



Australian Government

Department of Education, Employment and Workplace Relations

CUVOPA01B Identify and describe opal

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit encompasses the skills and knowledge to identify opal from various sources, describe the type of opal and apply the principles of valuation.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit

This unit requires the application of knowledge and skills to identify and apply valuing principles to different types of opal based on sound understanding of how opal is formed, where it is found and the characteristics of the gemstones. The work is done in line with industry practice and may be applied in a range of environments from cutting and polishing to retailing, wholesaling, selling on the Internet or mining.

Where appropriate the outcomes of this unit could be contextualised to apply to other gemstones. Examples of aspects of the unit that may need to be adjusted would include:

- the specific properties of each gemstones
- industry and market requirements
- underpinning knowledge
- Range Statement.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit may be assessed on its own or it may be assessed with other units that cover related skills and knowledge.

Evidence is most relevant when provided through an integrated activity which combines the Elements of competency for the unit, or a cluster of units of competency.

Employability Skills Information

Employability skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- 1 **Develop knowledge of opal geology.**

- 1.1 Identify the geological conditions suitable for the ***formation of opal*** and explain the theories of opal formation.
- 1.2 Determine ***sources of opal worldwide and locations of opal fields in Australia.***

ELEMENT	PERFORMANCE CRITERIA
2 Apply the principles of grading and quality assessment to opal.	2.1 Identify the principles used for valuing opals in terms of: <ul style="list-style-type: none">• <i>base and background colours</i>• <i>the predominant colours and patterns</i>• <i>other factors that influence an opal's value.</i> 2.2 Apply <i>principles of valuing</i> to determine the potential value of opals.
3 Distinguish natural opal from man-made varieties.	3.1 Determine <i>the gemmological characteristics</i> of opal based on knowledge of varieties of opal found worldwide. 3.2 Select <i>gemmological instruments</i> to authenticate <i>natural opal</i> . 3.3 Use the selected instruments to authenticate opal. 3.4 Identify <i>substances used to simulate opal and synthetic opal-like substances</i> and compare their characteristics to natural opal.
4 Identify and describe the different types of opal using correct opal nomenclature and terminology.	4.1 Identify <i>opals of various types</i> and describe them using correct terminology. 4.2 Develop a general awareness of types of <i>opal treatments</i> and determine which are acceptable in the industry.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- communication skills to describe and document identification information
- basic research skills
- skills in using gemmological equipment.

Required knowledge:

- industry sources of information
- valuation systems
- functions of various industry sectors, for example mining dealing, manufacturing jewellery etc
- accepted terminology.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm accurate identification and description of the characteristics of the different types of opal using correct terminology and equipment in a variety of work environments, and the ability to apply principles of valuation and determine the authenticity of opal materials.

EVIDENCE GUIDE

Context of and specific resources for assessment

This unit may be assessed in a work environment, in a simulated work environment or in a combination of these situations.

Method of assessment

For valid and reliable assessment of this unit, evidence should be gathered through a range of methods to indicate consistent performance.

Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on underpinning knowledge and skills and other methods as required.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Competence in this unit must be assessed over a period of time in order to ensure consistency of performance over the range of variables and contexts applicable to the work environment.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Formation of opal may include:

- opal combining with other minerals
- opal formed in a sedimentary deposit
- opal formed in a volcanic deposit (Igneous)
- opal formed in erratic boulders
- opal formed in replacement cavities (nobbies, glauberite xls.)
- opal formed in seams
- opal formed in volcanic and erosion sediments
- opal replacing fossils
- opal replacing wood.

Sources of opal worldwide may include:

- Australia
- Brazil
- Hawaii
- Indonesia
- Mexico
- Slovakia
- USA.

Locations of opal fields in Australia may include:

- New South Wales - Lightning Ridge, White Cliffs
- Queensland - various places including Winton, Quilpie, Jundah, Yowah
- South Australia - Coober Pedy, Mintabie, Andamooka.

RANGE STATEMENT

Base and background colours may include:

- black
- boulder - ironstone
- dark
- light.

Predominant colours and patterns may include:

- colours such as but not limited to:
 - blue
 - green
 - orange
 - red
 - violet
 - yellow
- patterns such as but not limited to:
 - broad
 - Chinese writing
 - flagstone
 - harlequin
 - peacock tail
 - pin fire
 - rolling flash
 - sheen
 - straw.

Other factors that influence an opal's value may include:

- availability of supply
- economic climate
- mining restrictions
- origin
- political situation
- rarity
- weight
- whether the sale is wholesale or retail.

RANGE STATEMENT

Principles of valuing may include:

- body colour
- brilliance
- inclusion/imperfections
- pattern
- play of colour
- predominant colour
- quality of cut (shape/proportions)
- shape
- size/weight
- thickness of colour bar
- type.

The gemmological characteristics may include:

- chemical composition
- colour
- fracture
- hardness
- phosphorescence
- refractive index
- specific gravity.

Gemmological instruments may include:

- microscope
- refractometer
- S.G. scales
- standard 10X loupe
- ultraviolet lamps
- also the naked eye gives a good judgment.

Natural opal is classified as:

- common opal and potch - opal which does not exhibit a play of colour
- precious opal - exhibiting a play of colour.

Substances used to simulate opal and synthetic opal-like substances may include:

- simulants - Gilson opal
- synthetics - for example plastics; slocum stone.

RANGE STATEMENT

Opals of various types may include:

- composite natural opal - doublets; triplets; mosaic and chip opals
- natural opal type 1 (opal in one piece in its natural state apart from cutting and polishing)
- natural opal type 2 - opal naturally attached to the host rock - boulder opal
- natural opal type 3 - opal intimately diffused as infilling in pores or between the grains of the host rock - matrix opal
- varieties of opal:
(N1 to N9 represents gradation from black to white in approximately 10% intervals)
 - black - opal which shows a play of colour within or on a black or very dark body tone (N1,N2, N3, N4)
 - dark - opal which shows a play of colour within or on a dark body tone (N5, N6)
 - light - opal which shows a play of colour within or on a light body tone (N7, N8, N9).

Opal treatments may include: • treatments applied to improve appearance, structure or durability

Note: Any treatment other than cutting and polishing must be disclosed.

Unit Sector(s)

Not Applicable

Competency field

Competency field Opal cutting and polishing