Australian Government

Department of Education, Employment and Workplace Relations

CUVOPA13B Apply advanced pre-cutting processes to complex opals

Release: 1

ISC INDUSTRY SKILLS COUNCILS

Creating Australia's Future

CUVOPA13B Apply advanced pre-cutting processes to complex opals

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers skills and knowledge required to perform the pre-cutting processes for boulder and other special opals. It includes documenting and recording all aspects of the procurement and pre- cutting process.

Application of the Unit

Application of the unit	This unit is applied to pre-cutting processes for boulder and black opal and other types of difficult or particularly valuable opal. It requires knowledge of the processes of opal formation and extensive experience in handling opal of various types as a basis for decision-making on how to cut or carve the opal.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units   This unit is dependent on the skills achieved in the unit *CUVOPA03B - Complete pre-cutting processes for solid opals* which should be regarded as a pre-requisite to this unit. It 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 **Identify type of opal rough**.	1.1 Undertake preliminary investigations before deciding how to proceed with cutting or carving the opal.
	1.2 Review current market requirements and consult with the owner to determine his/her preference for how it should be cut.
	1.3 Based on knowledge of the geological formation of opal, field from which the opal came and past experience, determine the location of the colour within the rough opal.
	1.4 Discuss possible strategies for cutting with colleagues and clients.
	1.5 Determine jewellers' requirements for products being considered.
	1.6 Review the options for cutting and plan cut to achieve the best result.
2 **Block off the stone** (**boulder opal**).	2.1 When working with boulder opal, use a series of cuts to block off stone to gain more information about position and quality of the opal present in the stone and determine best gem outcomes from that piece of boulder.
	2.2 Cuts should aim to identify position of opal and minimise waste.
	2.3 If appropriate, split block opal along fault lines.
3 **Expose the colour**.	3.1 Use *appropriate equipment* to expose the colour without going too deep and removing gem material.
	3.2 Select the correct grinding wheels and grits for a given piece.
4 **Decide on whether to cut and/or carve the opal**.	4.1 Review the stone, determine the directionality and decide on the final outcome to be achieved.
	4.2 Remove *unwanted material* and prepare the stone for final processing.
	4.3 Select the way to cut the stone for the best artistic and commercial return.

ELEMENT	PERFORMANCE CRITERIA
5 **Follow OHS principles when operating machinery**.	5.1 Follow all ***general OHS principles and Safe Operating Procedures*** when using machinery for opal cutting.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills:

- ability to determine the position of the colour in a boulder opal
- use of appropriate equipment
- planning skills
- ability to make sound decisions to achieve best colour and yield
- communication skills for discussing possibilities with clients and colleagues.

Required knowledge:

- characteristics of opal gemstone structure and formation
- the importance of achieving yield when cutting a gemstone
- market trends, jewellers' and industry requirements.

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	To achieve competency in this unit, a person must be

EVIDENCE GUIDE

assessment and evidence required to demonstrate competency in this unit	able to make sound decisions about the final outcome to be achieved and complete all pre-cutting and preforming processes for boulder, black and especially valuable or difficult opals.

Assessment must confirm the comprehensive knowledge of geological formation and structure of opal and the ability to make sound judgement on what the final product should be and how to cut the opal to achieve the best result in terms of yield, colour and aesthetics based on knowledge and experience with a range of types of opal including black opal, boulder opal and other especially valuable or difficult opals.

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. |
| **Context of and specific resources for assessment** | This unit may be assessed in a work environment or 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, evaluation of the final product 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).

Assessment of this competency requires access to:
- an opal-cutting workshop
- a qualified workplace assessor or assessment team. |

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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.

Appropriate equipment may include:	• Asahi wheel • diamond grinder • diamond sawing • free-hand saw • nova wheel • silicon carbide grinder • slab saw • trim saw.
Unwanted material may include:	• cotton/gypsum • cracked material • crockery • iron stone • materials with inclusions or stains • matrix (in black opal as a unwanted inclusion) • poor colour • potch • sandstone.
General OHS principles and Safe Operating Procedures sheet may include:	• appropriate procedures for dealing with emissions • complying with the safe operating procedures for each machine • good housekeeping (in particular cleanliness of the workshop) • using personal protection equipment where required.

Unit Sector(s)

Not Applicable

Competency field

Competency field   Opal cutting and polishing