

## MINING SURVEY

**UNIT CODE:** LSM/CU/LM/CR/05/6/A

### Relationship to Occupational Standards

This unit addresses the unit of competency: Conduct mining survey

**Duration of Unit:** 120 hours

### Unit Description

This unit describes the competencies required to by a surveyor to conduct a reconnaissance, establish surface and underground baseline, measure surface and underground works and prepare mine plans

### Summary of Learning Outcomes

1. Conduct a reconnaissance
2. Establish surface and underground baseline
3. Measure surface and underground works
4. Prepare mine plans

### Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Conduct a reconnaissance	<ul style="list-style-type: none"><li><input type="checkbox"/> Meaning of reconnaissance</li><li><input type="checkbox"/> Objectives of reconnaissance</li><li><input type="checkbox"/> Importance of a reconnaissance</li><li><input type="checkbox"/> Safety precautions</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Observation</li><li><input type="checkbox"/> Oral questioning</li><li><input type="checkbox"/> Practicals</li></ul>
2. Establish control points	<ul style="list-style-type: none"><li><input type="checkbox"/> Monumentation of control points</li><li><input type="checkbox"/> Establishment of vertical controls</li><li><input type="checkbox"/> Establishment of horizontal controls</li><li><input type="checkbox"/> Transfer of controls from surface to underground</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Observation</li><li><input type="checkbox"/> Oral questioning</li><li><input type="checkbox"/> Written tests</li><li><input type="checkbox"/> Practical assessments</li></ul>

3. Measure surface and underground works	<input type="checkbox"/> Underground traversing <input type="checkbox"/> Levelling <input type="checkbox"/> Alignment survey <input type="checkbox"/> Tunneling survey <input type="checkbox"/> Determination of mine resource volumes <ul style="list-style-type: none"> <li>○ Piling</li> <li>○ Drilling</li> </ul>	<input type="checkbox"/> Observation <input type="checkbox"/> Oral questioning <input type="checkbox"/> Written tests/sketches
4. Prepare mine plans and reports	<input type="checkbox"/> Composition of plans and reports <input type="checkbox"/> Format and content of plans and reports <input type="checkbox"/> Preparation of plans and reports <input type="checkbox"/> Certification of plans and reports	<input type="checkbox"/> Observation <input type="checkbox"/> Oral questioning <input type="checkbox"/> Written tests/drawings and sketches <input type="checkbox"/> Practicals

### Suggested Delivery Methods

- Lecturing
- Demonstration by trainer
- Practical work by trainee
- Demonstration videos
- Projects
- Group discussions
- Group projects
- Internship and attachments
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### Recommended Resources

- Survey instruments
- Stationery
- Survey data
- Measuring tools
- Design software
- Computers
- Online resources
- Reference Text books
- Transportation

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