

OPAL - AUSTRALIA'S NATIONAL GEMSTONE



Australia's Opal fields are larger than all the Opal fields in the rest of the world combined.



In Aboriginal dreamtime stories, the Opal was created when the colours of the rainbow touched the earth.



Types of Opals found in Australia

- » **Precious Opal** displays play-of-colour
- » **Common Opal** does not exhibit a play-of-colour (*aka Potch Opal by Australian Miners*).



Australia is the only place in the world where you can find **Opalised animal fossils**, there are also many examples of Opalised plant fossils.



On 23 July 1993 – the **Governor-General**, the **Hon Bill Hayden AC**, proclaimed the Opal as **Australia's national gemstone**.



In 1994 the **Australian Women's basketball team** adopted the nickname **'The Opals'**.

AUSTRALIA'S ICONIC OPALS

1915

PRIDE OF AUSTRALIA AKA RED EMPEROR

- » Found 1915 at Lightning Ridge, NSW.
- » Shaped like Australia.
- » By 1954, it had toured at least five World Fairs as "the greatest Opal of Australia".

1938

AURORA AUSTRALIS

- » Found 1938 at Lightning Ridge, NSW.
- » Considered the world's most valuable black Opal.

1946

FIRE OF AUSTRALIA

- » Found 1946 in Coober Pedy, SA.
- » World's finest uncut Opal.
- » Weighs 998g – size of two cricket balls.

1986

HALLEY'S COMET

- » Found 1986 at Lightning Ridge, NSW.
- » Found about the time Halley's Comet appeared in Australian skies.
- » Recorded as the world's largest uncut Opal.

1989

GALAXY Opal

- » Found 1989 in Jundah, QLD.
- » One of the largest and finest quality boulder Opals ever mined.

THE START OF OPAL MINING IN AUSTRALIA

1896 Precious Opal mining begins in QLD.



1926 Minnie Berrington was one of Australia's first female Opal miners.

1890 Precious Opal mining begins in NSW.

1912 Precious Opal mining begins in SA.

SCIENCE KEY FACTS

Chemistry:
 $\text{SiO}_2 \cdot n\text{H}_2\text{O}$

Hydrated Silica
Opal is a type of mineraloid



In 1965 **CSIRO scientists** discovered that the voids between Opal silica spheres caused light to be diffracted to create the play-of-colour, as seen in a rainbow.



Opal has a **play-of-colour** due to millions of tiny silica spheres of different sizes.