why corroborating evidence is so important in cases like this.

51. f.) Whether experts are proposing to testify about matters flowing naturally and directly out of research they have conducted independent of litigation, or whether they have developed it for the purposes of testifying. There is no indication from any witness involved in this case that

what they can testify about is their own research or whether what they have created is solely for litigation purposes.

52. g.) Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion. The Defense maintains that there have been some unfounded conclusions by handler Vreeland in this case. She has yet to provide any proof of accuracy. She has provided minimal records that did not comply with best practices recommendations. Defense has grave concerns regarding the assumptions that might be made from testimony regarding cadaver dogs alerting. There are many things a cadaver dog cannot tell the Court - when decomposition was in that area, who that decomposition is from, how long that decomposition was there, or whether the decomposition is a result of criminal or non-criminal behavior. There are dozens of reasons why decomposition could be in an area at a house or on a property, and a dog's alert simply cannot tell us those reasons. One deeply troubling possibility is that all of the various law enforcement personnel in and out of the house and vehicles belonging to Mark Redwine had the scent of decomposition on their footwear and transferred it into the house. There is nothing to corroborate that the scents the dogs alert is decomposition matter associated with Dylan Redwine.

53. h.) Whether the expert has accounted for obvious alternative explanations. Handler Vreeland does not account for obvious alternative explanations. Dylan Redwine spent significant periods of time in the house. A miniscule amount of his blood was found in the home. Cadaver dogs alert to blood and hair. It stands to reason law enforcement officials who had been on the scene had been in locations where other cadavers were located on other calls. Dogs are thought to smell odors in the parts per trillion range making transference exceedingly easy without proper precautions.

54. i.) Whether the expert is being as careful as she would be in her regular professional work when she does volunteer search and rescue for the sheriff. There is no evidence in discovery regarding this for handler Vreeland.

55. j) Whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give. Reliability in the case of any type of canine should not be based on self-reported training records, out-of-date certifications, or on certifications for other previous dogs. The only way to assess and predict reliability of any handler and dog team is through repeated, randomized double blind testing, which was not done for either dog based on what counsel has reviewed in discovery.

VI. Other Issues

Contamination

56. There was significant potential for contamination of scent articles and locations in this case. However, there is no evidence provided in discovery by the State to ensure any safeguards were taken to try to limit or prevent that contamination. Nor is there any evidence provided by the State to suggest that contamination did not play a role in the alerts that were given by both the dogs. Contamination can play a role in the alerts that dogs give, and there is not sufficient information to know how much of a role contamination played in this case because the following non-exhaustive list has not been adequately provided: dismissal lists, innocuous reasons for decomposition, and the unknowns of the scent articles given to the trailing dog handlers, coverings for footwear, lists excluding Sheriff's Office employees and other investigators from locations of cadavers around the time of searching.

Hearsay

57. CRE 802 dictates that hearsay is not admissible unless it falls under an exception. The alerts of the canines in this case do not fall into any exception outlined in the hearsay rules. The State is clearly offering the dog's alert and their handlers interpretation of those alerts for the truth of matter asserted. There is no exception in the hearsay rules for dog alerts.

Confrontation Clause

58. Under *Crawford v. Washington*, 541 U.S. 36 (2004), the accused has a right to confront those who testify against him. In this case, essentially the dogs are being allowed to testify through their handlers as to what they were thinking or meaning at the time. This does not allow for the defendant in this case to confront the dogs. Colo. Const Art. II § 16.

Special Jury Instruction

59. If the Court allows the introduction of any canine evidence at trial for this case, the Defense respectfully requests that the Court issue a special jury instruction. One example would be that the Court instruct the jury that the canine evidence must be viewed with caution, that it must be considered with all other testimony in the case, and that in the absence of some other evidence of guilt, standing alone it does not warrant conviction.

VII. Conclusion

60. The Defense strongly urges this Court to suppress all evidence relating to both cadaver dogs and trailing dogs in this case.

61. First, the canine evidence is simply not relevant under CRE 401. The canine evidence in this case is so completely unreliable that it does not have any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence. There has not been enough evidence disclosed by the State that the canine evidence is even relevant.

62. Second, the canine evidence is simply not admissible under CRE 403. The possible probative value of such evidence is substantially outweighed by the danger of unfair prejudice, confusion of the issues, misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence. The Defense asserts that the State wants to introduce

canine evidence to entice the jury into believing that these canines are able to identify when someone was at a certain location and use that as substantive evidence of guilt. The State has not disclosed sufficient information regarding the reliability of these dogs and their handlers for the Court to make an assessment as to reliability, and therefore the Court cannot allow this evidence to be submitted to a jury. If the canine evidence is deemed admissible, it will likely bog down the jury and create mini-trials regarding the reliability of these dogs.

63. Third, if the Court concludes that dog handlers are non-scientific experts, their testimony should still be barred because the handlers do not meet the requirements under CRE 702, which requires that the evidence be based upon sufficient facts or data, the testimony is the product of reliable principles and methods, and the witness has applied the principles and methods reliably to the facts of the case. *See Brooks*, 975 P.2d at 1114. Again, the State simply has not disclosed enough evidence to suggest that they could ever meet this standard.

64. Fourth, if the Court concludes that it is going to use the *Daubert* standard, based on the above-analysis using the ten factors, the Defense asserts that the State will not meet their burden to satisfy the *Daubert* standard. There are some critical holes should the state seek to meet the *Daubert* requirements including the inability to assess the reliability of any dog involved in this case, the absence of any corroborating evidence, and the lack of safeguards against contamination.

65. Fifth, if the Court concludes that the trailing and cadaver dogs must pass a multi-prong test before that evidence is admissible, the Defense asserts that the State again cannot meet its burden. In this case, the trails the trailing dogs tried to follow simply were no longer fresh trails, and because of the lack of safeguards against contamination of trails or cross-contamination of cadaver scent, there is no guarantee that any trail the dogs followed or scent alerted on was ever touched by any cadaver let alone the remains of Dylan Redwine.

66. Sixth, the Defense asserts that without any corroborating evidence, the Court cannot deem any canine evidence admissible. This case is analogous to *Loucks*, in which not only was there no physical corroborating evidence, but evidence existed that tended to negate the guilt of the

defendant. *See generally*.

67. The vast majority of states that allow canine evidence allow it only when there is corroborating evidence to support the alerts made by the canines. There was no testimony provided by the State to show that there is any corroborating evidence, and the Defense asserts that there is none with respect to dog sniffs. Corroborating evidence is a critical prerequisite in the admission of canine evidence in the majority of states and Colorado. *See Brooks*, 975 P.2d at 1114.

68. In addition to all of this, there are a myriad of issues that the Court would have to address before deciding to admit this evidence. Simply put there is not enough disclosed information here to do so. There is a lack of training records and certifications for these canines. There is no solid evidence regarding any possible reliability of the canines. Reliability cannot be based on self-reported training records. There are major concerns regarding contamination. There are concerns of this evidence being hearsay and violating the confrontation clause.

69. In conclusion, the Court simply does not have enough information to adequately assess the reliability of any of the canine evidence or the degree of contamination involved, and the admission of such evidence should not be allowed. For the all of the foregoing reasons, Mr. Redwine, respectfully requests that the Court suppress any and all evidence pertaining to cadaver dogs and trailing dogs, particularly Cayanne.

WHEREFORE, Mr. Redwine makes this motion pursuant to the Due Process, Trial by Jury, Right to Counsel, Equal Protection, Cruel and Unusual Punishment, Confrontation, Compulsory Process, Collateral Estoppel, Double Jeopardy, Right to Remain Silent and Right to Appeal Clauses of the Federal and Colorado Constitutions, and the First, Fourth, Sixth, Eighth, Ninth, Tenth, and Fourteenth Amendments to the United States Constitutions and Article II, Sections 3, 6, 7, 10, 11, 16, 18 20, 23, 25 and 28 of the Colorado Constitution.

Respectfully submitted,

/s/ John Moran

John Moran, No. 36019
Deputy State Public Defender
Dated: September 20, 2018

/s/ Justin Bogan

Justin Bogan, No. 33827
Deputy State Public Defender
Dated: September 20, 2018

Certificate of Service
I hereby certify that
I served the foregoing
document by e-filing same to all
opposing counsel of record.
/s/ John Moran
/s/ Justin Bogan