



## Evidence Search Training Course for Metal Detectorist



## Volunteer Evidence Search Program 38 Slides

May 4, 2012

Metal Detecting Hobby Talk @  
<http://www.mdhtalk.org>

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## Evidence Search Training Course for Metal Detectorist



### Course Co-Authors

- **Paul Long**, Detective County Sheriff Office Email: [plong@placer.ca.gov](mailto:plong@placer.ca.gov)  
Sergeant Long has 17 years in law enforcement and spent 5 years as a detective. He has worked as a search and rescue coordinator for 12 years. He is currently a sergeant with the County Sheriff's Office.
- **Jim Milbradt**, Retired Highway Patrolman Email: [jwmilbradt@cwo.com](mailto:jwmilbradt@cwo.com)
- **Lee Wiese**, Ex-Law Enforcement, Management and Site Webmaster Email: [lee.01ca@yahoo.com](mailto: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



## Evidence Search Training Course for Metal Detectorist



### Evidence Handling by Paul Long Slides 4 - 16

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## Evidence Search Training Course for Metal Detectorist



### Introduction

#### Who am I?

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

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### **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..**

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### Evidence Defined

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

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

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### 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

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### Crime Scenes

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

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### 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...**

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### Evidence Collection is:

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

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### 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.

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### 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!**

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### 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!**

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### 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.**

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### In General

- **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.**

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### **Search Patterns, Techniques and Responsibilities** by Lee Wiese Slides 17 - 29

Lee Wiese, Ex-Law Enforcement and Management

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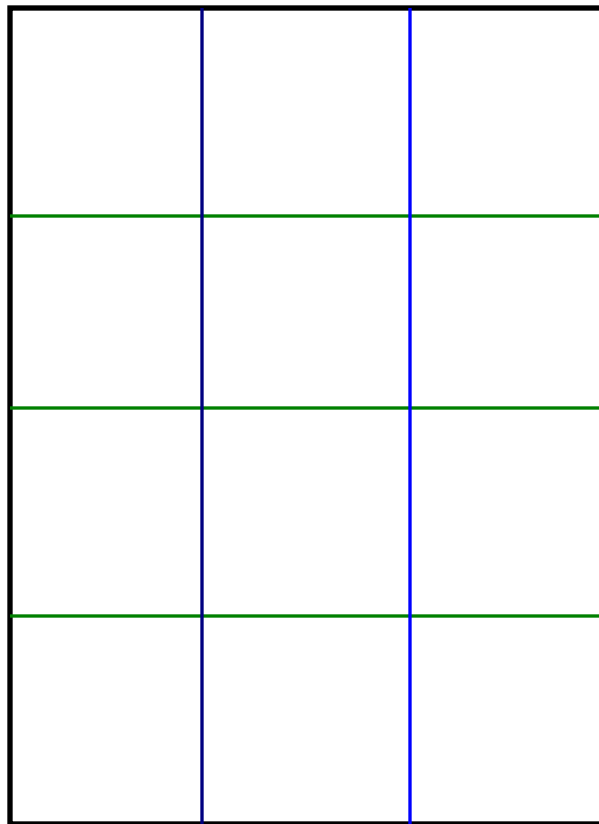


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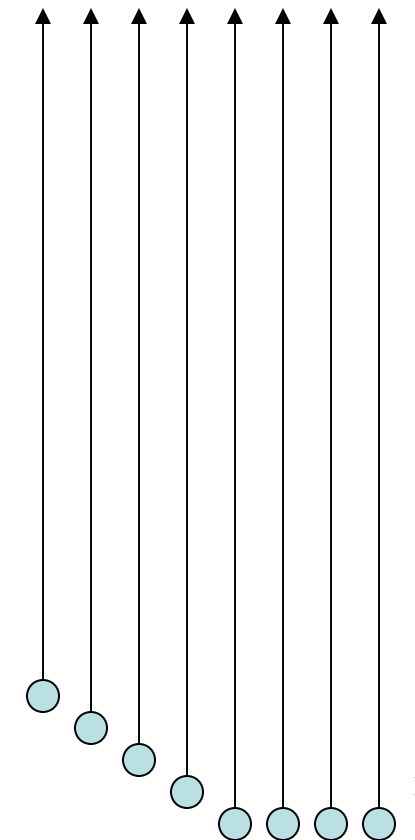
## Three Search Patterns



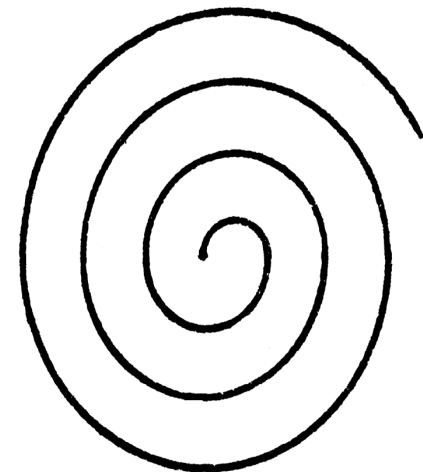
Grid



Lane



Spiral



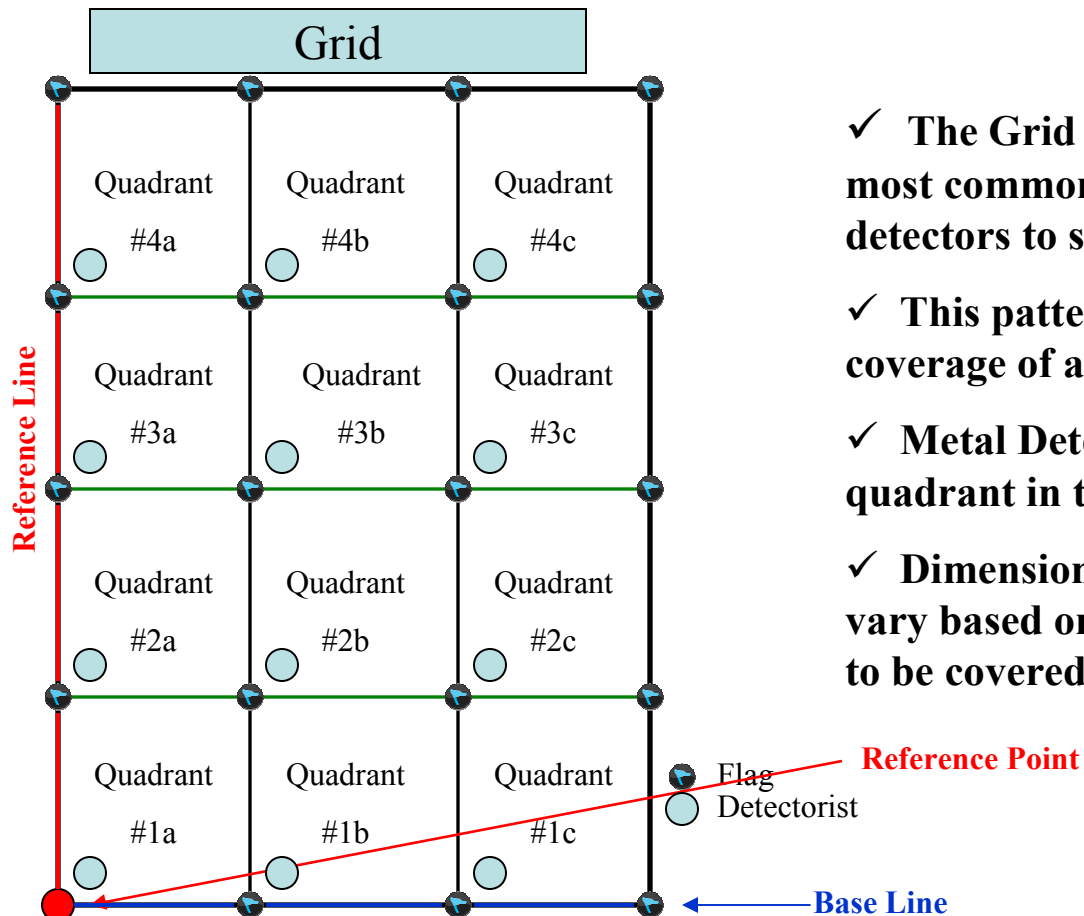
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## Grid Search Pattern



- ✓ 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.

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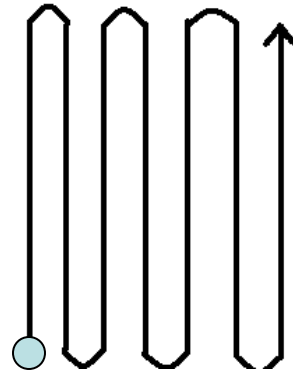


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## Grid Search Technique

### Overlapping Pattern



**First Pass**  
**Vertical Sweep**

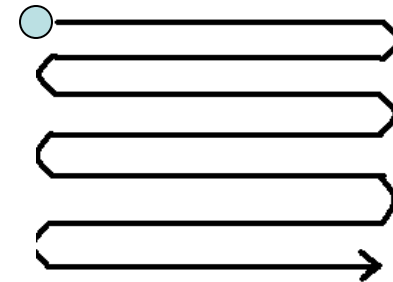
○ Detectorist

✓ 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**

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## Grid Example



**Note: Flags**

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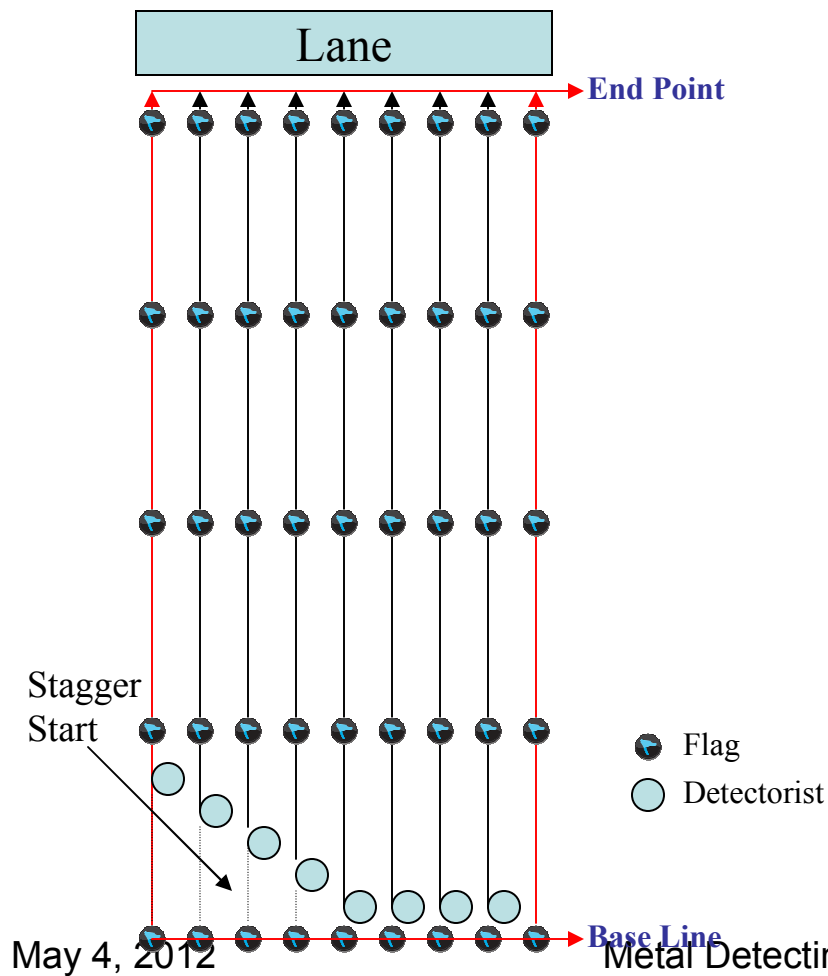
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## Lane Search Pattern



✓ 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.

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### Lane Example



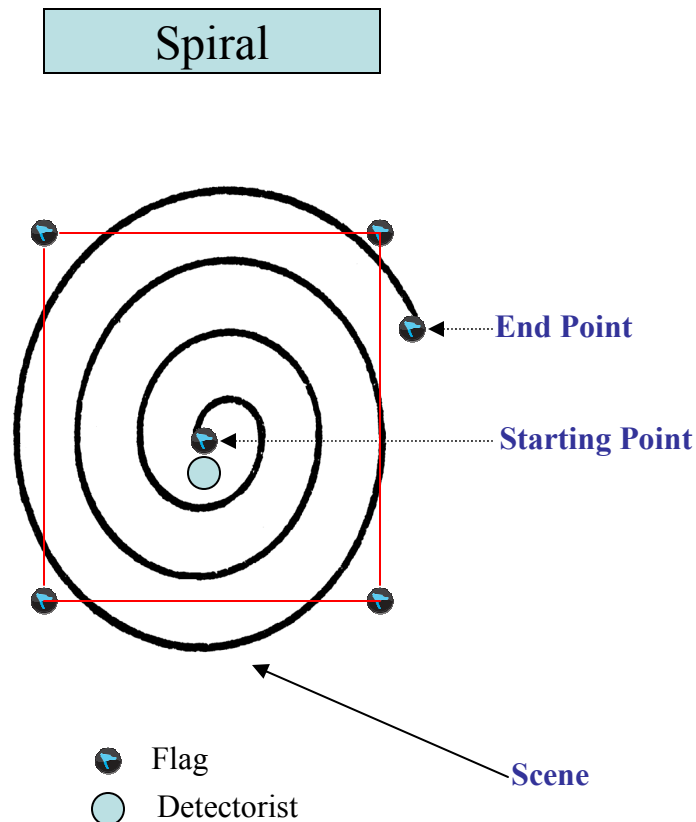
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### Spiral Search Pattern



✓ 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.

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## 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.

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## Team Leader Work Sheet

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

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### 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.**

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# 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:** \_\_\_\_\_

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### Search Team Support Kit

#### Kit Contents

- ✓ Flags Two Colored (200 – 300)
- ✓ Tape Measure 25 ft Plus
- ✓ Roll of Crime Scene Tape
- ✓ 25 – 50 Copies of all Forms & Pencils
- ✓ Bathroom Tissue
- ✓ Shovel
- ✓ First Aid Kit
- ✓ Case of Bottle Water (Not in Photo)
- ✓ Soft Carry Case for Support Kit



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### Preparing for Court by Jim Milbradt Slides 30 - 36

By: **Jim Milbradt**, Retired Highway Patrolman



## 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 Highway Patrolman











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### 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 Highway Patrolman





## 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.**



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