

The background of the slide is a photograph of a crime scene. A bright light source, possibly the sun, is shining through the trees, creating a lens flare effect. A yellow crime scene tape is stretched across the foreground, with the words "CRIME SCENE DO NOT CROSS" printed on it in bold, black, capital letters. The tape is slightly out of focus, and the background shows dark green foliage and a clear blue sky.

USING TECHNOLOGY TO SOLVE CRIME

GUS J. SOLOMON

INN OF COURT

MARCH PUPILAGE GROUP



THE GREEN RIVER KILLER



July 15, 1982

- 16 year old Wendy Lee Coffield

GARY RIDGWAY
MUG SHOT FROM PROSTITUTION ARREST 1982
AND AT SENTENCING IN 2003



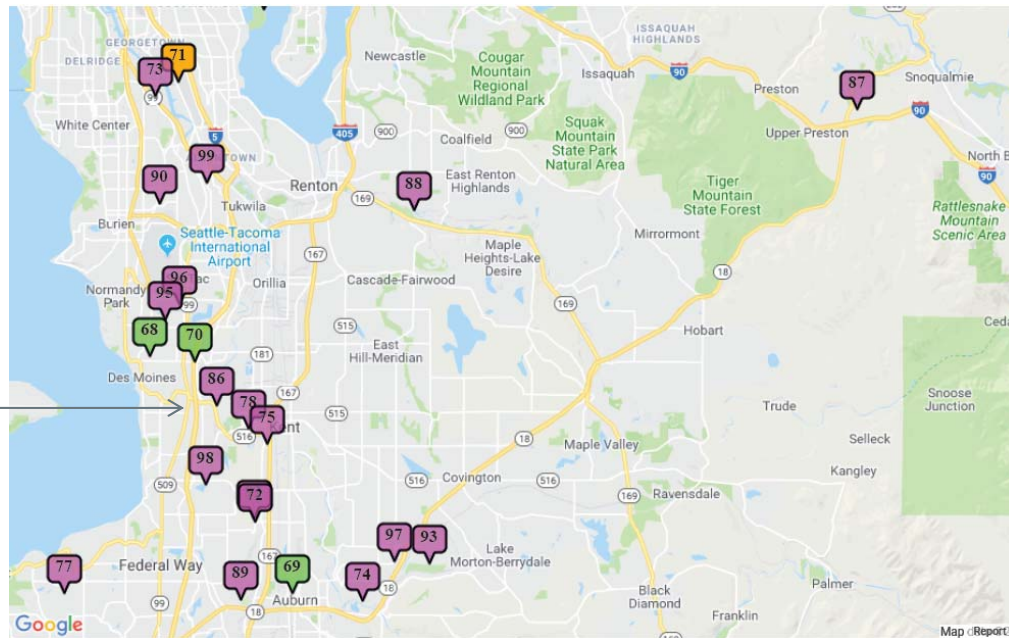
THE 48 IDENTIFIED VICTIMS

*A 49TH WAS IDENTIFIED SUBSEQUENT TO THIS PHOTO ARRAY



VICTIM “DUMP SITES” – SEATTLE AREA

#78 is the
Green River Site



Key: **Purple:** Location
of Victim Body
("Dump Site")

Green:
Ridgeway
Residences

Orange:
Workplace

VICTIM “DUMP SITES” – EAST/HWY. 410

79: Highway 410 gravel road

Roberta Joseph Hayes 2/7/1987

80: Highway 410 mile post 33

Marta Reeves 3/5/1990

81: Highway 410 mile post 34

Mary Sue Bello 10/11/1983

82: Highway 410 mile post 36

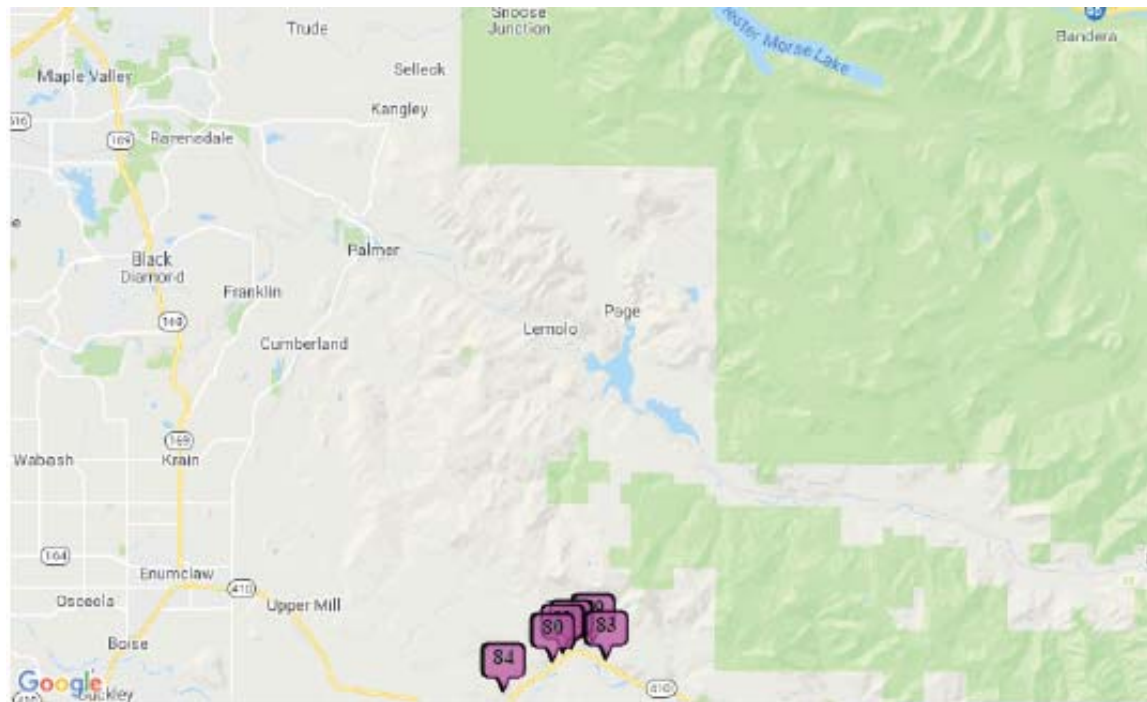
Martina Authorlee 5/22/1983

83: Highway 410 mile post 37

Debbie May Abernathy 9/5/1983

84: Highway 410 milepost 26

Pammy Avent 10/26/1983



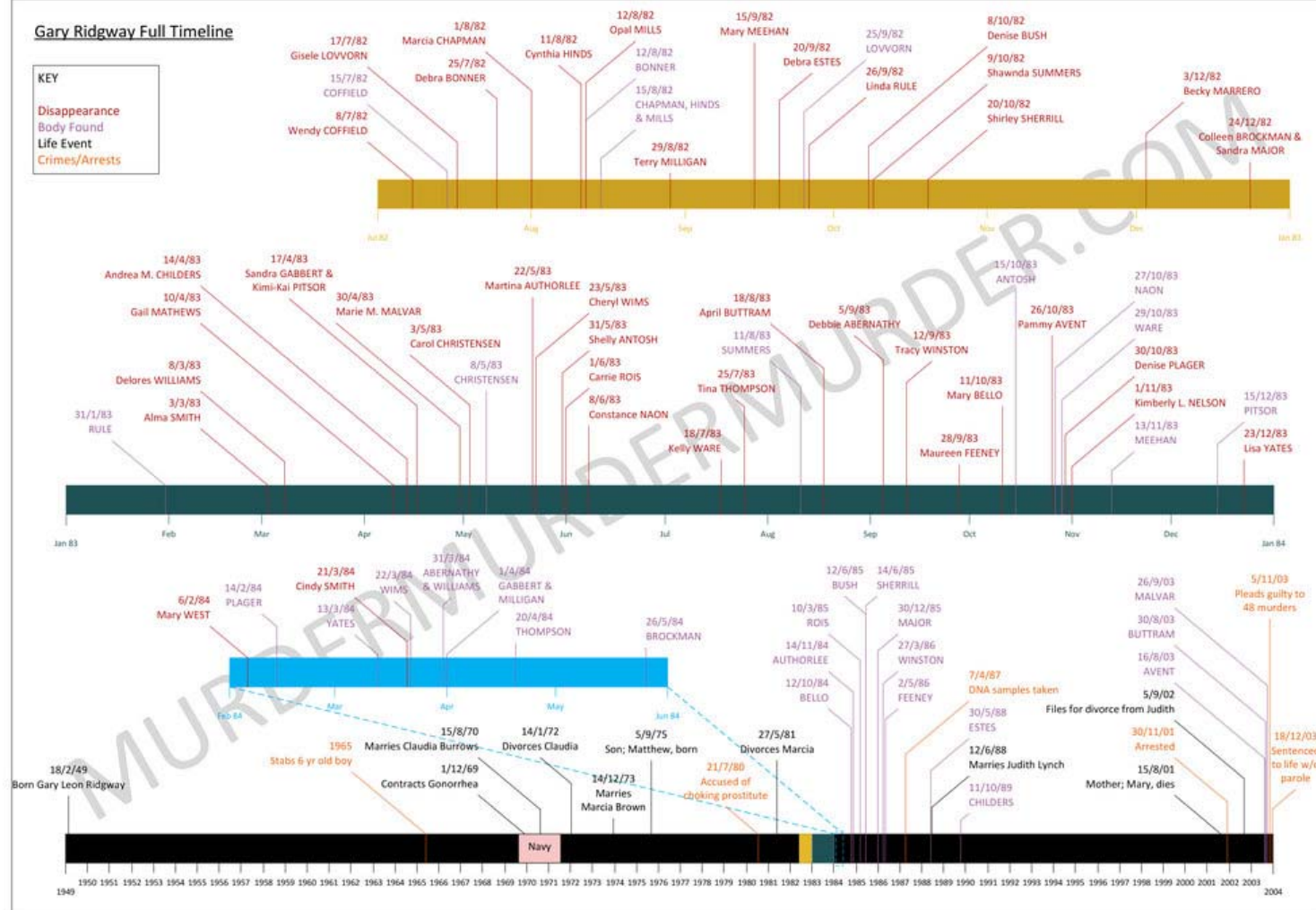
VICTIM “DUMP SITES” – PORTLAND AREA



Gary Ridgway Full Timeline

KEY

Disappearance
Body Found
Life Event
Crimes/Arrests



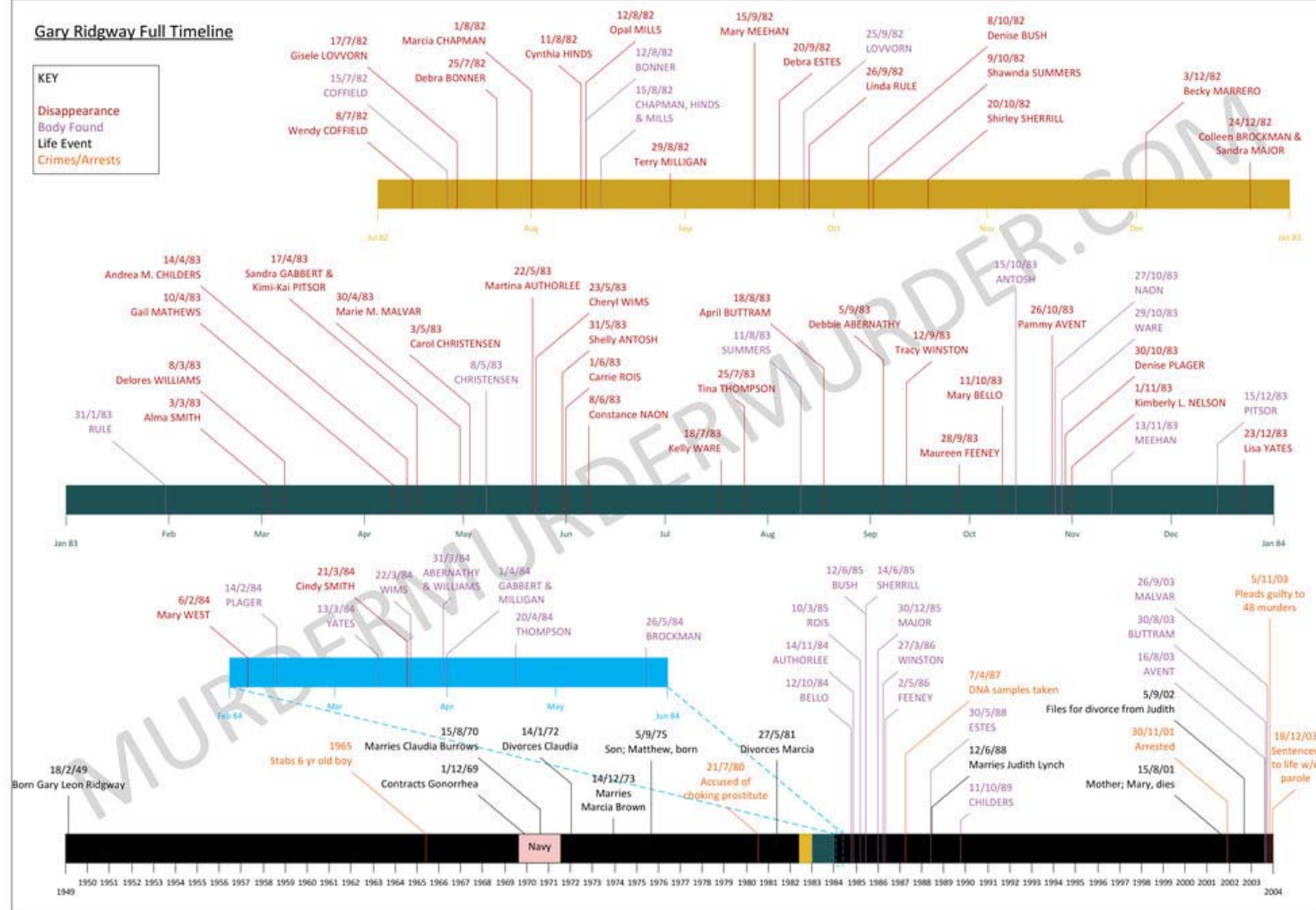
DAVE REICHERT INTERROGATING GARY RIDGWAY



Gary Ridgway Full Timeline

KEY

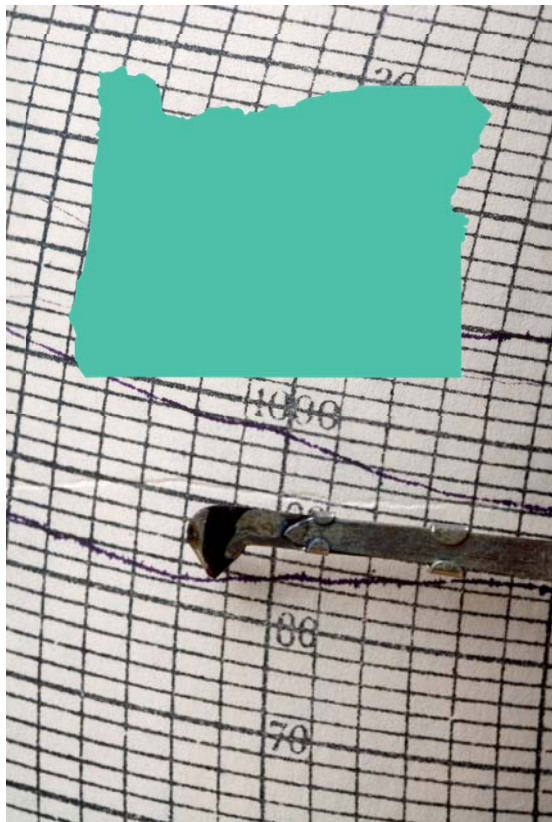
Disappearance
Body Found
Life Event
Crimes/Arrests



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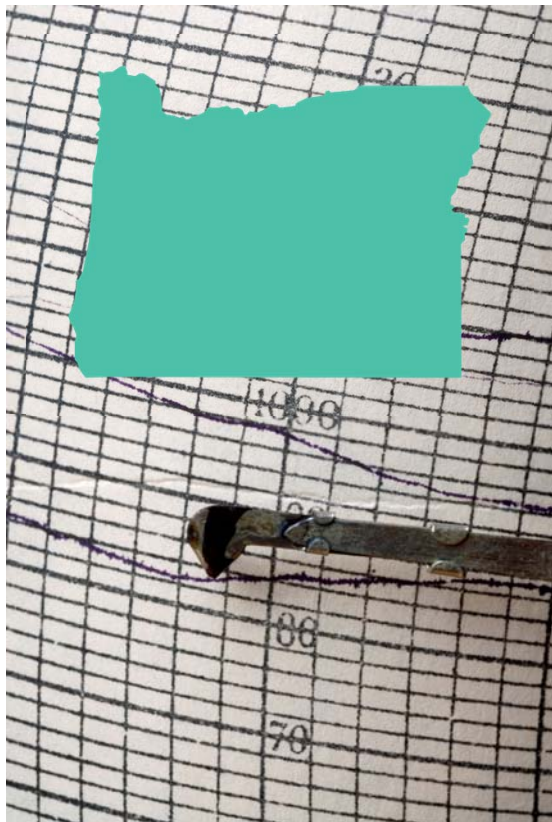


POLYGRAPH EVIDENCE ADMISSIBILITY IN OREGON



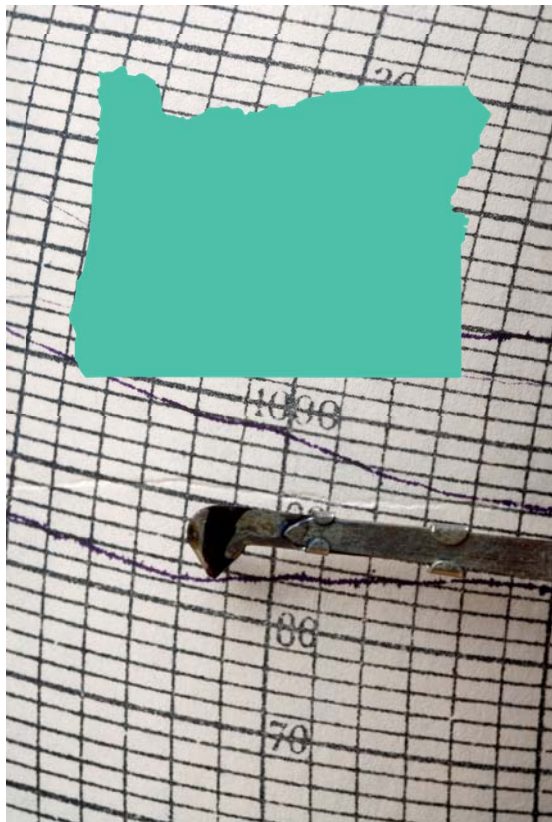
- “After analyzing the admissibility of polygraph evidence under the Oregon Evidence Code and existing caselaw, we conclude that upon proper objection polygraph evidence shall not be admissible in any civil or criminal trial in this state or any other legal proceeding subject to the rules of evidence under our Oregon Evidence Code.”
State v. Brown, 297 Or. 404, 445, 687 P.2d 751, 776–77 (1984)
- Extended in *State v. Lyon*, 304 Or. 221, 232, 744 P.2d 231, 236 (1987):
 - “Because of the importance of the institutional values implicated by the admission of polygraph results into evidence, we hold that we will not recognize a stipulation between the parties to the admissibility of polygraph evidence.”

ADMISSIBILITY (CONT'D)



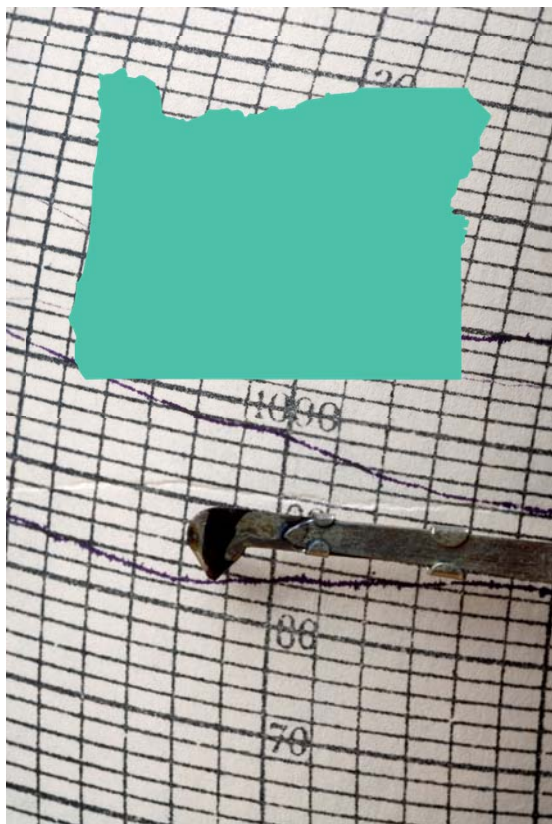
- Often admissible in non-OEC proceedings
 - *See, e.g., State v. Hammond*, 218 Or. App. 574, 582, 180 P.3d 137, 141 (2008) (“We conclude that none of the considerations in *Brown* requires exclusion of polygraph examination evidence in probation revocation hearings.”)

ADMISSIBILITY (CONT'D)



- Even under OEC, may be admissible for purposes other than establishing substantive truth/falsity of answers
 - “[B]oth *State v. Brown* and *State v. Lyon* addressed the question “whether polygraph evidence may be admitted in a jury trial to prove the truth of the matter asserted” (*i.e.*, as proof of the truth of what the polygraph evidence indicated). When the polygraph examiner's report or knowledge of its conclusions is not offered to prove the truth of the matter asserted, the evidence may be admissible under certain circumstances.”
State v. Harberts, 315 Or. 408, 414, 848 P.2d 1187, 1191 (1993)

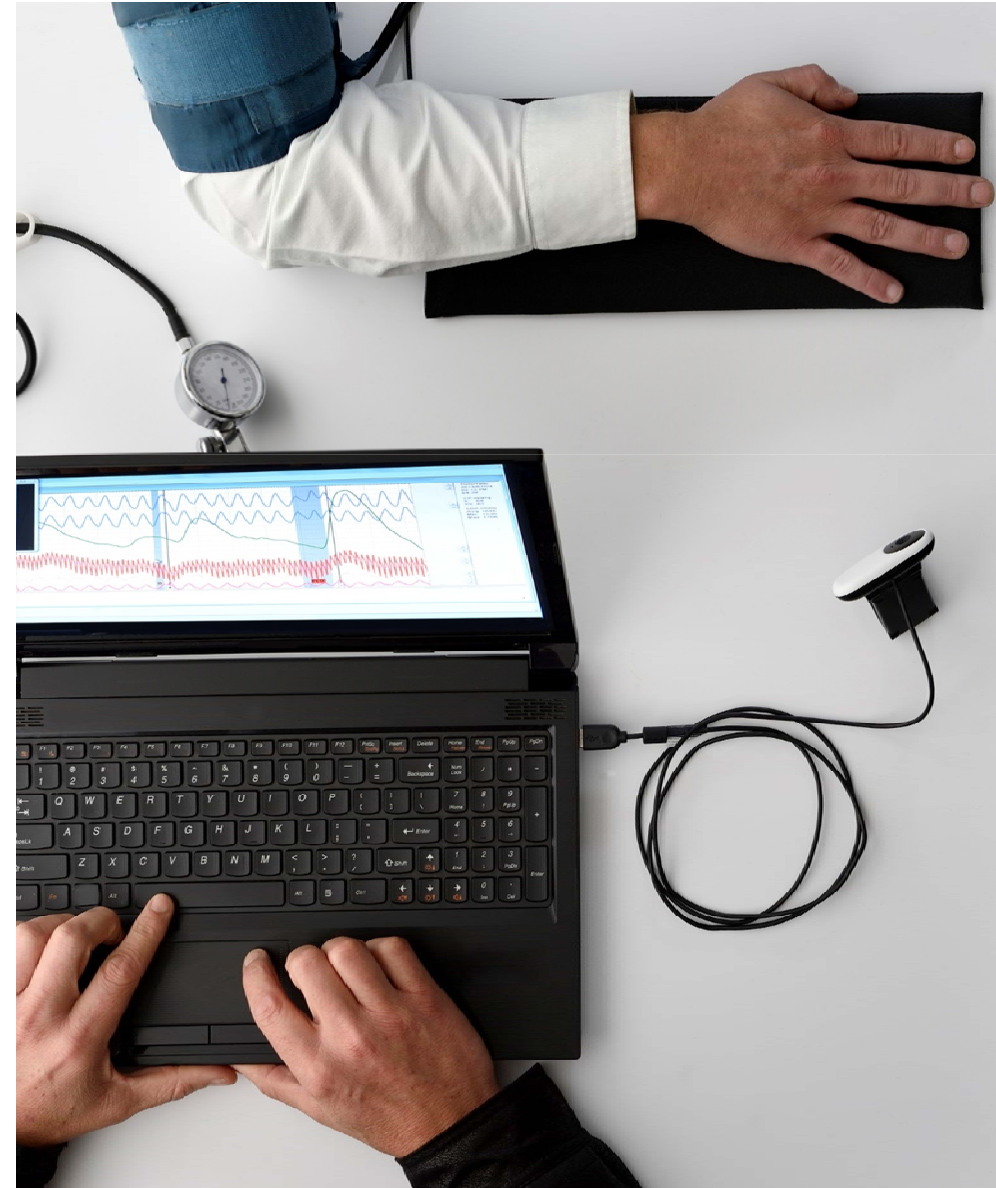
ADMISSIBILITY (CONT'D)



- See, e.g., *In re Marriage of Fromdahl*, 314 Or 496 (1992) (admissible where “Mother offered the polygraph examiner's report and testimony about her knowledge of its conclusions to show its effect on her state of mind and to support her argument that, in view of the evidence available to her, her perceptions and responses thereto were rational and appropriate”)

ORS 703.010-335 REGULATES POLYGRAPH EXAMS

- Polygraph examiners must be licensed – ORS 703.050
- Minimum requirements for polygraph equipment - ORS 703.310
 - Shall record visually, permanently and simultaneously the cardiovascular pattern, the respiratory pattern and the galvanic skin response of the individual
 - Patterns of other physiological changes of the individual also may be recorded
- Police officer exception – ORS 703.335
 - May use an instrument or mechanical device that does not comply with the minimum requirements under ORS 703.310(1) if the police officer:
 - Uses the instrument or mechanical device in the course of the officer's official duties while investigating a crime; and
 - Is certified to use the instrument or mechanical device by the agency that employs the officer.



PPB POLICY 640.75 POLYGRAPH EXAMINATION

Policy

Polygraph may be used to verify, corroborate or refute statements, and narrow or focus investigative leads.

Polygrapher must be licensed

Polygraph is only instrument for detection of deception authorized for use in criminal investigations and will be only instrument used by Portland Police Bureau

PPB POLICY 640.75 POLYGRAPH EXAMINATION

Procedure for polygraph test

Member schedules exam and provides information to subject and polygrapher prior to exam

In person when possible

Subject told in advance of exact nature of allegations

Polygrapher administers test; no attorneys or other individuals allowed to be present

Exceptions limited to interpreters or polygraph students

Polygrapher generates report detailing exam and results

No guidance or restrictions on post-exam discussion of polygraph results with subject

PPB POLICY 640.75 POLYGRAPH EXAMINATION

Subjects who
may be
inappropriate
for testing:

IQ below 70

Younger than 14 (too immature)

Under influence of drugs or alcohol

Pregnant

Medical history include being prone to seizures, respiratory illness, recent major surgery, recent serious injury

Experiencing non-chronic pain, such as headache, and/or lack of sleep

Involved in lengthy interview or interrogation just prior to exam

Emotionally involved in a traumatic incident; includes witnessing the event, of the loss of a loved one in a homicide

Suffered recent emotional shock, such as loss of job

FULL CAST AND CREW

TRIVIA

USER REVIEWS

IMDbPro

MORE

SHARE



Without Evidence (1995)

★ 4.3₇₈₀ / 10

★ Rate This

Not Rated | 1h 39min | Thriller, Drama | 12 September 2000 (USA)



The story revolves around a possible conspiracy behind the real life murder of the Oregon's Head of Corrections Michael Francke.

Director: [Gill Dennis](#)

Writers: [Phil Stanford](#), [Gill Dennis](#)

Stars: [Scott Plank](#), [Anna Gunn](#), [Andrew Prine](#) |

[See full cast & crew »](#)

Reviews

[9 user](#) | [1 critic](#)

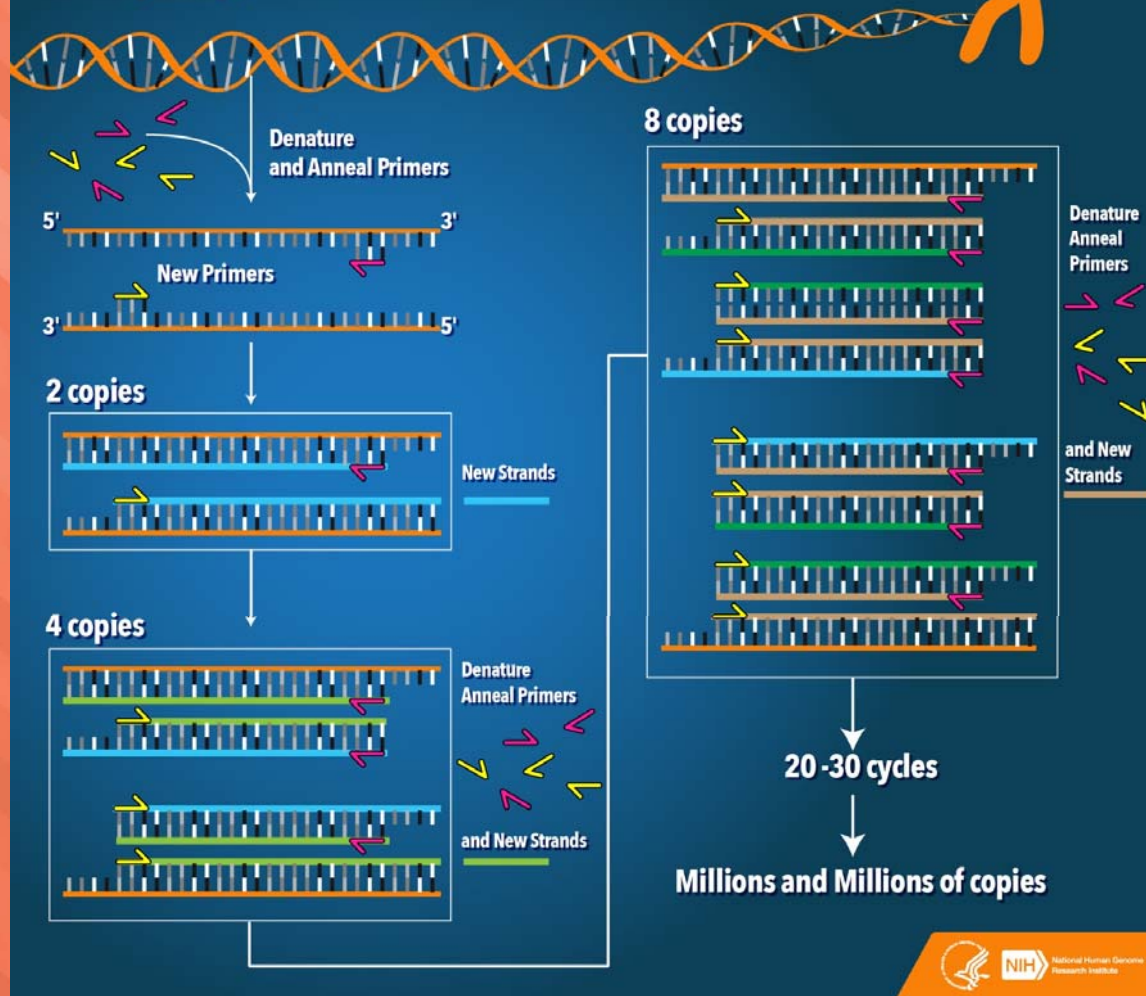
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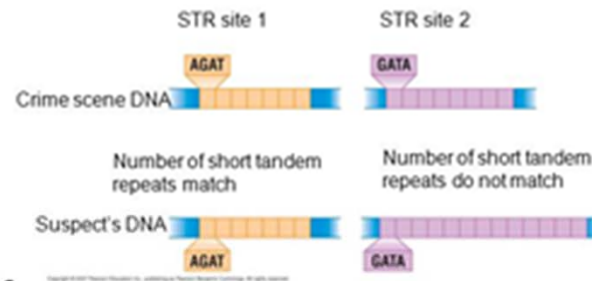
PCR - Polymerase Chain Reaction

NHGRI FACT SHEETS
genome.gov



Short Tandem Repeat (STR)

- STR analysis is a technique for producing and comparing DNA fingerprints that reflect the lengths of STR sequences at specific sites in the genome.



Randomly scattered throughout the genome, STR sites contain tandem repeats of four-nucleotide sequences. In the image above, both samples have 7 repeats at STR site 1, however, different numbers (8 vs. 13) at STR site 2.

Image from: Benjamin Cummings

&



PRETEND IT IS THE LATE 80'S



DNA IN THE FIRST CRIMINAL INVESTIGATION

1986 – 15 year-old Dawn
Dawn Ashworth was
murdered in Leicestershire,
UK

17 year-old Richard Buckland
was charged with the murder

Geneticist, Alec Jeffreys at
the University of Leicester
had stumbled the knowledge
that DNA extracted from cells
could be used to identify
individuals

DNA IN THE FIRST CRIMINAL INVESTIGATION (CONT.)



PEOPLE VS. CASTRO, 1987

The first serious challenge to the admissibility of DNA

In 1987, Vilma Ponce, her unborn child, & 2 year-old were brutally stabbed to death in the Bronx

There were blood splatters throughout the crime scene & a single drop of blood near the door indicating the killer had cut himself

The police took the blood from the crime scene to a private lab

Within 48 hours, the police identified a suspect, Joseph Castro, who had a fresh cut on his hand & blood on his watch

Castro was charged shortly after his interview

PEOPLE VS. CASTRO (CONT.)

The New York Supreme Court conducted a 12-week pre-hearing to determine if the blood collected from the crime scene & the watch would be admissible at trial

After the hearing, the Judge determined that:

- The DNA tests could be used to show that the blood on Mr. Castro's watch was not his.
- But due to procedural problems, the tests could not be used to show that the blood was that of his victim's.

Regardless, the defendant, Castro was found guilty.

DNA DEVELOPMENTS OVER THE PAST 30 YEARS

1992 – The Establishment of the Innocence Project to support the rights of convicted felons who maintain their innocence

1994 – The Violent Crime Control & Law Enforcement Act – implemented to advocate for uniform standards to be used for forensic DNA testing

1994 – The Introduction of the FBI's Combined DNA Index System (CODIS) forensic DNA database – mandated by the DNA Identification Act of 1994

DNA DEVELOPMENTS OVER THE PAST 30 YEARS

DNA Databases – maintained
by all 50 states

Late 1990's

- John Doe Warrants will be used to obtain a warrant & file criminal charges against a man identified in the warrant solely by his DNA profile

2004

- Justice for All Act signed by President George Bush – will strengthen the rights for convicted felons to obtain post-conviction DNA testing if they assert their innocence

PICKUP LOCATIONS

Key:

Blue:

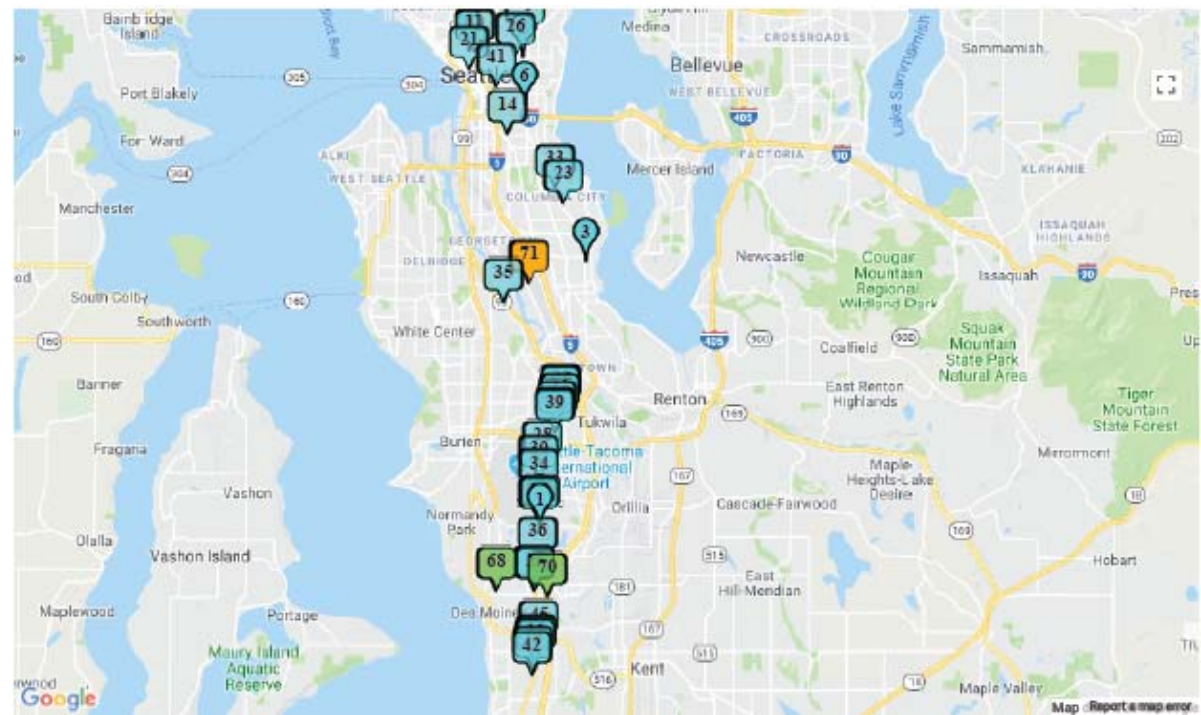
Last Location
Seen, or Known
Pickup Location

Green:

Ridgeway Residences

Orange:

Workplace

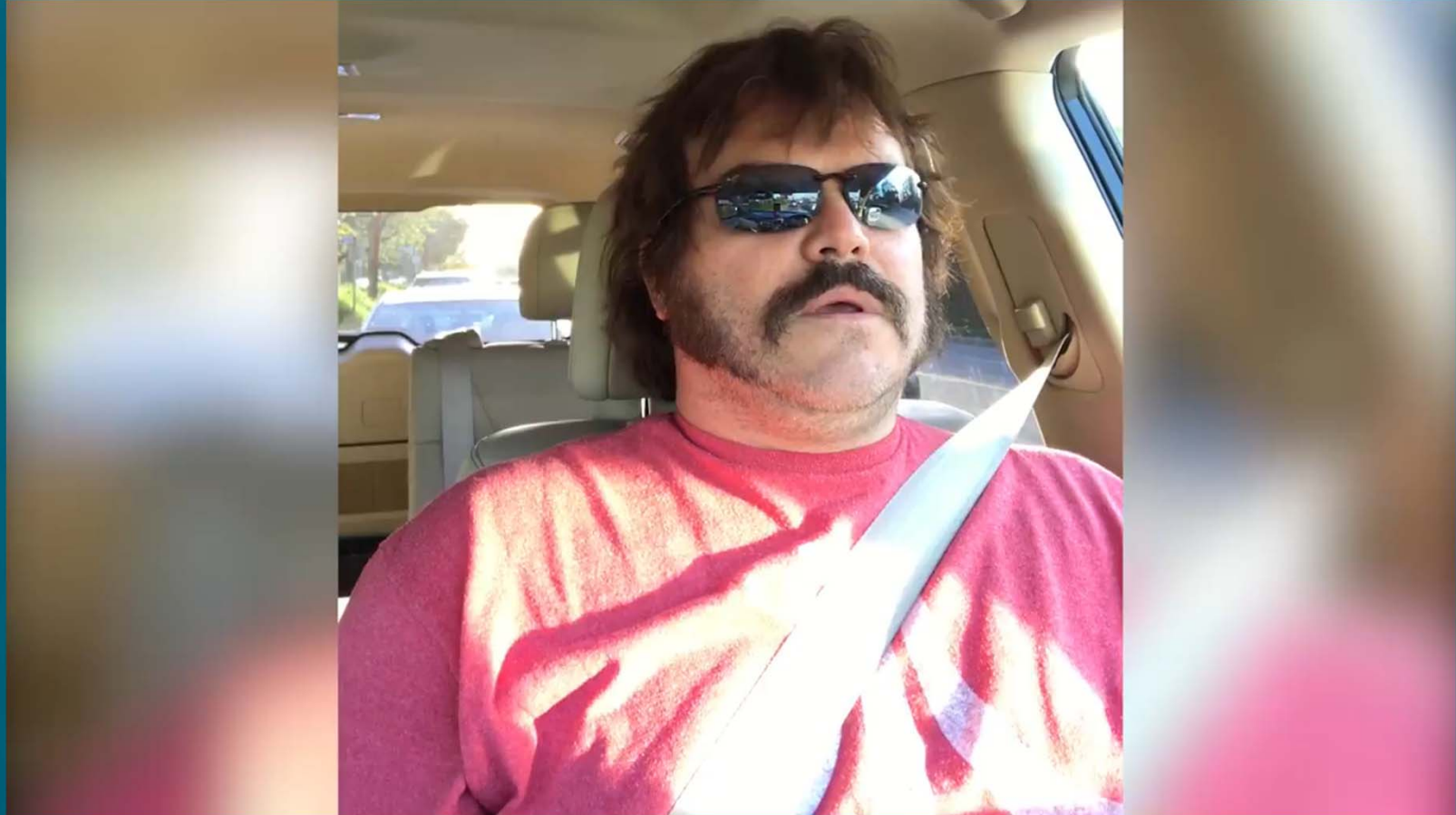


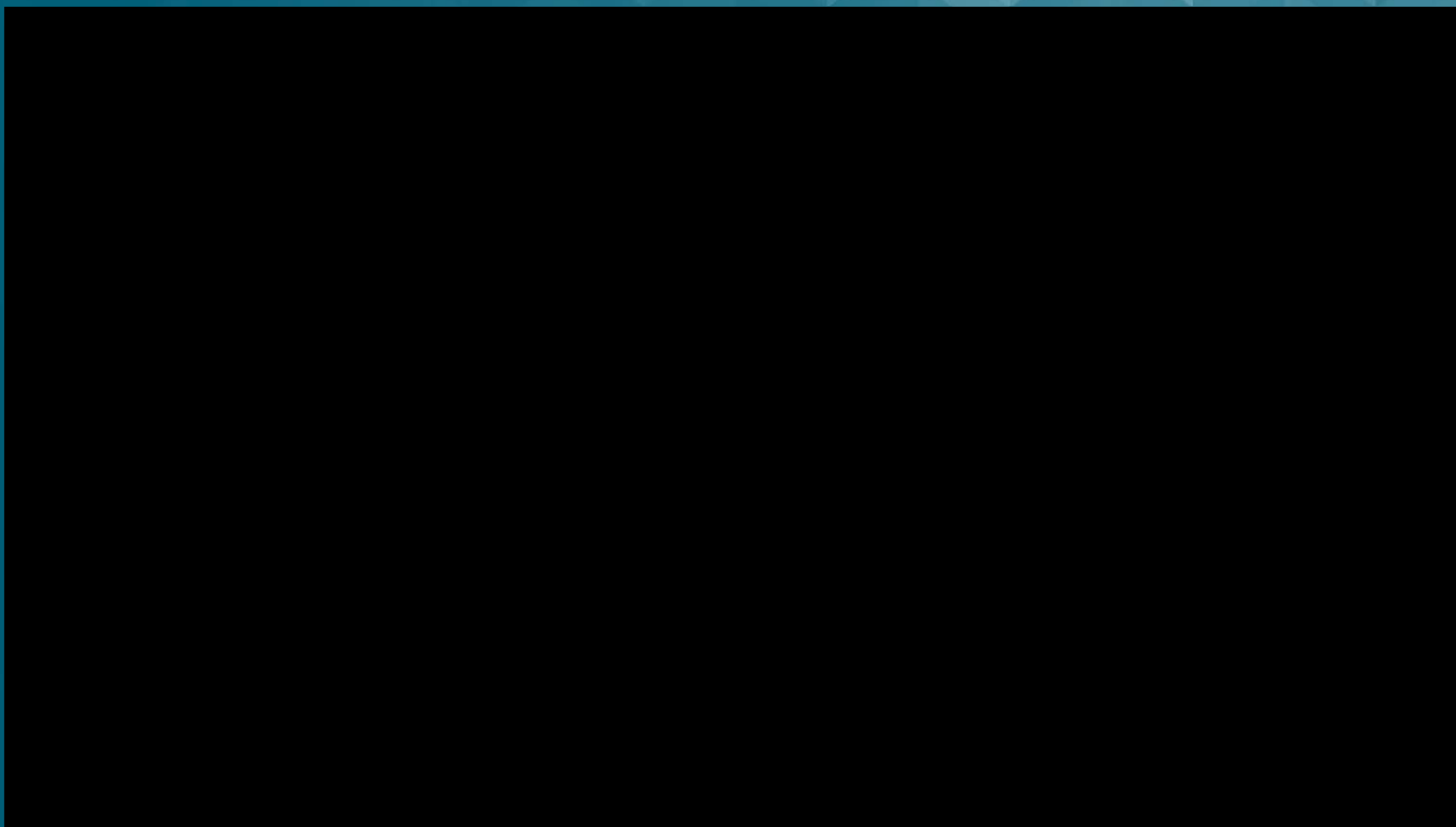
&



The background of the slide is a solid orange color with a subtle, repeating chevron or zigzag pattern in a slightly darker shade of orange. The pattern is composed of many small, interlocking V-shapes that create a textured, three-dimensional effect.

LIMITS OF NEW TECHNOLOGIES IN SOLVING CRIMES





TESTING AND MARIJUANA DUI

No reliable or standard chemical test for marijuana exists

Drug Recognition Expert (DRE) Protocol

- The DRE protocol is a standardized and systematic method of examining a Driving Under the Influence of Drugs (DUID) suspect to determine the following: (1) whether or not the suspect is impaired; if so, (2) whether the impairment relates to drugs or a medical condition; and if drugs, (3) what category or combination of categories of drugs are the likely cause of the impairment.

In *State v. Rambo*, the Court of Appeals, Brewer, J., held that police officer's opinion that defendant had driven while under the influence of a controlled substance was admissible as nonscientific expert opinion evidence. ***State v. Rambo*, 250 Or. App. 186**

STANDARDIZED FIELD SOBRIETY TESTS (SFSTS)

The administration of field sobriety tests is a search. *State v. Nagel*, 320 Or 24, 880 P2d 451 (1994). In the absence of a warrant, the administration of field sobriety tests may be justified by probable cause and exigent circumstances. *State v. Nagel*, 320 Or 24.

A defendant's refusal to consent to field sobriety tests cannot be used to establish probable cause to believe that the defendant is intoxicated. *State v. Gilmour*, 136 Or App 294, 901 P2d 894, rev den, 322 Or 360 (1995).

BLOOD ALCOHOL CONTENT TESTING (BAC)

State v. Burshia, 201 Or App 678 (2005)

- Officer conducted a DUI investigation, believing that the defendant was under the influence of a controlled substance, not alcohol. The court ruled that the officer had probable cause to believe that the defendant had committed the crime of DUI, which includes driving under the influence of controlled substances. Further, it was likely that a breath test would reveal evidence of that crime; a 0.00% result is evidence that the defendant was under the influence of something other than alcohol.

State v. Hedgepeth 290 Or App 399

- The Oregon Court of Appeals reversed a DUI conviction because police administered the breath test almost 2 hours after the traffic stop. Mr. Hedgepeth registered a .09, but the Court of Appeals held that the prosecution did not present sufficient evidence to demonstrate that his BAC was .09 at the time he was driving two hours earlier. That holding will likely impact future marijuana DUI cases where the link between the time of drug use and the amount of drug detected in your blood is even more complicated.

REFUSAL

- When a defendant is subject to arrest for DUI and the administration of FSTs is reasonable in time, scope, and intensity, exigent circumstances will justify the warrantless administration of FSTs.
 - **State v. Mazzola, 356 Or 804 (2015).**
 - The officer's subjective determination of probable cause must be made before the administration of the tests. **State v. Rutherford, 160 Or App 343 (1999)**
- Oregon's Implied Consent Law, ORS 813.100, regulates the circumstances under which a police officer may lawfully obtain a blood sample for use in a DUI prosecution.
- In 2013, the legislature amended the Implied Consent Law to specifically state that "[n]othing in [the implied consent statute] precludes a police officer from obtaining a chemical test of the person's breath or blood through any lawful means for use as evidence in a criminal or civil proceeding including, but not limited to, obtaining a search warrant." Accordingly, obtaining a blood sample based only upon probable cause and exigent circumstances no longer violates the implied-consent law.
 - See **State v. Moylett, 313 Or 540 (1992).**
 - And, in any event, with the enactment of ORS 136.432 and ORS 813.320(2), a violation of the implied-consent law does not require suppression.

STATUS

States do use a blood test to test for a marijuana DUI, but the test is widely viewed as an inaccurate measure of impairment. Scientists continue to work on breath, blood, and saliva tests to measure recent marijuana use. Until then, the tests law enforcement uses today are really not much more accurate than the tests administered by Officer Beckerman in today's COPS episode.

