

Module 8: Metal Smelting in Small Scale Mining

- Smelting of Metals
 - Basic Chemistry of Smelting
- Melting Points of Metals
- Melting or Smelting
 - Chemicals/Reagents
 - Equipment & Tools
- Smelting Procedure

Module 9: Business Planning and Costing

- Types of Costs by any Mining Method
 - Identifying and Classifying Costs
 - Fixed Costs and Variable Costs
- Evaluating Costs, Benefits and Making Projections
 - Breakeven Analysis
 - Cash Flow Projections
- Business Plan
 - What is a Business Plan
 - Relationship with Planning
 - Writing a Business Plan

Module 10: Community Living

- Citizenship Rights and Responsibilities
- Parental Roles and Responsibilities
- Marriage, Separation/Divorce and Adoption
- Violence Against Family and Women
- Marriage and Family Planning



Course participants conducting Metal Smelting



Course participants exposure to a Mechanized Mine

The Level 3 course is focused mainly on Mechanised Small Scale Mining practices and also addresses related topics at that level reinforced by practical sessions both onsite and offsite. A site trip to Mechanised Mining operations...

FOR MORE INFORMATION PLEASE CONTACT

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SMALL SCALE MINING TRAINING CENTRE



CONTENT OF LEVEL 3 COURSE 2 WEEKS

Module 2: Laws Governing Small Scale Mining in PNG

- Transfers, Renewals and Objections
 - Tenement Transfer
 - Renewal of a Tenement
 - Objection to extension/renewal of a Tenement
- Contract/Tribute Agreement
- Lease Development Proposals
- Variation of Approved Proposals

Module 3: Geology and Gold

- Gold in various stages
- Effect of weight loss & purity on gold sales
- Keeping a Production Record
- Reserve Estimation Calculation

Module 4: Prospecting in Small Scale Mining

- Prospecting in Different Geological Conditions
 - Current River Placers
 - High Terrace/Bench Deposits
- Budgeting a Prospecting Cost
 - Logistic Costs
 - Equipment Costs
 - Manpower/Personnel
- Planning a Prospecting Program
- Using GPS and Applications

Module 5: Mechanized Mining & Processing Techniques

- Mechanical Concentrators
 - Shaking Table
 - Wave Table
 - Nelson Concentrator
 - Knudsen Bowl Concentrator
 - Gold Wheel/Carmel
 - Gold Spinner
 - Spiral Concentrator
- Mechanical Rock Crushers
 - Jaw Crushers
 - Ball Mills
 - Rod Mills
 - Autogenic Mills
 - Stamp Mills
- Mechanical Wash Plants
 - Sizing Trommel Plants
 - Jig Wash Plants
 - Static Wash Plants
 - Shaking & Vibrating Wash Plants
- General Purpose/Standard Equipment
 - Hydraulic Excavators
 - Bulldozers
 - Front End Loaders (FEL)
 - Backhoes
 - Tipper/Dump Trucks

Module 6: Occupational Health & Safety

- Occupational Health & Safety Management
 - OHS Management System
 - Risk Management
 - Risk Assessment
- Cost of an Accident
- Emergency Planning and Fire Prevention
 - Emergency Planning
 - Fire Fighting
- Writing an OHS Policy

Module 7: Environmental Management & Rehabilitation

- What are Environmental Issues
 - Air Quality
 - Noise and Vibrations
 - Water Management
 - Flora and Fauna
 - Parks and Protected Areas
 - Waste Management
 - Principles of Environmental Management
- Mine Closure in Mechanized Hardrock and Alluvial Mining
 - Stakeholder Involvement
 - Planning and Financial Provision
 - Implementation
- Case Study on Mine Closure