

AML HANDBOOK

TAB VII FIELD GUIDE

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Mining and Minerals Branch  
Land Resources Division-WASO  
National Park Service

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**CAUTION**

**ABANDONED MINES ARE HAZARDOUS**

There are risks of falling, roof collapse, bad air, radon (even if uranium was not mined), toxic materials, abandoned explosives, rotten ladders and supports, and animals that consider the mine their territory.

Mines are temporary features that were never intended to last for centuries. Roof spans and support were intended to last only long enough to get the ore out, and must be continuously maintained. Operating mines are ventilated; and once abandoned, the fans are shutdown and passages critical to air circulation often collapse.

FOR INVENTORY AND RECONNAISSANCE, DO NOT ENTER COAL MINES, VERTICAL OR NEAR VERTICAL OPENINGS, AND DO NOT ENTER OTHER MINES UNLESS SUBSTANTIAL JUSTIFICATION OVERRIDES SAFETY CONCERNS AND UNLESS PROPERLY EQUIPPED AND TRAINED.

## INTRODUCTION

The field guide is a ready reference and checklist of procedures recommended for the inventory, reconnaissance, and monitoring of AML sites. A set of forms provide a logical sequence for collecting information required to inventory AML sites; plan site characterization, remediation or restoration; and prepare conceptual plans and preliminary cost estimates for budgeting. In addition, the guide contains back up information including engineering tables, formulas, and definitions useful in field work.

First, identify and locate AML sites:

- \* Search through archive records
- \* Talk to local people and park staff
- \* Search air photographs
- \* Follow old dirt roads
- \* Look on maps for mining symbols

The records search is most important; it provides investigators an idea of what to look for beyond the obvious. Many of the hazards and environmental impacts are hidden, buried, or lie below the surface. Graphic materials, such as old photographs, maps, and engineering drawings are particularly useful in identifying where to look to insure that the AML inventory is all inclusive.

Prior to field work, the investigators should become familiar with this guide, its forms, recommended field equipment, and safety procedures. To keep the guide as concise as possible, it assumes the investigators are generally familiar with AML inventory and remediation methods, and it assumes they have the required safety training.

Blank AML forms are found at the back of the guide. These forms can be separated and used as originals to make additional copies. Use these forms to guide the field work. Simply collect the data requested and fill in the blanks. When questions arise concerning what is required, refer to the form instructions which follow in the next section. For additional guidance, refer to the completed example forms following the instructions.

Complete only the AML Inventory Form if the purpose is simply to inventory the site.

Complete the AML Reconnaissance Form when the time comes to develop conceptual plans and estimate costs. The inventory and reconnaissance forms can be filled out on the same site visit which will save time and the expense of multiple visits.

After remediation or restoration, use the AML Monitoring Form to periodically update the condition of the site, report the environmental trends, and recommend additional remediation if required.

The third section of this guide, Underground Reconnaissance Safety, provides safety procedures for entering underground openings. This section is no substitute for underground safety training; it is simply a list of safety reminders. Underground reconnaissance teams must have the requisite training and experience.

Finally, the appendices contain additional useful information for field work. This information includes a checklist of recommended field equipment, methods for locating land features on topographic maps, procedures for compass and pace surveys, rating system for hazards and environmental impacts, formulas for calculating areas and volumes, a table of material weights, unit conversion factors, and definitions of selected mining terms.