

# EVALUATION OF CARVED LIGHTNING RIDGE BLACK OPAL

*Anthony Smallwood MSc, FGAA, GG  
Registered Valuer NSW 169*

## INTRODUCTION

For most producers of opal in the Lightning Ridge district of north western New South Wales, the normal trend always has been to cut and polish this black opal as oval cabochons. It is not difficult to understand why the oval cabochon is chosen, for most ornamental gemstones, which display any optical phenomena, are cut in this fashion. In fact, we can take this argument one step further and make the comment that the only thing jewellery manufacturers want to purchase are oval-cut cabochoned gemstones in the usual calibrated sizes. There is little doubt that cutting opal in these commercially desired shapes has the potential of wasting substantial amounts of otherwise very scarce opaline material that will simply disappear down the drain with the lubricating cutting water.

Carving individual pieces of opal has the advantage of rescuing much valuable rough from the ravages of the grinding wheel. Carved gemstones are not new, although perhaps, they are more known and accepted in European than other markets.

Freeform undulating carvings of opal have, in many ways, been seen before. For example, it has been common practice when working boulder opal. As the opal layer on boulder opal is often very thin, freeform cutting has become the predominant form of cutting for Queensland boulder opal. This results in very few standard oval cabochons for use in jewellery. Rather, much of the bright boulder opal makes maximum use of its free form shape and undulating surface to make this opal more attractive for use in artistically designed pieces of jewellery. This change in the traditional practice of opal cutting has been essential in gaining market access and acceptance for boulder opal, and to some extent has allowed boulder opal to gain some pre-eminence over other varieties of precious opal.

The beginning of freeform undulating carvings of Lightning Ridge black opal has been slow to be accepted, when compared with the ready acceptance of freeform boulder opal; for black and dark opal from Lightning Ridge has always been reserved for cutting into the standard oval cabochon. To overcome this conservatism, in recent years some innovative concepts have been developed and applied for opal carving in Lightning Ridge.

## A HIERARCHY OF OPAL CARVING

In the first assessment of suitability of Lightning Ridge black opal for carving, the carver always examines the rough opal with a view to eliminating those inclusions that are normally considered to be faults within the piece of opal rough. The thickness of the colour bar and rough is also a factor, as is whether the material is either a *nobby* or is *seam opal*. Hence the individual piece of rough often becomes the determining factor for how the carving will proceed. In every instance, in the determination of which method of carving will be employed, there will be much discussion between the carver and the owner or miner of the piece of rough opal that is under consideration. This process determines every freeform shape, while the opal carver always has in mind the importance of retaining the opal's rare and valuable precious *play-of-colour*.

The typical types of faults found in a piece of Lightning Ridge black opal can include many forms of *potch lines*, *patches* and *spots*, or *sand*, *matrix* and other imperfections. Not all potch is detrimental to a carving, however, and it the artistic ability of the opal carver who decides what is to be left and what will be removed. In some instances it is beneficial to leave some potch. In fact, included potch can be made to be less obvious in the face, or hidden to some degree; or added to stand out and increase the visual appeal and attractiveness of the carving. Special care in carving also can take advantage of the *play-of-colour* termed *side flash*. This occurs when the most brilliant *play-of-colour* is displayed from the side of the colour bar rather than on the top or face of the opal.

In addition, the carver has to assess the colours and brightness available in the opal, and recognise those patterns of colour that are available to enhance the carving and make the aesthetic appeal of the carved surface flow over the surface of the piece.

Opal carving at The Ridge falls into a hierarchy of four categories; with each succeeding category representing a substantial step up in complexity. All of the carvings in Lightning Ridge opal are described as freeform carvings, however the complexity of shapes and type of rough may allow the application of a combination of different carving methods. In the end, it is the carver's determination to remove faults, while preserving the opal's precious

*play-of-colour*, that produces a pleasing and artistic freeform-carved shape from the original rough.

The categories used to describe freeform-carved Lightning Ridge black opal are defined by both the opals' outline shapes and nature of their surface undulations. These methods of opal carving include:

- Undulating (flat, concave, convex) carving
- Step carving
- Abstract carving
- Figurative carving

### *Undulating carving*



Fig. 1. *Undulating Triangle*, a freeform undulating carving in Lightning Ridge black seam opal weighing approximately 50 carats and showing a vibrant green and blue *play-of-colour*. Carving by Daniela L'Abbate.

Freeform undulating opal carvings display a carved surface that may be almost flat, concave or convex, depending on where the *colour* and faults lie in the rough material and is illustrated in figure 1. The principle behind this type of carving, which is usually the least complex, is that as with most cutting procedures this method of carving is mostly designed to recover and market as much precious opal from the rough material as is possible—particularly where the rough material may have a sloped or twisted colour bar. The colour also may be in a number of thin colour bars and patches that are randomly scattered throughout the rough. In many ways, undulating carving is a suitable method for removing sand and potch inclusions out of the face and the side of a piece of rough opal, and thus this process dictates the outline shape and undulations of the carving before thoroughly polishing the surface of the opal.

### *Step carving*

Step-carved opal is most often used on seam opal that is multi-layered or has multiple colour bars. Presently, a relatively high proportion of this material is being mined from Grawin and Sheeppark fields, with a lesser amount coming from Glengarry. Step carving is usefully applied to carve the large areas of opal that are found in these seams. These seams often contain several colour bars of precious opal per piece of rough. A good carver will assess a piece of rough seam opal, and then carve or shape the rough with minimal shaping of its exterior outline.

They will then proceed to carve the individual seams of colour (the *colour bars*) into steps in the rough to reveal an artistically contoured specimen as illustrated in figure 2.



Fig. 2. *Step Cut Dark Green*, a freeform step carved vibrant opal that is predominantly green with blue and just a hint of orange. It has been moderately step cut to the top with an accentuated and contrasting step to black potch apol in the foreground to facilitate the outlined freeform shape. Carving by Daniela L'Abbate.

Often featured, and also polished in this seam opal, are this opal's interweaving layers of potch opal. A substantial amount of potch may often be left in the carving, for this is used to support and enhance those layers of precious opal that do display a *play-of-colour*. Potch, and other 'impurities' must be removed to reveal the *colour* and to obtain precious opal that *faces* brilliantly. While this form of carving is a significant step upwards from the method of undulating carving described above, the two types of carving may often be seen together in some carvings.

### *Abstract carving*

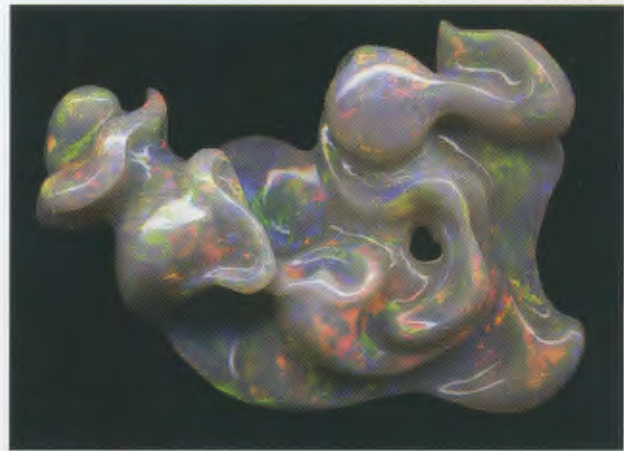


Fig. 3. *Wraith or Wraithfront*, an unusual freeform abstract carving of a red and multicoloured medium random patterned dark Lightning Ridge opal weighing 56 carats. It also shows a combination of some undulating and step carving to accentuate the abstract outline and free flowing nature of the carving. Carving by Daniela L'Abbate, courtesy Down to Earth Opals.

The more included the opal and greater number and size of the sand inclusions (in particular) there are in a piece of rough of either *nobby* or seam opal is proportional to the amount of carving that may be required to convert this rough into a carved opal. So, as the name suggests, abstract carving gives the piece a slightly more artistic or abstract 'feel', and

the carver may need to remove or adjust to a range of different shapes during the carving process of a particular piece of precious opal. This form of carving is the next step up in the opal carving hierarchy. As mentioned before, with the previously described methods of carving there is always a minimal loss of material, combined with a maximum enhancement of the original shape of the opal rough. With abstract carving, the rough is more complex, so a more complex amount of carving is required to shape the outline and surface of the carved piece of opal. Abstract carving often combines aspects of both undulating and step carving this is illustrated in figure 3.

Always, with an overriding concern for preserving the available precious opal *colour*, the carving artist begins to work on shaping the rough material into a more artistic shape; using soft curves and adding shallow concave undulations to more dramatic holes in and shapes of the rough. This vision of forms is often seen in children's games that involve them looking at the clouds and discussing what shapes and figures they can 'see' in them. Hence the abstract nature of these carvings, as the carver closely assesses the 'qualities' of each rough opal piece even more critically. Once this step has been mastered, the carver then move towards assessing the economic potential and artistic use of both *nobby* and *seam* type opal.

In abstract carving, the rough is shaped into patterns that, to some, may resemble figures, animals, or religion-inspired artefact shapes. Often the flows and shapes of these carvings are created by the natural flow between the cavities and ridges left by the removal of the faults. This allows the carver to 'coax' the rough opal into an imaginative and suggestive shape. This method of carving remains the realm of the artistic carver: who works out the potential shape, effects of the play of colour, and the intermingled precious opal with potch to produce an artistically carved gemstone.

### *Figurative carving*

As the name suggests, figurative carving involves the processing of pieces of opal into figures resembling animal shapes, floral patterns, and similar artistic patterns. While in the previously discussed methods of carving the overriding influence on shape is determined by the inclusions in the rough; this is less so with figurative carvings. Figurative carving also is a process that is less requested by miners or owners of the rough—as it is more wasteful of rough material, but often may be of greater benefit overall to the piece of opal. Figurative carving is also more often used on various types of light opal, such as Coober Pedy and Andamooka opal as this is the type of opal more commonly carved by overseas cutters.

Figurative carving represents the highest artistic rung in the ladder of the opal-carving hierarchy, see figure 4. Also this method represents the point (in opal carving) that is furthest away from the principle of 'conservation of rough'. Again, as is always the case with opal, the cutters artistry or ability to

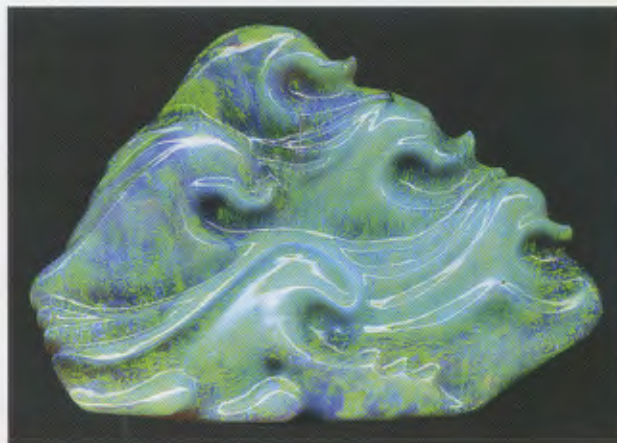


Fig. 4. *Waves*, an abstract triangular figurative carving of sea waves in a vibrant predominantly green with blue *play-of-colour* in a small rolling and randomly flowing pattern accentuated by small but repetitive wave like undulations. Carving by Daniela L'Abbate, courtesy Desert Gems.

'get the most' out of a piece of rough opal is of paramount importance. However, an artistically minded carver not only sees 'the figures in the clouds'; he or she can create these by sculpturing the rough opal. The results of this artistic endeavour are magnificent floral roses, petals and scrolls, seashells, ocean waves and animal figures that are characterised by much superb detail.



*Sea Mist*, a set of three freeform abstract carvings in Lightning Ridge dark seam opal showing highlights of a mixed red orange *play-of-colour* stepped down onto a darker green blue. Weights of 52.24 carats, 5.74 carats and 5.32 carats. Carved by Christine Roussel, courtesy Absolute Opals and Gems.



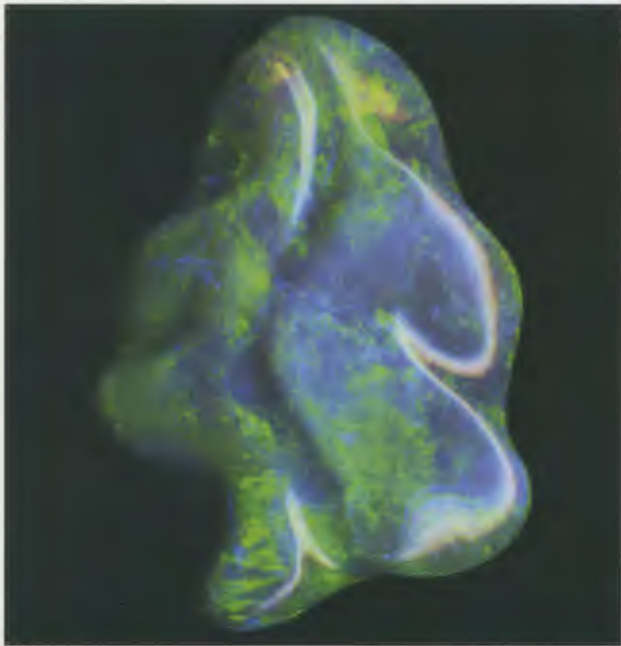
*Leafmoth*, a freeform abstract carving of a single Lightning Ridge black *nobby* opal showing a predominantly blue on green random patterned *play-of-colour*. Carved by Daniela L'Abbate for "Ted".



*Dragon*, otherwise known as *Whirlwind*, is an abstract freeform carving in Lightning Ridge Dark opal (N5/N6). The carving shows an intricate series of flowing grooves that create the pattern of a whirlwind around a central cavity. The opal shows a bright predominantly green small and random patterned *play-of-colour*, with blue, modifying the lower parts of its undulations. It measures approximately 50.5 x 42.5 mm and weighs 78.5 carats. Carving by Daniela L'Abbate, courtesy of Down to Earth Opals.



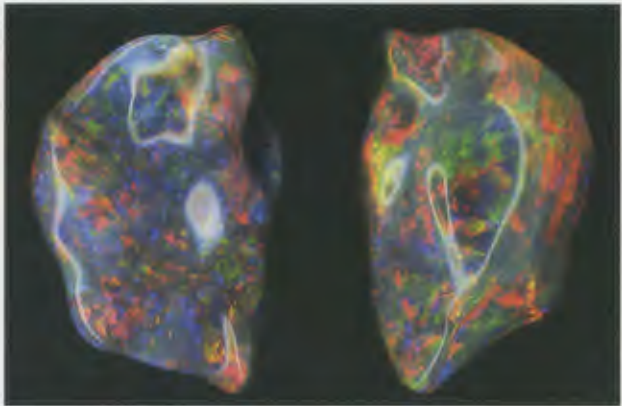
*Ear*, a Lightning Ridge black opal *nobby* freeform step carving with minor abstract outline shaping showing a vibrant red multicoloured small and random patterned *play-of-colour*. Carved by Daniela L'Abbate.



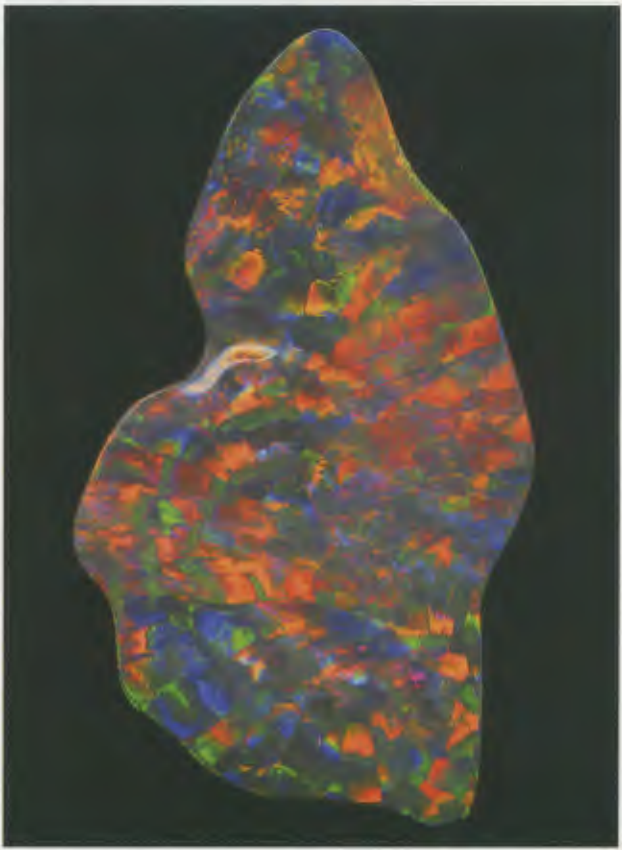
*The Green Blue Dude*, a freeform undulating abstract carving in Lightning Ridge black opal showing a small and random predominantly green *play-of-colour* on blue with just a hint of orange added to highlighting a soft rounded and domed carving. Carving by Christine Roussel for Absolute Opals and Gems.



*Red hole carving* or *Fire in the mountain*, a freeform undulating carving in seam opal showing orange on green and blue predominant *play-of-colour*, with sculptured indentations to a lower red predominant colour bar. Carved by Christine Roussel for Absolute Opals and Gems.



*Red Nobby*, a Lightning Ridge black opal *nobby* freeform undulating carving showing a brilliant red multicoloured *play-of-colour* in a small random pattern photographed from two directions. Carved by Christine Roussel.



*Shell*, a freeform Lightning Ridge black opal with minor undulations and abstract outline showing a vibrant red multicoloured *play-of-colour* in a more blocky and regular pattern. Carved by Christine Roussel and weighing approximately 60 carats.

## ENTER THE VALUER

So ... one of these pieces of carved opal comes across the desk of a jewellery valuer ... set into an item of jewellery. This could be a pendant or necklace, a bangle, a dress pin or head piece. Arghhhhh!!!!

What do I do with this is perhaps is the valuers first thought!

### The process

Well, let us break the process of determining value of carved opals down a little and ask a few valuing-type questions.

Initially, the valuer might start at the beginning by asking:

#### **What type of opal do we have here in the carving?**

While our discussion has so far revolved around Lightning Ridge black and dark opals, remember that some light opal is being carved in Hong Kong and Idar Oberstein in Germany. However, in this contribution I will restrict the discussion to Lightning Ridge opal; although the principles will remain the same, and these principles are similar to assessing the standard oval cabochon cut gemstone.

Then, the valuer needs to follow a series of steps

The first step is to ask:

#### **What is the body colour of the opal ? Is it 'black', 'dark' or 'light'?**

Remember ... the darker the body colour of the opal means the better the *play-of-colour* it will exhibit or promote relative to its *brightness*.

With respect to the answers to these questions, it matters little if the opal is Lightning Ridge black or Queensland boulder black opal.

The second step is also similar to that used in valuing all types of opal. The question to be answered is:

#### **How bright is the opal's play-of-colour?**

Bright, or very bright with a vivid *play-of-colour* will increase the opal value. If the colours are subdued, then, although the opal carving can enhance the softer nature of the *play-of-colour*, its value will still be lower.

The question to be answered in the third step is:

#### **What colours are seen in the play of colour?**

Red-predominant still has the highest value.

Discussions with opal carvers, and wholesalers, suggest that for smaller pieces – say those weighing 50 ct or less, the valuer should examine the piece of carved opal and then look at its individual 'sections' of *play-of-colour* displayed by the carving. Then assign a per carat price to the sections, add up the values and calculate an average for the whole piece.

So, as an example, let us consider a piece of *multi-colour bar* opal that has, for example, three colour bars step-cut down to feature the shape of the carving in relatively equal proportions.

The top portion shows small pattern red-predominant and slightly subdued opal that has maybe a value of \$1200 per carat if it could be faced into a standard oval cabochon.

The second layer, that is carved out in the step below, is a thin bright rim of vivid green-blue opal that may be assessed at say \$800 per carat.

The third layer, that adds to the shape of the finished piece, is of a fairly subdued blue-violet opal that, at most, would range up to \$70 per carat.

The resulting average cost suggests the value of \$690 per carat would be appropriate for the piece.

### Determining value

So what is the value of the actual carving?

Well this may well remain something of an enigma!

As often happens with gemstone cutting – be it opal or diamond – the value of a good cutter, or correct/appropriate proportions, is often forgotten or not recognised.

However, the basic fact remains that an excellent opal cutter is essentially worth, at least, their weight in opal!

Unfortunately, the truth is that this fact is rarely recognised.

For example, opal carvers in the Ridge are lucky to be able to receive an hourly rate for carving. On top of this, is a basic fact that as you proceed up the hierarchy of carving, it becomes obvious that time taken to complete the carving must increase exponentially. As a consequence, the market does not recognise the true time taken to produce an artistic opal carving.

Fact ... as the carving of black opal increases in popularity, so will demand increase for this unique product. Then it is certain the dollar value of carved opal will increase further.

So how do I value and opal carving?

Well the answer to this question is still quite simple. You must rely on determining the four C's of carved opal:

- Colours seen,
- Carat weight,
- Clarity, and,
- Carving quality,

... by obtaining answers to the following questions:

#### 1. Colours seen

**What is the body colour (black, dark or light)?**

**What are the colours seen (red, green, blue)?**

**Is one colour more predominant than others?**

**How bright are the colours ... are they vivid or brilliant, or subdued?**

#### 2. Carving

**What type of carving is it ... or  
is it a combination of carving types?  
Is the carved freeform shape in balance  
and pleasing to the eye?**

*Is the carved opal proportioned correctly?  
Is the polish and finish of the carved  
opal good, mediocre or poor? Where  
does the carved opal fit into the  
carving hierarchy?  
How long would it have taken the carver  
to finish the piece?*

### 3. Clarity

*How has the potch left in the carving been used to  
enhance the carving ... is it appropriate  
... has it been hidden or has it been  
revealed to enhance the carving?*

### 4. Carat weight

*What is the carat weight of the carving?*

## CONCLUDING COMMENTS

Assessing the value of an opal carving is really no different from assessing the value of an oval cabochon of the same material. The same principles, as outlined above, will still develop a 'picture in the mind' of the valuer with respect to the quality of the opal to be valued.

The most distinctive thing in the assessment of the opal carving will still be its colour and *play-of-colour*. However, it just might be that the carving process, and abstract nature of, or artistic influence of the cutter may increase the value of the item above and beyond that of the standard oval cabochon-cut opal that has been used as a determinant of its value.

Some of the opal carvings, with an overall more consistent *play-of-colour* over the whole face of the carving ... and of larger proportions than those suitable for small jewellery items ... may have per carat values that can range upwards towards 75 per cent of the regular 'per carat prices' obtained for standard oval cabochon cut goods of similar quality.

### SPECIAL THANKS

This contribution would not have been possible without the great assistance provided to me by some lightning Ridge carving identities. Their free offer of many hours of their time, expertise, and specimens of opal carvings (many of which are privately owned, and some of which are for sale) is most appreciated. In particular I would like to express my gratitude to the following colleagues:

#### *Daniela L'Abbate*

Daniela's opal cutting experience of over fifteen years in lightning Ridge, and her experience in carving for over four years, together with a wonderful Italian flair and passion for preserving opal resources, is apparent from the photographs provided for this article. Daniela's artistic opal carving can also be viewed on the Web at <http://www.opal-anvings.com>. Daniela also assists in opal valuation, with regular attendance at the lightning Ridge Opal Advisory Service each Saturday morning.

#### *Christine Roussel*

Christine spent many hours talking over details and such carving specifics as tools, finishing and polishing — especially of seam opal specimens and carvings. With over eleven years of cutting at "The Ridge" and also over four years of artistic carving experience, Christine has carved many large items as well as many other gems. She is also a representative at the Opal Advisory Service in lightning Ridge.

#### *Jenni Brammall*

My thanks to Jenni for providing the wonderful photographs used in this article. Jenni is also a recognised writer and has an honours degree in palaeontology.

#### *Carl Babic, FGAA*

Carl has been of great help, especially with discussion on the wholesale values of opal carvings. He has assisted me by showing hundreds of opal carvings of many different shapes sizes and values. It could be said that Carl has taken up the challenge of marketing these 'new' black and dark opal carvings from lightning Ridge. As a gemmologist, Carl has always offered his expertise and samples of specimens of *potch* and *colour* for use in opal courses at the GAA. Watch for his new website from 'Absolute Opals'.