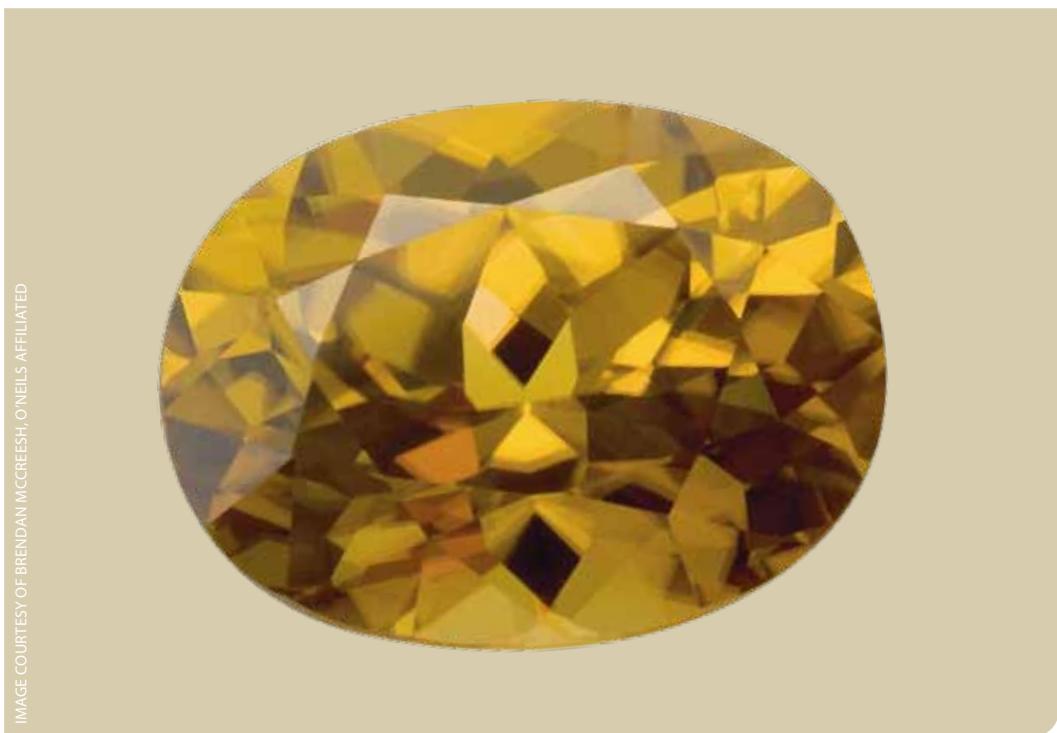


AUSSIE GEMSTONES: ZIRCON



Zircon is the oldest mineral on earth and Australia boasts the oldest deposits dating back more than 4.4 billion years.

Megan Austin reports.

The most famous source of Australian zircon is the Mud Tank Zircon Field, found in an area known as the Harts Range, which is situated 1,220 km south to southeast of Darwin in the Northern Territory of Australia.

This field, first explored in the 1940s, is well-known amongst fossickers for producing top-quality zircon and includes two areas called Zircon Hill and Specimen Hill. The zircons found here display beautiful earthy tones of cinnamon, sherry, cognac, pinks, plums, oranges, yellow and even parti-coloured and colourless. Gemstones may occur as small, doubly-terminated crystals or chips, and larger specimens may show well-developed crystal faces. Waterworn zircon crystals occur in the low-lying areas between the two hills.

Zircon is found intermixed with sapphire in deposits associated with tertiary volcanic deposits from Tasmania to Northern Queensland. This is particularly true on the gemfields of Northern NSW and Central Queensland where they range in colour from colourless through to champagne and orange-red.

Sometimes Australian zircons are heated to lighten them or make them colourless; however, they can rarely be turned to blue as some zircons found in Kampuchea (Cambodia) can. Most zircon deposits originate from Burma but other world sources include Sri Lanka, Cambodia, Brazil, Africa, Madagascar, Thailand and Vietnam.

Zircon is prized for its diamond-like lustre, intense fire, brilliance and strong double refraction and it's these qualities that separate it from its many imitators. Colourless zircon can look like a diamond or like diamond

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simulants, such as cubic zirconia and strontium titanate. Blue zircon can look similar to aquamarine or blue topaz, golden brown zircon can appear similar to topaz or citrine, and pink zircon can look similar to rose quartz or morganite.

Many people have heard of zircon but haven't had the opportunity to see it. The most popular colour is blue, which results from heat treatment, followed by colourless examples. Red and green are highly sought by collectors especially when large, bright and clean but Australian zircons are also in demand because they display beautiful colours that reflect the earthy tones of the landscape.

Blue zircon was highly regarded in Victorian times while colourless zircon was widely used in the early 1900s, where it developed a reputation as a diamond alternative. Even though zircon has been replaced by more convincing diamond look-alikes since that time, such as cubic zirconia and moissanite, its name is unfortunately still associated with 'imitation'.

Zircon sometimes contains traces of uranium, irradiating itself and changing its properties. For this reason, zircon is classified into three types – high, intermediate and low. A zircon's classification depends on its properties, which are directly related to the amount of radiation-induced damage done to its crystal structure.

Although relatively hard, measuring 6.5–7.5 on Mohs scale, zircon is brittle and sensitive to knocks and pressure. It has the tendency to wear along facet edges and, for this reason, it should be limited to occasional wear in rings or set into protective settings. Avoid ultrasonic cleaners, strong light and heat as this can cause some gemstones to change colour. *

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