

Title	Demonstrate knowledge of survey principles and apply to an extraction site		
Level	4	Credits	4

Purpose	People credited with this unit standard are able to demonstrate knowledge of: survey principles and apply to positions; the application of different plans, maps or photographs; and the use of survey devices, at an extractive site.
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Classification	Extractive Industries > Extractive Industries Management
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Available grade	Achieved
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Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to:
- Health and Safety at Work Act 2015 (HSW);
 - Health and Safety at Work (General Risk and Workplace Management) Regulations 2016;
 - Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016;
 - Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2022;
 - Health and Safety at Work (Hazardous Substances) Regulations 2017 and related Safe Work Instruments (SWIs) published by WorkSafe NZ; approved codes of practice issued pursuant to the HSW Act available at <http://www.worksafe.govt.nz/worksafe/information-guidance/approved-codes-of-practice-acops>.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

- 2 Definitions
- Company procedures* mean the documented methods for performing work activities and include health and safety, operational, environmental, and quality management requirements. They may refer to legislation, regulations, guidelines, standard operating procedures, manuals, codes of practice, or policy statements.
- Industry good practice* may be documented in management plans, control plans, company procedures, managers' rules, occupational health and safety policy, industry guidelines, codes of practice, manufacturers' instructions, and safe working and/or job procedures (or equivalent).

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of survey principles and apply to positions at an extractives site.

Performance criteria

- 1.1 Grid references and coordinate references are explained for a specific site.
- Range NZ Mapping Grid, local meridian circuits, datum 2000, geodetic datum, old cadastral datum, local datum.
- 1.2 Angles, distances, and heights are established and the data is reduced to positions.
- 1.3 Positions are recorded in accordance with industry good practice.
- Range plan, coordinates, elevations.
- 1.4 The principles of survey are explained in terms of from the whole to the part.

Outcome 2

Demonstrate knowledge of the application of different plans, maps or photographs at an extractive site.

Performance criteria

- 2.1 Each map or photograph is explained in terms of its application to a given extractive site.
- 2.2 The accuracy and limitations of each map or photograph are explained in terms of the proposed end-use of the map or photograph.

Outcome 3

Demonstrate knowledge of the uses of survey devices at an extractive site.

Range survey devices may include but is not limited to – Global Positioning System, total station, theodolite, chain, staff, level, compass, clinometer, laser, tape, data-logger, electronic distance measure; evidence for three devices required.

Performance criteria

- 3.1 The uses of each device is explained in terms of their application to a given extractive site.

- 3.2 The accuracy of each device is explained in relation to the level of accuracy required for a given extractive site task.

Range stockpile volume, in situ volume, set out, traverse, topographical survey, control survey.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 November 2000	31 December 2017
Review	2	24 November 2005	31 December 2017
Rollover and Revision	3	16 July 2010	31 December 2017
Review	4	20 August 2015	31 December 2026
Rollover and Revision	5	25 January 2018	31 December 2026
Review	6	30 January 2025	N/A

Consent and Moderation Requirements (CMR) reference	0114
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.