

# POLYGRAPH: AN INVESTIGATIVE TOOL





# WHAT IS POLYGRAPH

- ◆ Instrument to capture and process physiological information from sensors
- ◆ Produce charts from the data
  - Breathing reactions
  - Galvanic Skin Response
  - Cardio: blood pressure and other parameters
  - Movement
  - Pulse oximeter



# WHY DOES IT WORK

- ◆ Develop moral code when young
  - Don't lie
  - Don't steal
  - Don't hurt anyone
  - Don't cheat anyone



# FIGHT OR FLIGHT

- ◆ People are afraid of being caught lying for something that can get them into trouble
- ◆ Physiological reactions occur instantaneously
- ◆ Reactions cannot be stopped



# ANALOG OR DIGITAL





# BRAIN GENERATES INSTANT REACTIONS

- ◆ When you tell a lie:
  - Breathing patterns change
  - Electrical activity at cellular level changes
  - Heart rate and blood pressure change



# PSYCHOLOGICAL SET

- ◆ Choice: Relevant questions and Comparison questions
- ◆ Will focus of what presents most jeopardy
- ◆ Guilty: will react to relevant questions
- ◆ Innocent: will react to comparison questions



# HISTORY OF POLYGRAPH

- ◆ EIGHTY YEARS OF HISTORY
- ◆ AMERICAN INVENTION
- ◆ POLICE SERVICE EVERYWHERE
- ◆ FOREIGN INTELLIGENCE AGENCIES
- ◆ EVERY STATE EMPLOYS TECHNIQUE





# CASES FOR POLYGRAPH

- ◆ Suspects in criminal investigation
- ◆ Victims of crime
- ◆ Plea bargains to verify statements
- ◆ Intelligence agencies looking for spies
- ◆ Security clearance vetting
- ◆ Civil investigations
- ◆ Domestic relations



# AN INVESTIGATIVE TOOL

- ◆ Clear the innocent
- ◆ Identify the guilty
- ◆ Reactions occur:
  - If you lie to the examiner
  - If you fail to disclose guilty knowledge
  - If you exaggerate any facts
  - If you fail to disclose relevant information

# POLYGRAPH SUITE





# POLYGRAPH IS BEST TOOL

- ◆ When no physical evidence, such as sexual abuse cases
- ◆ Many individuals to be questioned
- ◆ Specific, clear cut issues



# CASE TYPES

- ◆ CIVIL AND CRIMINAL
- ◆ SUSPECTS
- ◆ VICTIMS
- ◆ DEFENSE CASES
- ◆ SEXUAL OFFENDERS
- ◆ INTELLIGENCE AND SECURITY



# POLYGRAPH INSTRUMENT



# ATTACHMENTS: PNEUMO, GSR, CARDIO





# TEST PROTOCOL

- ◆ Explain how polygraph works
- ◆ Background information and waivers
- ◆ Explain test procedure
- ◆ Discuss case
- ◆ Formulate questions after pre-test interview
- ◆ Review all questions
- ◆ Run at least two test series and validity test
- ◆ Score charts, review with examinee
- ◆ Post-test interview/interrogation





# TYPES OF TESTS

- ◆ YOU PHASE SPECIFIC ISSUE
- ◆ S-K-Y
- ◆ PEAK OF TENSION
- ◆ EXPLORATORY
- ◆ SEXUAL OFFENDERS



# RELEVANT QUESTION FORMULATION

- ◆ Single issue questions; not compound
- ◆ Yes or No answer; no narrative response
- ◆ No ability to rationalize the answer
- ◆ Must be jeopardy for lying
- ◆ Cannot answer the question truthfully and yet be lying to the target issue
- ◆ Most difficult component of test





# COMPARISON QUESTIONS

- ◆ Must pose an equal threat to Relevant questions
- ◆ Test subject must focus on the most important question: either relevant or comparison



# QUESTION SERIES: SPECIFIC ISSUE TEST SERIES

- ◆ 13: Irrelevant
- ◆ 25: Outside issue
- ◆ 39: Pseudo-Relevant
- ◆ 46: Comparison/control question
- ◆ 33: Relevant question
- ◆ 47: Comparison/control question
- ◆ 35: Relevant question
- ◆ 48: Comparison/control question
- ◆ 26: Outside issue



# QUESTION SERIES: S-K-Y

- ◆ 13: Irrelevant question
- ◆ 25: Outside issue
- ◆ 39: Pseudo-relevant
- ◆ 46: Comparison
- ◆ 31: Do you SUSPECT
- ◆ 32: Do you KNOW
- ◆ 33: Did YOU
- ◆ 34: Comparison Question
- ◆ 26: Outside issue



# CHART INTERPRETATION

- ◆ At least two complete test series for each issue
- ◆ Numerical scoring technique developed by Cleve Backster
- ◆ Each ZONE is assigned a value
- ◆ Results are based upon composite score
- ◆ Each test: about four minutes in length



# CASE EXAMPLES

## ◆ CHAD RIEDEL

- Killed father in farmhouse arson
- Burned down own house
- Was not a suspect in the fire

## ◆ BRET REIDER

- Honor student and athlete
- Parents: both professionals
- Killed mother in premeditated murder





# RIEDEL HOMICIDE

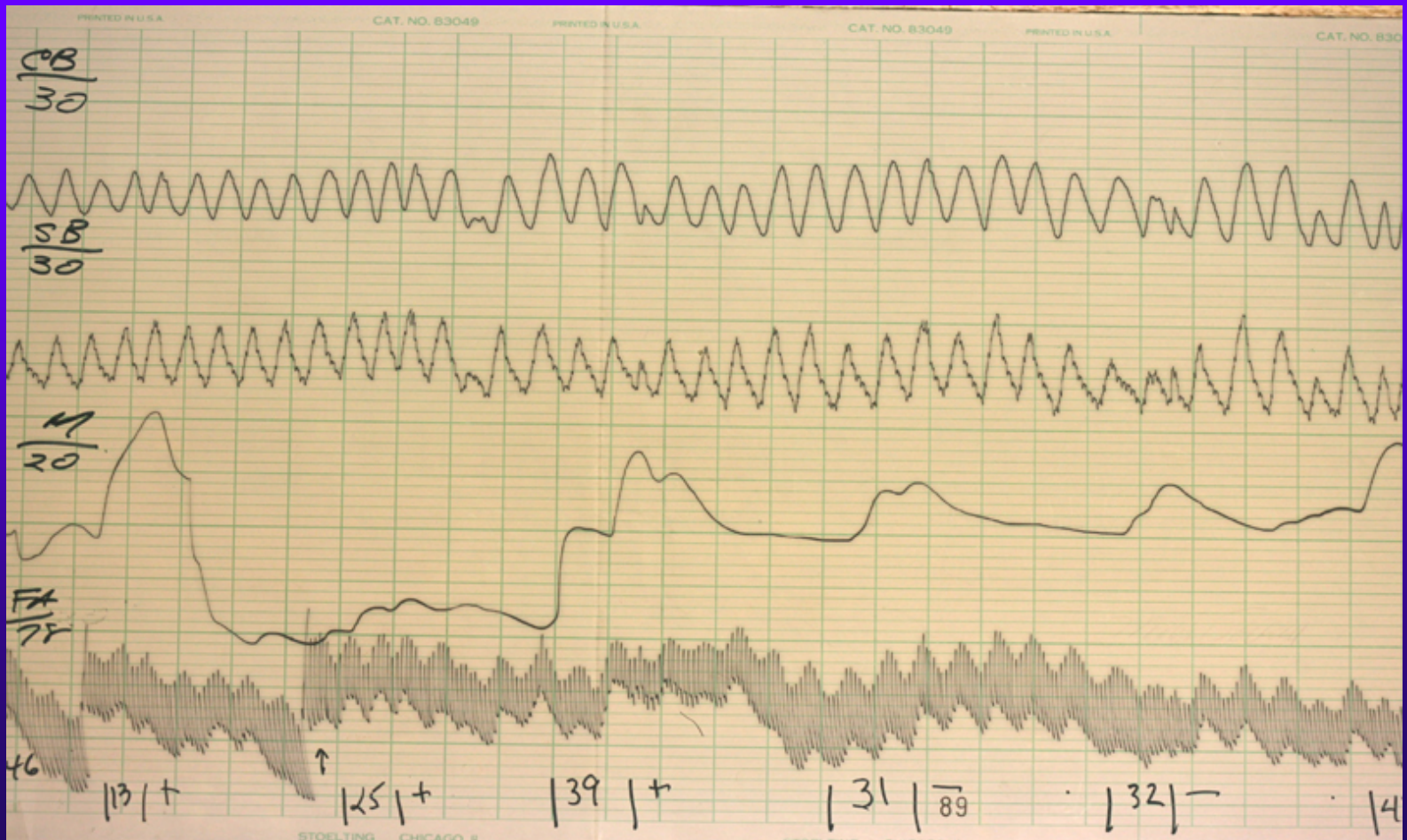
- ◆ 20 year old kid
- ◆ Lived in rural South Dakota
- ◆ Lived with parents and sisters at farm
- ◆ Worked as informant for Sheriffs Office
- ◆ Had been in minor trouble
- ◆ Farm house burns down
- ◆ Chad is trapped in basement room in fire
- ◆ Rescued by father



# FORENSICS

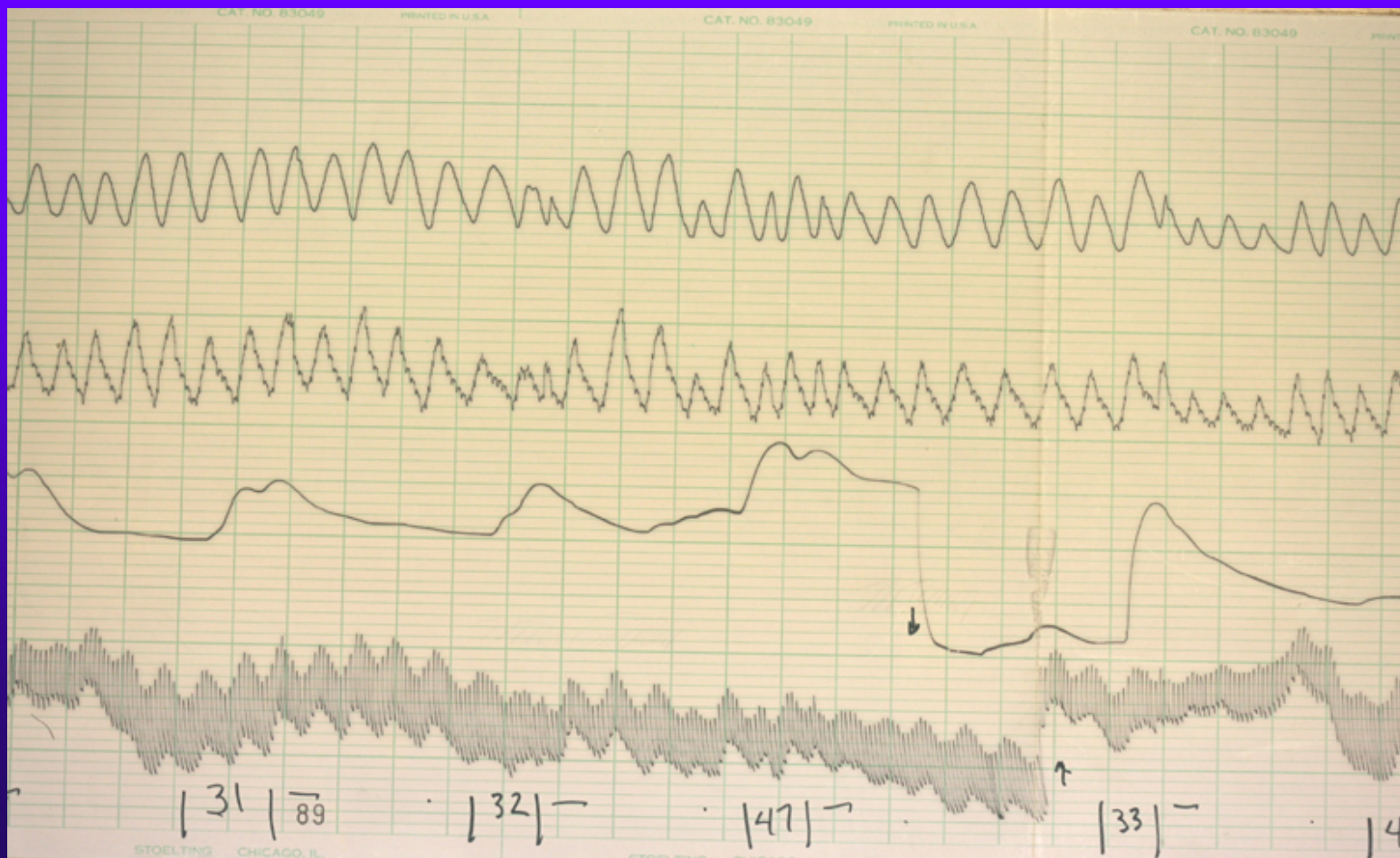
- ◆ Fire was an Arson
- ◆ No suspects
- ◆ Thought it might be someone with a grudge against Chad
- ◆ Threatening note left on van in yard
- ◆ Note written with crayons on paper bag, tied to windshield

# CHART #1: SKY TEST

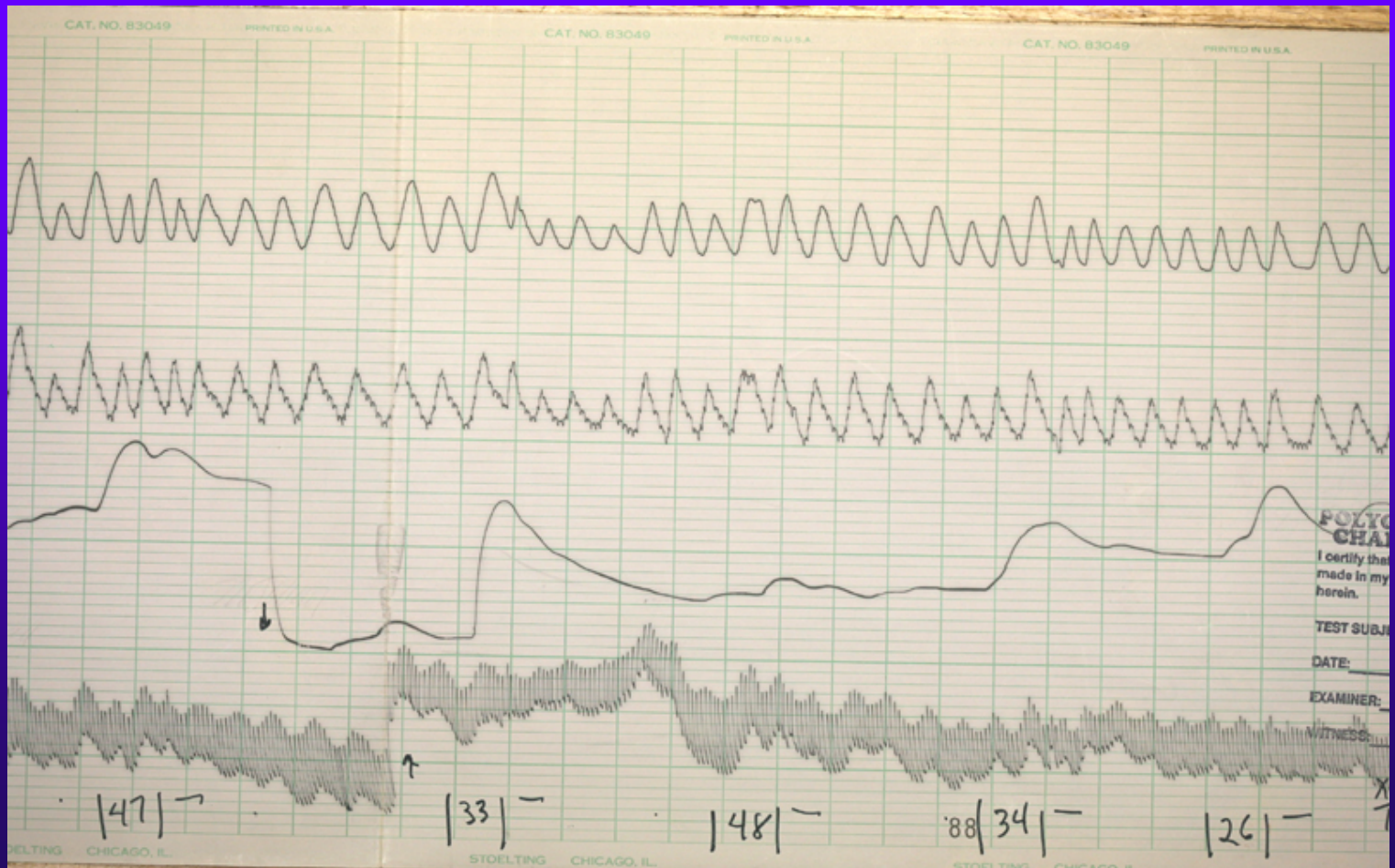




# SKY TEST

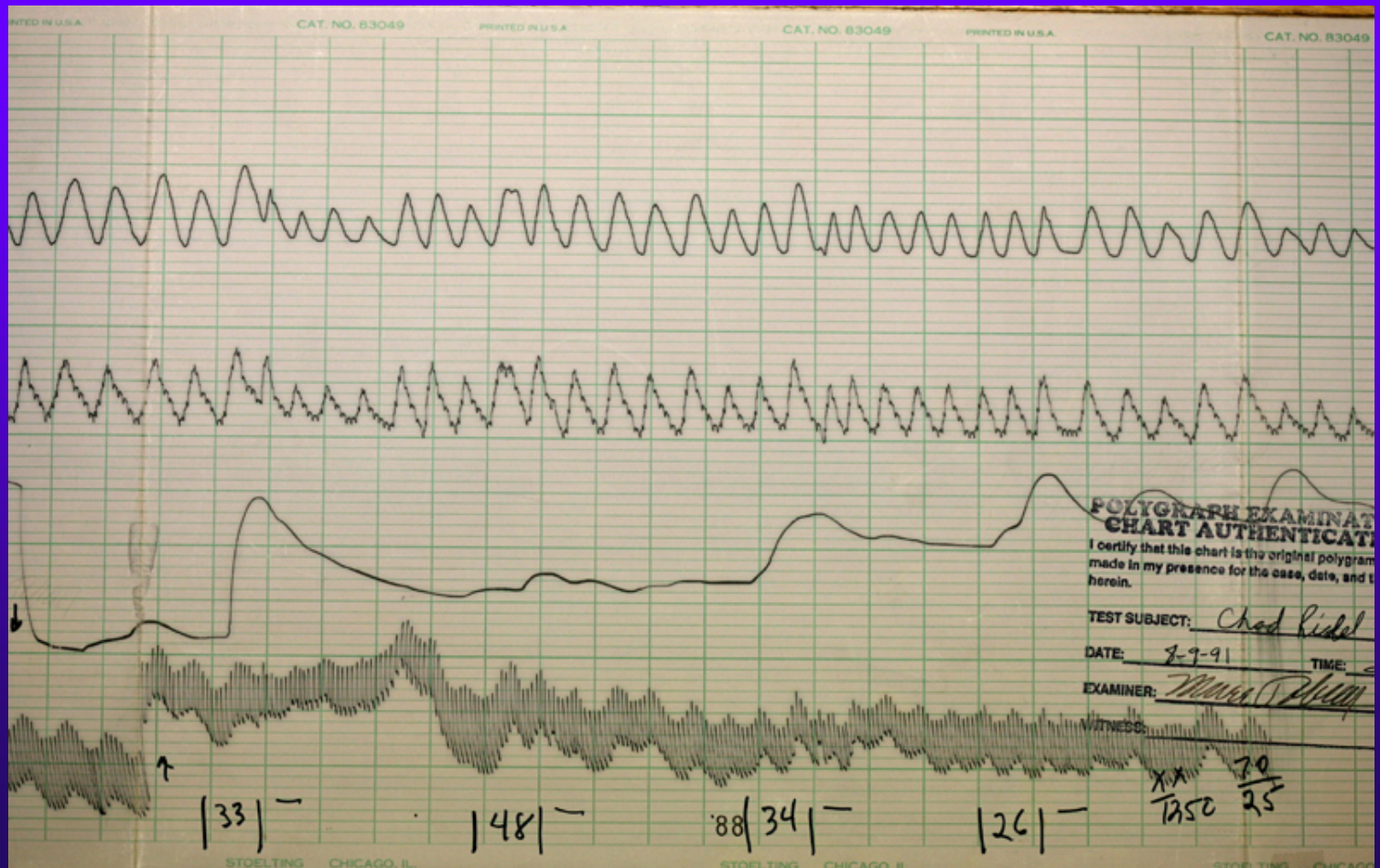


# SKY TEST





# SKY TEST



# CHAD RIEDEL POLYGRAPH





# POST-TEST INTERROGATION

- ◆ Chad started the fire
- ◆ Was trying to kill himself
- ◆ Did not want his father to rescue him
- ◆ Father died four hours after polygraph
- ◆ Chad plead guilty to manslaughter



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