

Module 8: Advanced Course for Mercury

- ◆ Continuous & discontinuous ore amalgamation
- ◆ How to improve amalgamation
- ◆ Flouring effect
- ◆ Separation of excess mercury
- ◆ Mercury recovery
- ◆ Testing retorts & calculating mercury recovery
- ◆ Recharging mercury

Module 9: Enhanced Economics of Small-Scale Mining

- ◆ The complete cash book (practical bookkeeping)
- ◆ Filing records
- ◆ Banking
- ◆ How to create a financial plan
- ◆ Budgeting
- ◆ Savings, investment & microfinance

Module 10: Community Development-Child Labour

- ◆ Community Development in small scale mining
- ◆ Education & Laws on child labour
- ◆ Action against child labour
- ◆ Effects of:
 - ⇒ migration
 - ⇒ diseases
 - ⇒ lack of education
 - ⇒ gender inequality in small scale mining communities



Course participants building a wooden sluice box



Group photo of graduates with their certificates after successfully completing 2 weeks Level 2 training.

The level 2 course focuses on practical training and introduces participants to ways of improving non-mechanised tools, such as sluice boxes, to help increase gold recovery and avoid or reduce use of mercury

For more information and enrollment contact the following people on the addresses or telephone numbers below:

Mr. Samuel Leonhard
Small Scale Mining Training Centre
PO Box 126,
WAU, Morobe Province
Papua New Guinea
Telephone: 71922394
Facsimile: 474 6600
Emails: sleonhard@mra.gov.pg



SMALL SCALE MINING TRAINING CENTRE



CONTENT OF LEVEL 2 COURSE 2 WEEKS

Module 2: Comprehensive Mining Legislation

- ◆ Steps to apply for Alluvial Mining Lease (AML) and Mining Lease (ML)
- ◆ How to submit a tenements application
- ◆ Transfer fees, rents and royalties
- ◆ Tenements Tribute Agreement
- ◆ Compensation
- ◆ Royalties and compensation claims
- ◆ Mining Safety Act
- ◆ Accident reporting procedures
- ◆ Environment Act
- ◆ Environment permit
- ◆ Class activities
- ◆ Filling Form 8 (ML)
- ◆ Filling form 16 (ML/AML) Transfer Form

Module 3: Geology on Alluvial and Hard Rock Gold Deposits

- ◆ Rock formation
- ◆ Formation of igneous rocks & different types of gold mineralization
- ◆ Sedimentary rock formation—breccias & conglomerates
- ◆ Formation of metamorphic rocks like phyllites, slates and gneisses
- ◆ Primary gold deposits—Hard rock
- ◆ Secondary gold deposit:
 - ⇒ Colluvial deposits
 - ⇒ Eluvial deposit
 - ⇒ Alluvial deposits

- ◆ Identification of gold deposits
- ◆ Identifying gold in quartz with oxidation
- ◆ Identify sulfur and sulfide minerals
- ◆ Practical identification of different minerals
- ◆ Deposition of sedimentary rocks
- ◆ Silt and clay deposition
- ◆ Hard Rock Deposits
- ◆ Hydrothermal activities
- ◆ Volcanic rocks
- ◆ How oxidation affects rocks and minerals
- ◆ Weathering processes
- ◆ Causes and effects of erosion
- ◆ Visit different sites for practical training

Module 4: Basic Prospecting Techniques

- ◆ Planning a prospecting programme
- ◆ Sampling methods
- ◆ Methods in prospecting.
- ◆ Prospecting exercise on site.

Module 5: Improved Mining and Processing Techniques

- ◆ Improved mining & processing
- ◆ Ground sluicing & sieving
- ◆ Parameters of standard sluice boxes
- ◆ Practical training using different sluice boxes
- ◆ Experience effects of different types of riffles on sluice box performance
- ◆ Influence of lining materials on gold recovery
- ◆ Procedures using a sluice box
- ◆ Sluicing with a monitor

- ◆ Handling undercurrent in sluice boxes
- ◆ Simulation on campus how to clean bedrock
- ◆ Gold separation from black sands
- ◆ Use of portable suction dredge
- ◆ Function of mechanical water pumps
- ◆ Quality control by test panning sluice box tailings

Module 6: Occupational Health & Safety in SSM

- ◆ Practical application of OHS
- ◆ Hazards in Small Scale Mining
- ◆ Personal Protective Equipment (PPE)
- ◆ General Safety
- ◆ First Aid
- ◆ Practical site visit
- ◆ Identify hazardous practices
- ◆ Manual handling and lifting
- ◆ Safety violation case studies and solutions

Module 7: Environmental Rehabilitation in SSM

- ◆ Why Rehabilitation?
- ◆ Steps in rehabilitation design—from start to finish
- ◆ Practical rehabilitation after mine closure on selected sites
- ◆ Selection of plants suitable for rehabilitation
- ◆ Practical reforestation on selected mined out areas by course participants