

**Evidence Search Training Course
for Metal Detectorist**

**Sacramento Valley Detecting Buffs
SVDB
Volunteer Evidence Search Program**

Evidence Search Training Course for Metal Detectorist

Course Co-Authors

- **Paul Long**, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov
- **Jim Milbradt**, Retired California Highway Patrolman
Email: jwmilbradt@cwo.com
- **Lee Wiese**, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Course Outline

- ✓ **Evidence Handling** by Paul Long
- ✓ **Search Patterns, Techniques and Responsibilities** by Lee Wiese
- ✓ **Preparing for Court** by Jim Milbradt



Placer County

Sheriff - Coroner - Marshal

Volunteer

Evidence Handling

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Who am I?

- **Placer County Sheriff's Office detective for 5 years.**
- **Digital evidence forensic examiner.**
- **Search and rescue coordinator.**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Intention

- **Not to make you evidence technicians.**
- **PLEASE DON'T TOUCH THE EVIDENCE.**
- **Call for us if you find something.**
- **We want you to understand the context of a crime scene.**
- **Life is full of unforeseeable circumstances..**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Evidence Defined

Reliable statements that inform the court about the matter under consideration.

- **Foundation**
 - proper collection
 - proper testimony
- **Reliability**
 - chain of custody
 - proper maintenance

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Crime Scenes

- **Controlled Access Area**
 - Especially in era of DNA evidence
- **Inner Perimeter**
 - Primary detectives and evidence techs only
 - Logged in/out
 - Probably have to testify in court
- **Outer Perimeter**
 - Law enforcement and designated others only
 - Where you want to be

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Crime Scenes

If a search needs to be performed in inner perimeter, it will usually be after major crime scene processing is completed.

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

On Scene Rules

- **No talking to press (refer to deputy).**
- **Hold what you see and learn in strict confidentiality.**
- **Absolutely no photography.**
- **Don't initiate conversations with anyone other than your point of contact.**
- **If there's any doubt, ask...**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Evidence Collection

- **Find**
- **Photograph**
- **Document**
- **Collect**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Evidence Photographs

Our evidence technicians photograph all our major crime scenes.

- **overall photos**

Show overall scene and relationships between *areas*.

- **medium distance photos**

Show relationship of items to area.

- **photos of objects in place**

Capture state and details of object before being handled.

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Evidence Photos

- **Only one official set, taken by our evidence division.**
- **Otherwise, confusion can develop.**
- **Bad photographs can introduce artifacts of shadow and light.**
- **These can be used to discredit perfectly legitimate evidence!**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Evidence Documentation

Before collections, notes are taken:

- date/time
- location
- description of item
- who found it
- who collected it
- what was done with it.

Locations are measured from known locations in side major crime scene. Elsewhere, GPS usually has to suffice.

Average your waypoint if possible!

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Evidence Collection

- **Mark location (flag, flagging, chalk, paint).**
- **Don't touch the item ungloved.**
One pair of gloves per item on a violent crime scene (DNA)
- **Collect items into paper versus plastic**
Biological or wet items dry in paper but rot in plastic
- **Reality: I can't think of a situation where we would ask you to collect evidence.**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

- **Callouts**
 - callout will be via your points of contact
 - it will almost always be inconvenient
 - you should receive a single point of contact and a contact plan
 - plan on being self-sufficient for 6-12 hours
- **On arrival, someone will designate the area to be searched.**

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

In General

Notify us immediately if:

- you find evidence
- you're unsure if you've found evidence
- someone gets hurt
- there's any kind of conflict with the land owners or anyone else
- you need something
- you plan on modifying the terrain (we may have to ask the landowner or even get a court order)

Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov



Placer County

Sheriff - Coroner - Marshal

Any Questions?

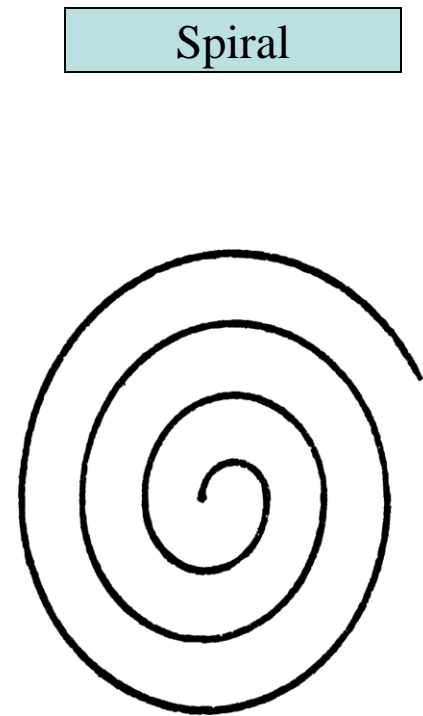
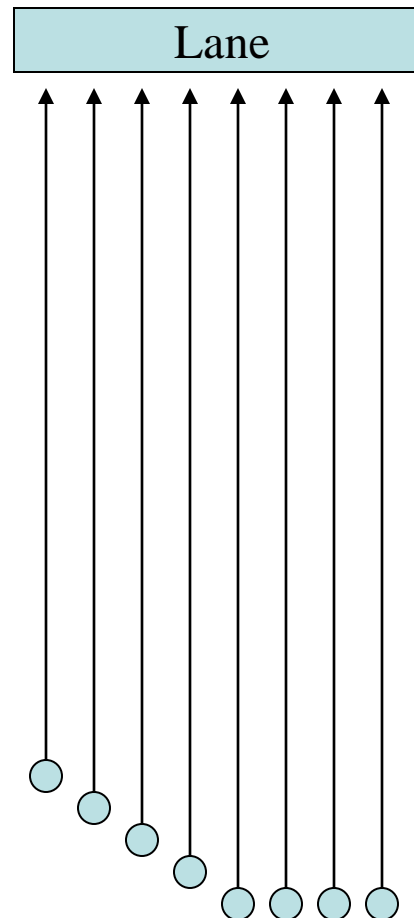
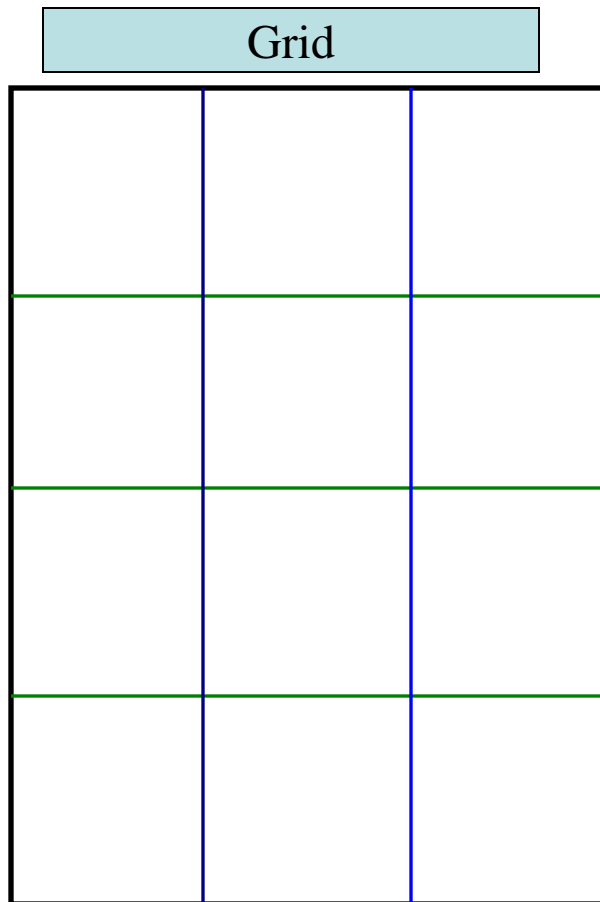
Paul Long, Detective Placer County Sheriff Office
Email: plong@placer.ca.gov

Evidence Search Training Course for Metal Detectorist

- ✓ **Search Patterns**
- ✓ **Search Techniques**
- ✓ **Responsibilities**

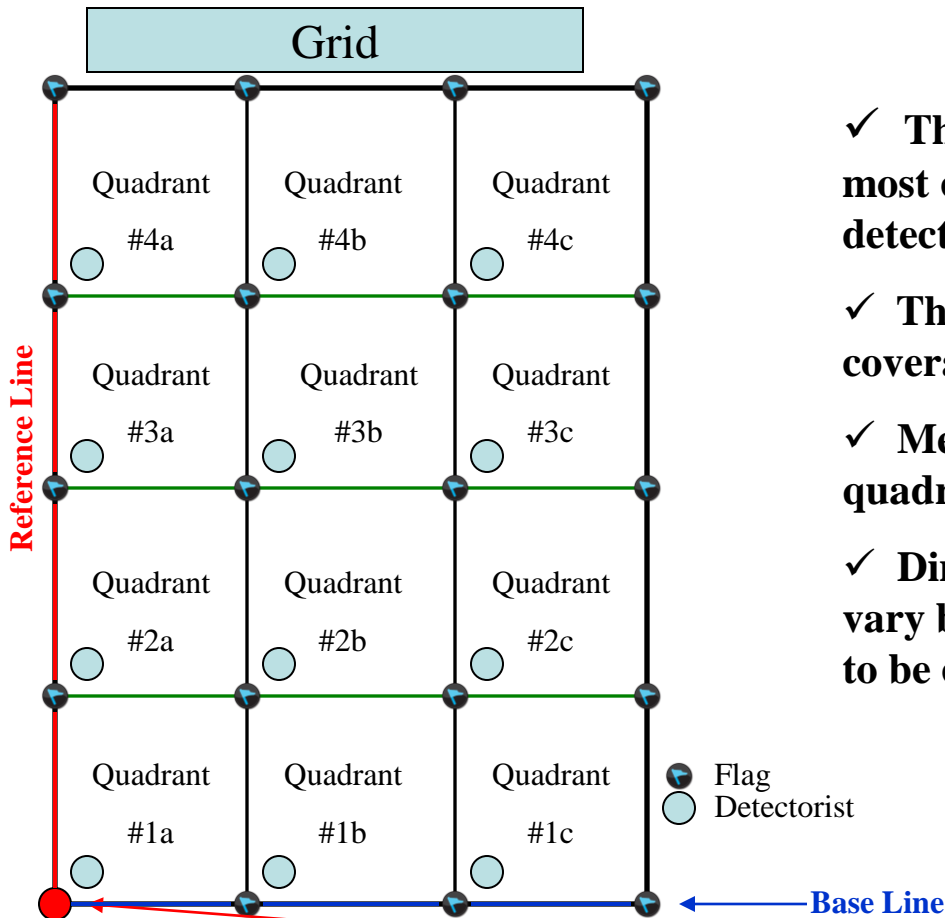
Evidence Search Training Course for Metal Detectorist

Three Search Patterns



Evidence Search Training Course for Metal Detectorist

Grid Search Pattern



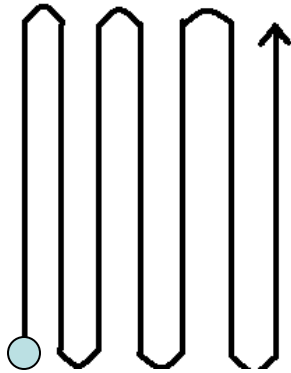
- ✓ The Grid Search Pattern is probably the most common pattern to use while using metal detectors to search for evidence.
- ✓ This pattern should provide for complete coverage of any given search area.
- ✓ Metal Detectorist are assigned a search quadrant in the grid.
- ✓ Dimensions of the grid & quadrants can vary based on the search area size that needs to be covered.

Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Grid Search Technique

Overlapping Pattern



First Pass
Vertical Sweep

○ Detectorist

✓ This pattern can be used for any type of metal detecting. The benefits are that each pass overlaps on the previous pass, leaving no undetected ground.

✓ Each Detectorist must start in same quadrant location on the grid to minimize detector interference.

✓ To locate very small objects may require TWO passes in the same quadrant to gain a thorough search.

✓ Always overlap the search coil on each sweep of the coil.



Second Pass
Horizontal Sweep

Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

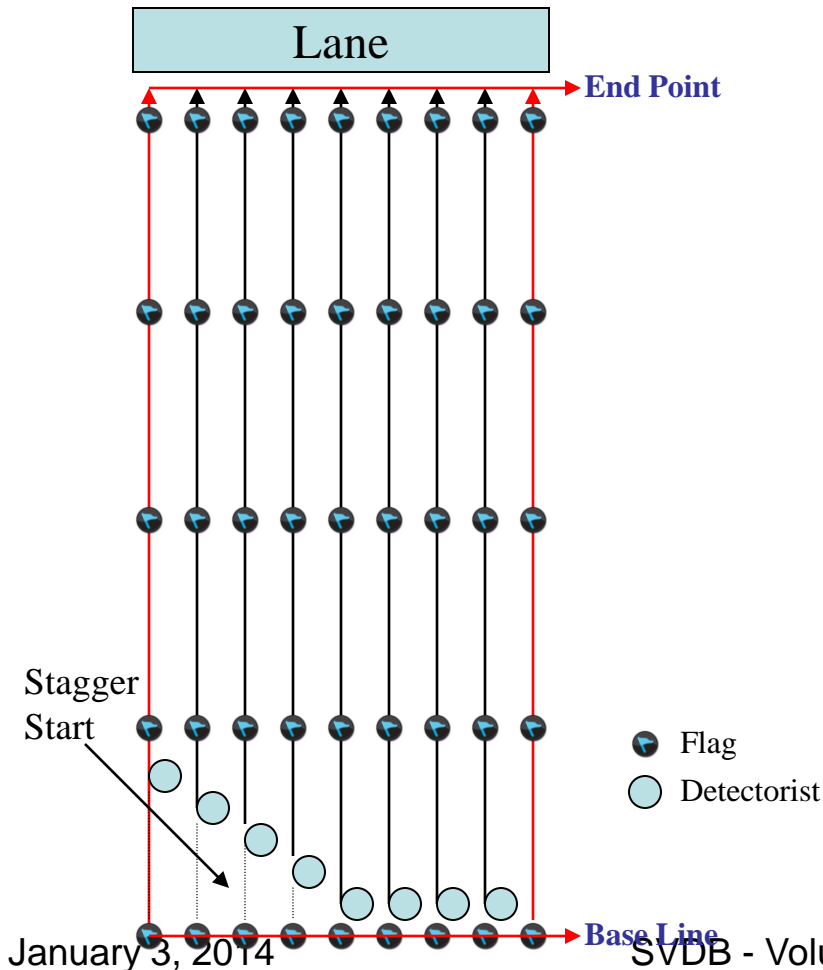
Grid Example



Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Lane Search Pattern



- ✓ The Lane Search Pattern requires that lanes be set up across the evidence search area. This pattern may be used where the search area is very long.
- ✓ These lanes should be as wide as the detectorist coil swing. Always overlap the search coil on each sweep of the coil.
- ✓ Each lane is to be assigned to one detectorist.
- ✓ Detectorist must start in a stagger fashion to minimize detector interference.
- ✓ Lanes should be clearly marked with Flags as to avoid missing any portion of the lane.
- ✓ It may be useful to outline the search area with crime scene tape. This will clearly establish the boundaries of the Lane Pattern Search Area.

Evidence Search Training Course for Metal Detectorist

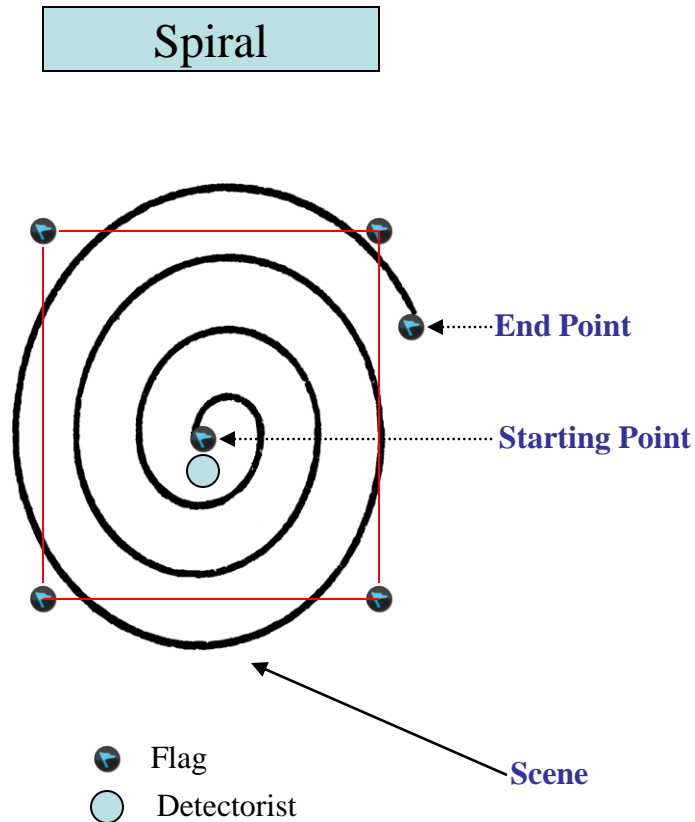
Lane Example



Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Spiral Search Pattern



- ✓ Used mostly when conducting a search for objects in a small concentrated outdoor scene.
- ✓ When using this method, the search detectorist will start at a designated central area of the scene and follow a spiral course outward from the central area until the perimeter is reached.
- ✓ The search area must be larger to cover the complete scene since the search pattern is circular.
- ✓ Always overlap the search coil on each sweep of the coil.

Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Club Team Leader and Contact Responsibilities

The Club Team Leader:

- ✓ is the contact between the law enforcement agency and the club.
- ✓ contacts search members (*detectorist*) and relays date, time and place of search.
- ✓ get the clubs search equipment kit together. (*flags, gps, tape measure, water, first aid kit*)
- ✓ at the scene, lays out the search pattern.
- ✓ assigns detectorist to the grid quadrants or search lanes.
- ✓ coordinates or provides final instructions to search team.
- ✓ provides flags to mark potential targets to be investigated. (*never place flag directly on target*)
- ✓ performs follow-up with detectorist while search is in progress.
- ✓ documents the necessary information on the work sheet for future retrospect and possible court appearance.

Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Team Leader Work Sheet

Name of Search Scene: _____	Grid or Lane Assignment:
Date of Search: _____	Q1a _____
Time of Search: _____	Q1b _____
What is the item to be found: _____	Q1c _____
_____	Q2a _____
Sample available to tune detectors: Yes or No	Q2b _____
Was Item found? Yes or No	Q2c _____
If Yes, quadrant number: _____	Q3a _____
What was the item found: _____	Q3b _____
Time item found: _____	Q3c _____
Team Leaders Name: _____	Q4a _____
Leaders Signature: _____	Q4b _____
	Q4c _____

Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Team Member (Detectorist) Responsibilities

Team Member or Detectorist is to:

- ✓ **bring one or two discriminating detectors.** (*if it's a water search, the detector must be waterproof*)
- ✓ **bring water and food for at least six to eight hours of search time.**
- ✓ **dress according to time of year and terrain to be search.** (*coats, boots, gloves, etc*)
- ✓ **use headphones.** (*bring spare batteries*)
- ✓ **use proper coil size which will depend on target to be located.** (*small coil for trashy areas*)
- ✓ **not dig or use manual pin point tools in search scene.**
- ✓ **overlap search coil swings for full search area coverage.**
- ✓ **document the necessary information on work sheet for future retrospect and possible court appearance.**

Evidence Search Training Course for Metal Detectorist

Team Member (*Detectorist*) Worksheet

Name of Search Scene: _____

Date of Search: _____

Time of Search: _____

Brand of Detector used: _____

Detector Program used: _____

Quadrant Assigned: _____

Sample available to tune detector: Yes or No

What is the item to be found: _____

Was Item found? Yes or No

Where found in the quadrant: _____

Name of Detectorist: _____

Signature of Detectorist: _____

Lee Wiese, Ex-Law Enforcement and Management
Email: lee.01ca@yahoo.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court Introduction

- **Successful trial performance is directly related to successful case preparation.**
- **The proper point and time to begin preparation for trial is upon receipt of the initial call for service.**
- **Handle every call as though it will go to trial.**

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court On – Scene Preparation

- **Conduct sound preliminary investigation.**
- **Protect the scene and physical evidence.**
- **Follow steps outlined by law enforcement representative.**

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court Witness Preparation

- **Preparing a witness for court begins at the scene.**
- **Physical evidence should be carefully marked and processed by law enforcement representative.**
- **Witness interview(s) will be conducted and reviewed prior to court.**
- **Remember, witnesses will be asked to testify in court. Their willingness to do so is often related to their assessment of the investigating officer. Work together.**

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court Prior to Trial

- **Officers will generally want to meet with witnesses to review the case and its presentation.**
- **Officers will review and verify identification of the physical evidence.**
- **Witnesses should be advised that the court date is growing near.**
- **Witnesses should be advised of the appropriate courtroom attire and demeanor.**

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court Courtroom Attire

- **Witnesses should conform to the basic rules of good courtroom demeanor.**
- **Be on time.**
- **Dress conservatively in business attire.**
- **Be neatly groomed.**

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Preparing for Court Responding to Attorney Questions

- **The witness should maintain good posture on the stand.**
- **Respond to all questions honestly and with courtesy.**
- **Responses should be directed at the person asking the question.**
- **All answers should be concise and to the point.**

By: Jim Milbradt, Retired California Highway Patrolman
Email: jwmilbradt@cw.com

Evidence Search Training Course for Metal Detectorist

Next Step

**The next step in this course is putting to practice the details of
this course metal detecting in the field.**