

# Welcome to *René's World*



## A word from your guide...

My passion for crystals and fossils started right here in North Queensland in 1963 when I found a massive Agate Nodule at Agate Creek, near Forsyth. Since then my obsession has grown and I have travelled the world in search of the most perfect; most extraordinary; most valuable; rarest and biggest crystals, gemstones, fossils and mineral specimens.

I built The Crystal Caves in Atherton in 1987 to house my extensive collection in such a way that you can touch and photograph over 600 specimens.

Now, covering an area of 300 square metres, you will embark on a self-guided journey through tunnels and grottos with million year old natural crystals and prehistoric fossils.



Rock on!  
*René Boissevain*



@thecrystalcaves



#crystalcavesatherton



The Crystal Caves Atherton

# Entrance

## 1 Sphalerite with Quartz Crystals from Peru

## 2 Native Copper in Matrix from Michigan USA

## 3 Amethyst Geode from Uruguay

One of the most popular of all the crystal formations are these geodes from Brazil and Uruguay. Millions of years ago, while bubbling lava flowed from erupting volcanos, the surface of the flowing lava started to cool and bubbles of gas were trapped. As the bubbles started to raise to the top, the lava turned to solid basalt and the silica trapped inside the bubbles grew into spectacular crystals. René has seen firsthand how the geodes are preciously and patiently mined by hand using pickaxes after initially blasting the mountain with dynamite. Once the



geodes have been located in the solid basalt, they drill

a small hole to look inside to determine the quality of the crystals. It can take several hours to extract one small geode without damaging it.

## 4 White Dogtooth Calcite on matrix from Brazil

## 5 Amethyst Crystals on Matrix from Vera Cruz, Mexico

## 6 Quartz Crystals from Bolivia

## 7 Citrine segment of Geode from Brazil

## 8 Quartz Crystal formation from Arkansas, USA

Crystals are associated with perfection, transparency and clarity. Many crystals fit these ideals, especially those cut as gemstones, but most are neither perfect nor transparent. The word crystal is based on the Greek word *krystallos*, derived from *kryos* meaning icy cold. In ancient times it was thought that clear quartz crystal was ice that had frozen so hard it would never melt.

## 9 Pale Amethyst Crystals from Madagascar

## 10 Realgar from Nevada, USA

## 11 Aragonite Galaxy from Mexico

## 12 Quartz Crystal formation from Arkansas

## 13 Rhodochrosite on Quartz Crystals from Peru

## 14 Pyrite Cube crystals, Quartz and Sphalerite from Peru

Pyrite is a very interesting mineral that comes in several crystallisation forms including cubes, octahedron, pyritohedron and combinations of these.

People often think pyrite is the glitter in sandy creeks and rivers; they are in fact small mica slivers.

Pyrite is sometimes called Iron pyrites and fool's gold. Although the colour of pyrite looks like gold, once placed next to gold it looks different. In the days of the gold rush many people were killed as prospectors believed they had gold in their saddle bags. Arriving at the bank



with the stolen "Gold", they were told it is was "Fool's gold".

The most amazing pyrite crystals are from Spain. They are near perfect cubes and come in many different sizes. Peru has the most fascinating and shiny pyrite clusters, mined at altitudes of up to 5000 meters in the Andes Mountains.

## 15 Pyrite crystals from Peru

## 16 Fishtail Selenite (Gypsum) from Naica, Mexico

## 17 Pyrite and Quartz from Peru

## 18 Amethyst Geode with Dogtooth Calcite from Brazil

## 19 Calcite Crystals on matrix from Brazil

## 20 Amethyst with Dogtooth Calcite from Brazil

## 21 Amethyst Geode Sliced from Brazil

This giant agate geode naturally lined with amethyst crystals was precisely cut into thin slices using a diamond saw, and then polished on both sides. Slices were then placed upright, and evenly spread out on a special sled-tray to give a 3D effect. At the end you will see a pyrite crystal.

- 22 Pink Dolomite from South Dakota, USA**
- 23 Quartz over long Iron Goethite Crystals from Brazil**
- 24 Dolomite Crystal cluster with Pyrite from Peru**
- 25 Quartz covering Sphalerite and Pyrite from Peru**
- 26 Dogtooth Calcite covering Amethyst from Brazil**
- 27 Blue Celestite from Madagascar**
- 28 Natural Pink Cobalto Calcite from Poona, India**

Poona has some of the most delicate and curious crystallised minerals, you will see some spectacular samples in the Glasshouse Collection.



- 29 Pink Barite with Chalcopyrite from Germany**
- 30 Smoky Quartz Crystal cluster from Arkansas USA**
- When it comes to the biggest in Quartz crystals, you have to go to Arkansas.*
- 31 Red Calcite Plateau from Mexico**

- 32 Azurite and Malachite from Queensland, Australia**
- Although Australia is rich in minerals and ore, the crystallisation of these minerals is not something that is commonly mined. Azurite and Malachite are both basic copper carbonate minerals and often found in mines where metals including gold, silver and copper are mined. Australia is renowned for precious gems including diamonds, sapphires, topaz and opal (though some argue that opal should be considered a semiprecious stone).*

## Calcite Cavern

- 33 Assorted Calcite Crystals from Brazil**
- 34 Giant Pyrite Crystal cluster from Peru**

## The Winding Walkway

- 35 Blue Celestite Geode from Madagascar**
- 36 Pyrite from Peru**
- 37 Calcite Crystal formation from China**
- 38 Amethyst 'Flower' from Brazil**
- Amethyst Flowers are formed when the crystals*

*are prevented from growing upwards because they are squashed between layers of Basalt, therefore they grow in outward radiating crystals. Mining them is a tedious job using small hand instruments until the basalt and other matrix minerals are removed, exposing the beautiful and awe inspiring Amethyst Flower.*

- 39 Green Tourmaline through Quartz from Brazil**

*Tourmaline is a spectacular trigonal shaped crystal which comes in many different colours, often in the same crystal. This semiprecious gem is often faceted in such a way that the transition from one colour to the next is a feature.*



- 40 Calcite Crystals over Goethite from Red Dome mine, Chillagoe, Queensland**
- 41 Large Single Quartz Crystal point from Arkansas USA**
- 42 Malachite over Azurite from Red Dome mine, Chillagoe, Queensland**
- 43 Amethyst Geode from Uruguay**

- 44 Chrysoprase from Queensland, Australia**

*This brilliant apple green colouring is often accused of being fake. The color of chrysoprase is due to trace amounts of nickel compounds in form of very small inclusions. It is part of the Agate family and Australia is one of the best known sources of Chrysoprase in the world.*



- 45 Okenite Puffballs from Poona, India**

*Very delicate! A weird but wonderful mineral. Often associated with Zoelites, here as spherical masses of radiating fibres in basalt. Okenite is named after the German natural historian, Lorenz Oken and is not as soft as it looks. Its' hardness in fact is similar to glass and must be handled with care as these fibrous crystals can easily penetrate the skin.*



**46 Citrine from Brazil**

**47 Double terminated clear Quartz on Smoky Quartz from Brazil**

**48 White Calcite on Amethyst from South Brazil**

**49 Brown Dogtooth Calcite from Mexico**

**50 Optical Selenite (Gypsum) from Brazil**

*This optical Selenite from Rio Grande de Sul in Brazil has miraculously developed inside an Amethyst Geode!*

**51 Clear Selenite Crystal from Naica, Mexico**



**52 Pink Dolomite Crystals from Peru**

**53 Mica Crystals (Muscovite) from France**

**54 Chrysocolla and Azurite from Honduras**

**55 Smoky Quartz from Arkansas**

**56 Purple Fluorite with Galena from Illinois, USA**

**57 Fluorite from China**

**58 Giant Agate Geode with Quartz Crystals from Brazil**

*Agate is a relatively common semiprecious gemstone which shows spectacular colours and patterns once it*

*is cut and polished. It has a hardness of 7 which means that it will not scratch easily, only something harder than it can scratch it, like a diamond. However, it is brittle, so if it is dropped onto a hard surface it will shatter. Agate is often found in bands along the edge of geodes like this one or in solid nodules.*

**59 Geyserrite, also known as Chalcedony 'Oysters' from Brazil**

*Chalcedony blisters formed on the outside of a geode during the volcanic cooling, hence the name oysters.*

**60 Cut Agate Geodes with Quartz Crystals from Brazil**

**61 Crystal Ball (33 Kilogram) from Brazil**

*Please consider the size of the original crystal that this single ball was cut from... (the word crystal is often confused with lead crystal which is glass.) This sphere was cut from a natural crystal point which was mostly clear.*

## Rock Bottom

**62 Large Amethyst Geode from Brazil**

**63 Native Copper Crystals from Michigan, USA**

*3 specimens, feel free to touch and gently move the hanging plates*

**64 Selenite Crystal formation ('Desert Rose') from Sonora Desert, Mexico**

*In the Sonora Desert, small granules of gypsum are mixed with the sand. When the wind blows, the lightweight gypsum granules are separated from the sand as they whirl around in the sand pans and form their own thick layer. When the rain comes, the gypsum granules melt down and filter through the sand. Due to the high temperatures during the day and very low temperatures at night the gypsum starts to crystallise and crackles out of the sand taking fine sand with it in its growth.*



**65 Selenite Crystals from France**

**66 Agate Nodules cut into bowls from Brazil**

*These bowls were cut from*

*one nodule of Agate by a German engineer living in Brazil. René visited him in 1991 and although he could not see how the machine worked, he was permitted to take the one picture shown here. Unfortunately, the image did nothing to clarify how the agate could be cut on the curve without damaging the rest of it. Perhaps a woodworker can work it out using a timber burl...*



**67 Aragonite crystals from Mexico**

**68 Phantom Calcite from Mexico**

*Sometimes referred to Mariposa Calcite, although there is ongoing debate as to whether this is because the inclusions look like the Mariposa butterfly or because this is the name of a mine where this type of calcite comes from. We call it Phantom Calcite to describe the reddish ore which appears to be inside the calcite. Calcite has grown over the ore and occasionally the internal crystal appears to be escaping from within, feel*

free to run your fingers over the specimen and identify the phantoms.

### 69 Cut and Polished Agate Nodules from Queensland, Australia

This is where it all began... These agates were found by René and Nelleke in 1963 while camping at Agate Creek with young daughter lefje. These were found during the same trip when René pulled out the massive agate nodule pictured here and on display at number 210.



### 70 Large Smoky Quartz Crystal from Brazil

### 71 Honey Calcite Crystals on Matrix from Joplin, Missouri, USA

### 72 Quartz Crystal formation from Arkansas, USA

### 73 Native Copper Crystals from Michigan, USA

## A word on fossils

Goniatites and Ammonites are closely related



to living coleoids (octopuses, squid, and cuttlefish). Goniatites flourished about 360 million years ago only to become extinct some 250 million years ago. They were survived by their cousins the ammonites, which became extinct only 65 million years ago.

The Orthoceras is a genus of extinct nautiloid and they are represented today by the living Nautilus. The Orthoceras lived between 480 and 200 million years ago. Because the Nautilus has survived relatively unchanged for millions of years, it is often referred to as the living fossil.



Trilobites (meaning "three lobes") are a well-known fossil group of extinct marine arthropods. Trilobites form one of the earliest known groups of arthropods. The first appearance of trilobites in the fossil



record indicates they flourished between 521 – 380 million years ago, before beginning a drawn-out decline to extinction. Trilobites finally disappeared in the mass extinction about 250 million years ago. The trilobites were among the most successful of all early animals, roaming the oceans for over 270 million years. Trilobites had many life styles; some moved over the sea-bed as predators, scavengers or filter feeders and some swam, feeding on plankton.

Tharrias are fish from early Cretaceous Brazil.

### 74 Goniatite Fossil plateau from Sahara Desert, Africa

### 75 Giant Trilobite Fossil from Sahara Desert, Africa

### 76 Orthoceras Plateau from Sahara Desert, Africa

### 77 March of the Trilobites from Sahara Desert, Africa

### 78 Tharrias from Brazil

### 79 Spoonfish Fossil from Brazil

### 80 Ammonite from Madagascar

250 - 350 million years old

### 82 Petrified Tree Fern slice, polished from Argentina

### 83 Pyrite Sun or dollar from Illinois USA

These were thought to be

fossilised sand dollars, they are in fact naturally forming pyrite in between layers of slate and coal, found deep in coal mines in Sparta, Illinois. As the Illinois coal mines have closed, these specimens will become more rare and valuable.

## Fluorescent minerals

Best viewed with your helmet lights off, this collection comes from worldwide sources. Fluorescent minerals react to long wave ultra violet black light. There are only very few minerals that change from grey, dull-looking 'rocks' into these spectacular fluorescent colours. This collection is approximately 200 years old and is one of the best in Australia.

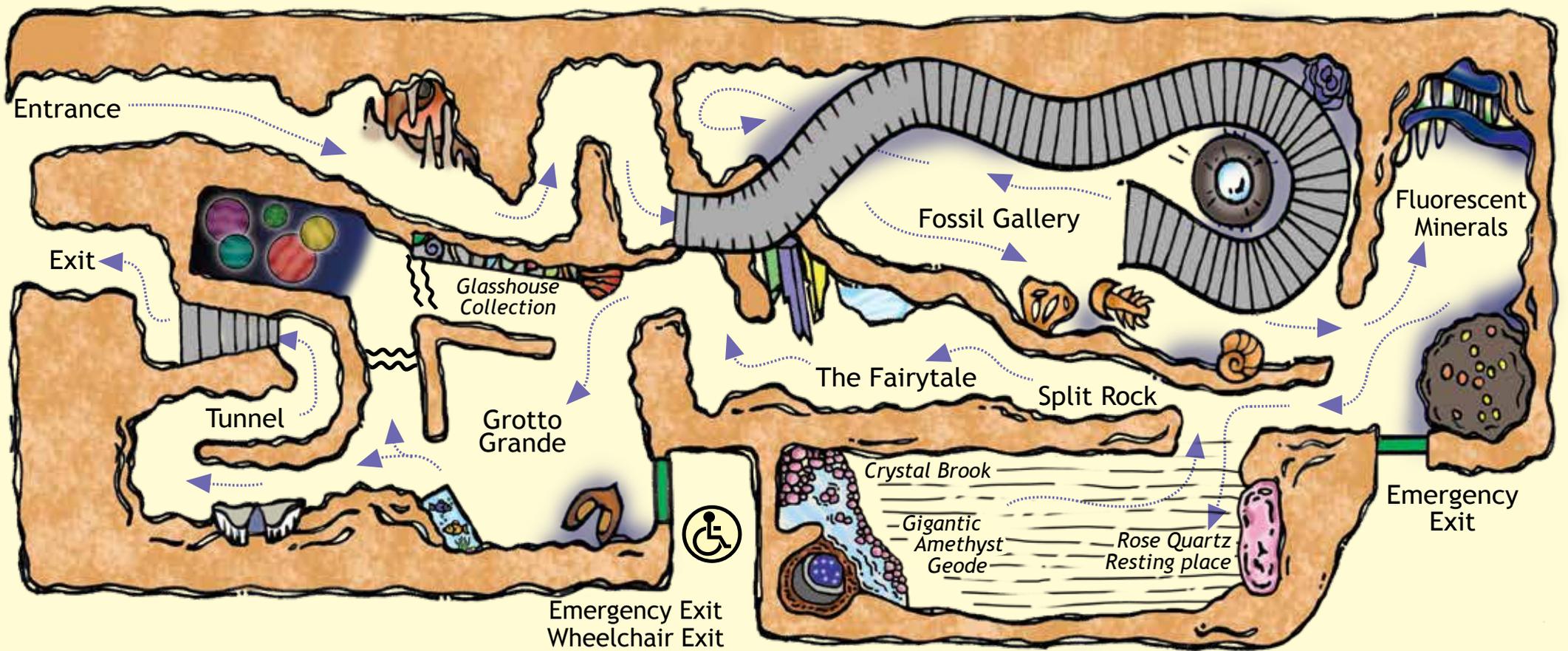
## Agate Dome

This dome is an artwork in its own right, it took hundreds of man hours to position and then reveal the Brazilian Agate slices. Feel free to lie in the dome and admire the work.

## Gigantic Amethyst Geode in the Crystal Brook

This 3.27 meter high gigantic Amethyst geode was discovered in Uruguay in 2007. At that time it was the biggest in the world weighing 2.5 tonne.

The quality of the Amethyst is AA grade suitable for faceting but it is more valuable as a specimen.



NOTE - Water feature warning - keep your children with you at all times.

It took 3 months to excavate it out of solid basalt.

René re-mortgaged his home to pay the US\$120,000 price tag. It's a decision he has never regretted.

The Rose Quartz brook surrounding the geode was built in 2018 using 4 tonne of Brazilian rose quartz boulders.

## The Fairytale

**84 Okenite from Poona India**

**85 Fluorite from Mexico**

**86 Celestite from Madagascar**

**87 Single Quartz Crystals and Cluster from Arkansas, USA**

**88 Large Selenite from Southern Brazil**

*This unusually large Selenite formation was once crystallised but underground running water has naturally polished the surface. Feel free to sit on it and have your picture taken.*

**89 Fishtail Selenite Crystals from Naica, Mexico**

**90 Assorted Fluorite from China**

**91 Agate nodules from Agate Creek, Queensland**

**92 Quartz Crystal Sphere with Phantom from Brazil**

*This pyramid inside this sphere is the tip of another crystal*

*which grew into the side of the host. This spectacular phantom crystal ball is a credit to the carver who was able to cut the sphere without damage.*

**93 Crocoite from Tasmania, Australia**

*Crocoite is considered to be one of Australia's rarest and most valuable crystallised.*



**94 Various pyrite crystals from Peru**

**95 Amethyst Geode with Calcite from Brazil**

**96 Single Pyrite Crystal from Brazil**  
*This massive single crystal weighs 109 kilos.*

**97 3 Spectacular Selenite Crystals from Naica, Mexico**

*There is a natural 'Crystal Cave' in Naica, Chihuahua, Mexico. Connected to A Silver mine and 300 meters below the surface this Selenite cave boasts the largest single crystal measuring a staggering 12 m in length, 4 m in diameter and weighing 55 tons. As a friend of the*

*family who owns the silver mine, René Boissevain was one of the first people to go inside this cave in 2003. The Selenite crystals displayed here were sourced from a smaller cave discovered years earlier called the 'Cave of Swords'. 'The Crystal Caves' nor the 'Cave of Swords' in Naica are open to the public.*



**98 Gharial Fossil Crocodile skull and bones from Sahara Desert**  
*65 - 70 million years old*

### Major Glasshouse collection

*This is a more typical way to present a collection of 'crystallised mineral specimens'. This collection is a particularly good one, and due to the delicacy and value of these, we hope you can appreciate that they have to be behind glass, similarly we hope you enjoyed the fact that most of the crystals and fossils you have seen in the rest of The Crystal Caves were fully accessible.*

**99 Quartz crystals over goethite needles from Brazil**

**100 Orpiment from Nevada, USA**

**101 Crocoite from Tasmania**

**102 Vanadinite, white Barite and black Hematite from Morocco**

**103 Yellow mimetite with Dolomite from Mapimí, Mexico**

**104 Anhydrite from Italy**

**105 Honey Calcite from Oklahoma, USA**

**106 Azurite, assorted crystal forms from various locations**

**107 Fluorite cube on Sphalerite from Bingham, New Mexico**

**108 Calcite on Limonite from Mexico**

**109 Calcite mixed with Hemimorphite on Limonite from Mexico**

**110 Green and white Apophyllite from India**

**111 Quartz crystals with Iron Oxide on hematite rosettes from China**

**112 Quartz crystals with Iron Oxide, Dolomite, Dogtooth Calcite, Pyrite and Chalcopyrite from Santa Eulalia, Chihuahua, Mexico**

**113 Hemimorphite on Limonite from Mexico**

**114 Quartz with Sphalerite from Peru**

- 115 Galena with Chalcopyrite and Sphalerite from Joplin, Missouri
- 116 Orange Barite from Morocco
- 117 Barite peppered with Pyrite from Germany
- 118 Phantom Calcite with hidden Phantoms from Mexico
- 119 Leaf fossil from Utah
- 120 Large Fish Fossil from Brazil
- 121 Ammonite with iridescent Ammolite from Canada
- 122 Ammonite positive and negative from Morocco
- 123 Ammonite pair cut and polished from Morocco
- 124 Shrimp Macropeneus, Cretaceous from Lebanon
- 125 Trilobite Assortment from Morocco
- 126 Belemnite from UK
- 127 Crab in mudball from Oklahoma, USA
- 128 Mud crabs and claw from Daley river, NT, Australia
- 129 Baby Mammoth Tooth from Doggers Bank, Holland
- 130 Shark teeth from Morocco
- 131 Dinosaur eggs from China
- 132 Assorted Geodes from Mexico
- 133 Assorted Pyrite crystals from Peru
- 134 Pyrite cubes from Spain
- 135 Matrix Concretion with Pyrite, Yunnan Province from China
- 136 Chrysocolla and Atacamite from Chile
- 137 Fluorite cubes from Mexico
- 138 Meteorite from Russia
- 139 Danburite from Mexico
- 140 Purple Adamite from Mexico
- 141 Adamite on Limonite from Mexico
- 142 Atacamite from Chile
- 143 Selenite swords and large crystal from Brazil
- 144 Selenite crystals from Australia
- 145 Endichite on Limonite from Mexico
- 146 Barite from Peru
- 147 Aragonite from Mexico
- 148 Sceptre Amethyst crystals from Brazil
- 149 Calcite Chapel on Amethyst from Uruguay
- 150 Amethyst over Selenite crystal from Artigas, Uruguay
- 151 Amethyst sphere from Brazil
- 152 Amethyst crystals on Matrix from Guerrero, Mexico
- 153 Black Tourmaline from Brazil
- 154 Tourmaline from various locations
- 155 Cavansite on Matrix from Poona, India
- 156 Topaz, rough and faceted from various places including Australia
- 157 Amethyst with Calcite crystals and Smokey Quartz from Brazil
- 158 Quartz crystals on Rhodochrosite from Peru
- 159 Chrysocolla from the democratic republic of Congo
- 160 Blue Hemimorphite from Mexico
- 161 Pyromorphite from Mexico
- 162 Gold nuggets embedded in Quartz from Palmer River, Queensland, Australia
- 163 Aquamarine in Mica rosettes from Pakistan
- 164 Aurichalcite on Limonite from Mexico
- 165 Angel wing Calcite from Mexico
- 166 Assorted Fluorides from China
- 167 Wulfenite, yellow, orange and dogtooth from Mexico
- 168 Spodumene (Hiddenite) from Pakistan
- 169 Sulphur from Mexico
- 170 Rainbow Pyrite from Russia
- 171 Quartz crystals and Pyrite cubes on Galena from Peru
- 172 Heulandite (Stilbite) on Mordenite from Poona, India
- 173 Single Quartz crystal point from Arkansas, USA
- 174 Herkimer Diamond from New York, USA
- 175 Quartz crystal formation from Arkansas, USA
- 176 Two Quartz crystals with carvings from China
- 177 Smoky Quartz from Arkansas, USA
- 178 Quartz from Arkansas, USA
- 179 Opal in bolder from Queensland, Australia
- 180 Pink Calcite from China
- 181 Aragonite on Limonite from Mexico
- 182 Dogtooth Calcite with Chalcopyrite from Mexico
- 183 Micro crystallisation of Chalcopyrite on matrix from France
- 184 Adamite on Limonite from Chile
- 185 Spessartite over Smoky Quartz crystals from Fujian Province, China
- 186 Pyrolusite from Mexico
- 187 Celestite from Madagascar
- 188 Bismuth from England
- 189 Muscovite in Lepidolite from Brazil
- 190 Quartz crystal from Mt. Isa Queensland, Australia
- 191 Dolomite crystal formation
- 192 Septarian nodule cut into sphere
- 193 Amethyst flowers from Brazil

- 194 Rhodocrosite from Argentina
- 195 Velvet Malachite the democratic republic of Congo
- 196 Ramshorn Selenite from Mexico
- 197 Black Tourmaline from Mexico
- 198 Aragonite from Mexico
- 199 Adamite on Limonite from Mexico
- 200 Diopside from Mexico
- 201 Kyanite in matrix from Brazil
- 202 Calcite crystals with Chlorite from Brazil
- 203 Hemimorphite on Limonite from Mexico

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- 204 Polished Chalcedony Nodule from Brazil
- 205 Quartz Crystal Cluster from Arkansas, USA
- 206 Lapis Lazuli carving from China
- 207 Petrified Wood, hand carved egg from Madagascar
- 208 Large Smoky Quartz from Brazil
- 209 Large Water Agate from Brazil  
*This wonderful specimen is placed on a special steel spring device. Push through slit under agate with fingers.*
- 210 Agate Nodule from Queensland, Australia

- 211 Pyrite Crystals from Peru
- 212 Amethyst Stalagmite formation from Uruguay
- 213 Mammoth Lower Jawbone from Czech Republic  
*The molars of the woolly mammoth were large, specialized structures with a flattened grinding surface. Low ridges of dense enamel run across the surface of the teeth, making them ideal for processing grasses. As with mastodons, a mammoth will have a series of six cheek teeth (premolars and molars) on each side of the jaw. Younger individuals will have three teeth on each side while most adults have two and old individuals have one. As the teeth were worn down, they were replaced by teeth growing from the back. These teeth were larger and had more ridges than earlier teeth.*
- 214 Handcarved Malachite Bowl and Egg from Congo, Africa
- 215 Ammonite from Madagascar
- 216 Large Amethyst flower from Brazil
- 217 Petrified Wood stump Arizona, USA  
*In Arizona there is an entire forest that is petrified, it is a highly secure National Park where your car, luggage and*

*even pockets are checked on the way out to protect the petrified wood within from being removed. This slice was purchased from a mine outside the national park in 1982. In this sample even the greyish centre of the log is preserved. Often the centre of a large slice such as this is just a big hole as the fluid silica did not reach it in time before the tree rotted away. 208 - 248 million years old.*



- 218 Huge Petrified tree slice from Arizona USA
- 219 Slice from Giant Agate Nodule from Brazil

### Elite Glasshouse collection

- 220 Stone carvings from Idar-Oberstein, Germany
- 221 Stone carvings from Idar-Oberstein, Germany  
*The gemstone carvers in the towns Idar and Oberstein in Germany are considered the best in the world for several generations. Hundreds of years ago, the rivers and streams running between*

*the hills provided the power to operate the lapidary equipment. Today, some old buildings still have a water wheel.*

- 222 Amethyst stalagmite slices from Brazil
- 223 Amethyst flower from Brazil
- 224 Scolecite from India
- 225 Calcite with Chalcopyrite from Missouri, USA
- 226 Aquamarine from Pakistan
- 227 Natural Amethyst sculpture from Brazil  
*This formation occurred when a stalactite grew from the ceiling of an Amethyst geode. The top of the geode was then cut out and turned upside down. This is René's favourite piece in the entire museum.*
- 228 Celestite from Madagascar
- 229 Stibnite from China
- 230 Slice of Agate and Amethyst
- 231 Pyrite cubes from Spain
- 232 Scolecite from India
- 233 Quartz crystal from South Africa
- 234 Pink Calcite with Pyrite edges from China
- 235 Chalcedony over Quartz and Calcite from India

**236 Smoky Quartz from Arkansas, USA**

**237 Beryl Crystal with Gem quality Aquamarine from Venezuela**

**238 Quartz Crystal cluster from Arkansas, USA**

*One of the largest quartz crystal formations in Australia! This very valuable specimen has very little damage. Quartz crystals are one of the most difficult to free from their deep underground 'pockets'. Many crystals get damaged during mining operation and they are then made into ornaments such as crystal balls, pyramids and wands.*

**239 Orthoceras and Ammonite Plateau from the Sahara Desert**

**240 Citrine Geode from Brazil**

*Citrine was once Amethyst! If the volcanic heat that forms Amethyst remains hot, Citrine can naturally form, though this has occurred very rarely in nature. This specimen, like most Citrine, is heat treated Amethyst.*

**241 Dolomite Geode with Calcite Crystals from Brazil**

*One of a kind! As you can see the last "puff" of gas escaped at the top forming the calcite crystals. The green colouring is called Chlorite.*

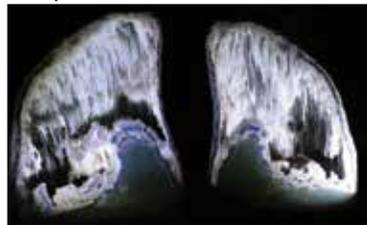
## Lights off! – when you enter the Magic Spheres

*These spheres have been cut from stones known as fluorescent minerals. The 20 spheres were cut by local lapidarian Bill Ralph, the biggest one in the middle weighs a staggering 34kg!*

## The Final Tunnel

**242 Geode with Quartz Crystals from Brazil**

*This geode was mined at an Amethyst mine in Brazil. The unusual crystallisation of these quartz crystals, with the black goethite dots have formed inside instead of Amethyst, making it a very rare and unusual specimen. It was destined for a mineralogical museum in Tokyo. However, René was at the mine in Rio Grande de Sul in 2002, he 'had to have it' and he offered a significant amount of cash if he could take the geode with him. So, Tokyo missed out.*



**243 Spectacular geode formation from Brazil**

**244 Matrix concretions with pyrite from Yunnan Province, China.**

*A concretion is a hard, naturally occurring compact mass of sedimentary rock. It forms within the spaces of softer sediment which erodes over time, leaving the balls. Concretions form in many different ways, such as the Moeraki Boulders of Koekohe Beach in New Zealand and Bowling ball beach in California. In this concretion, scattered pyrite has remobilized in the host matrix into parallel bands.*



**245 Amethyst 'Flower' with Dogtooth Calcite from Southern Brazil**

**246 Amethyst and white calcite from Brazil**

**247 Amethyst cluster cut from the ceiling of a geode**

## Australian Specimens

*While Australia is rich in minerals and ore, not many commercial mining leases exist for mining crystal specimens compared to other regions in the world. There are fossicking areas all over the country where you can easily find crystals and gemstones yourself. This collection will continue to grow with the help of the Atherton Tablelands mineral and Lapidary Club.*

**248 Boulder Opal, Winton, Qld**

**249 Quartz Crystal, Mt Isa, Qld**

**250 Rhyolite, Mt Hay, Qld**

**251 Mud Lobster, Darwin, NT**

**252 Ammonite, Walsh River, Qld**

**253 Chrysoprase, Yerilla, WA**

**254 Agate, Agate Creek, Qld**

**255 Topaz, Mt Surprise, Qld**

**256 Amethyst, Cloncurry, Qld**

**257 Chrysocolla, Cloncurry, Qld**

**258 Meteorite, Wolfe Creek, NT**

**259 Mookaite, Kennedy Ranges, WA**

**260 Magnatite, Chillagoe, Qld**

**261 Stauralite, Mt Isa, Qld**

**262 Crocoite, Tasmania**

**263 Gold in Quartz, Palmer River, Qld**

**264 Selenite, Broken Hill, NSW**

**265 Rainbow Lattice Sunstone, Harts Range, NT**

**266 Azurite, MacDonnell Ranges, NT**

# Crack a Geode Experience

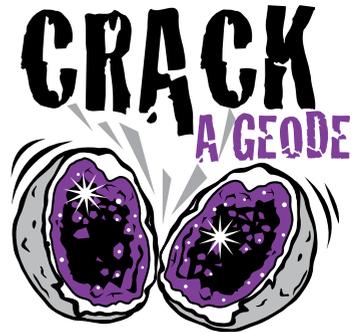


*A prehistoric lucky dip*

You will be the first person to see the crystals that grew inside a volcanic bubble 44 million years ago when you crack open your own geode to keep.

## **Only at The Crystal Caves Atherton**

- Learn how to select your geode
- Safety instruction and equipment
- Crack your own geode using the giant cutter
- Identification certificate and gift bag to keep your geode in.



The Crystal Caves Atherton 69 Main Street Atherton  
Phone 07 40912365 [www.crystalcaves.com.au](http://www.crystalcaves.com.au)