Tea Tree Gully Gem & Mineral Club Inc. (TTGGMC)
Clubrooms: Old Tea Tree Gully School, Dowding Terrace, Tea Tree Gully, SA 5091.
Postal Address: Po Box 40, St Agnes, SA 5097.
President: Ian Everard. H: 8251 1830 M: 0417 859 443 Email: ieverard@bigpond.net.au
Secretary: Claudia Gill. M: 0419 841 473 Email: cjjrgill@adam.com.au
Treasurer: Russell Fischer. Email: rfischer@bigpond.net.au

December Edition 2016

"Rockzette"

Tea Tree Gully Gem & Mineral Club News

President's Report

Hi All, I've dot pointed my report so as to highlight some reminders, updates, and thank-you's:

- A reminder…there is no member access to the club rooms during December 2016 due to the kitchen renovations.
- Not all members have paid their annual subscriptions…just a reminder to pay them soon.
- I welcome our new members to the club: Ron Lewis, Betty Anderson, Jean Hickman, Peter Rothe and Ken Jewell.
- With the addition of 2 new groups - Thursday cabbing and Wednesday evening silversmithing - it is gratifying to report that, as of the New Year, the clubrooms will be in use every day Monday to Friday.
- Thanks to Rod Bungey for setting up the new silver polishing tumbler with a mounting board & transformer, and Ron Lewis for making 2 storage units for sanding sheets/discs in the lap room.
- The TTGGMC Committee remains unchanged following the club AGM.
- There was a good turnout of members for the kitchen working-bee…thank-you.
- Finally, I hope you all have a Merry Christmas and Happy New Year.

Cheers, Ian.

Diary Dates/Notices

Show Dates 2017

- **Sat 11th – Sun 12th March 2017 GEMKHANA – Victoria – Gem and Mineral Show.**
  Time: 9.30am to 4.30pm. Venue: Quest Shepparton Racing Complex, Goulburn Valley Highway, Kialla, VIC. (7km south of Shepparton, VIC.)
- **See more Show Dates and Sale Items on the last page (18).**

Club Activities

Meetings
Club meetings are held on the 1st Thursday of each month except January.
Committee meetings start at 7 pm.
General meetings - arrive at 7.30 pm for 8 pm start.

Library
Librarian - Augie Gray
There is a 2-month limit on borrowed items.
When borrowing from the lending library, fill out the card at the back of the item, then place the card in the box on the shelf.
When returning items, fill in the return date on the card, then place the card at the back of the item.

Tuesday Faceting/Cabbing
Tuesdays - 10 am to 2 pm.
All are welcome.
Contact Doug Walker (08 7120 2221) if you would like to learn faceting.

Wednesday Silversmithing
Wednesdays - 7 pm to 9 pm.
All are welcome.
Contact Augie Gray (08 8265 4815 / 0433 571 887) if you would like to learn silversmithing.

Thursday Cabbing
Thursdays - 10 am to 2 pm.
All are welcome.
Contact Augie Gray (08 8265 4815 / 0433 571 887) if you would like to learn cabbing.

Friday Silversmithing
Fridays - 9 am to 12 md.
All are welcome.
Contact John Hill if you would like to learn silversmithing on a Friday.

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Courses & Fees.

Faceting/Cabbing
Course 10 weeks x 2 hours ***Cost $20.00***.
Use of equipment ***$1.00 per hour***.

Silversmithing
Course 5 weeks x 2 hours ***Cost $20.00***.
Use of equipment ***$1.00 per hour***.

While some consumable materials are supplied by the club, trainees must supply any additional requirements.

Trainees who use the club equipment (for example, magnifying head pieces, faceting equipment, tools, etc.) must return them to the workshop after usage. Trainees are also encouraged to purchase and use their own equipment.

In the interest of providing a safe working environment, it is necessary to ensure individuals using the workshops follow the rules set out in *Policy No. 1 - 20/11/2006*.

It is necessary that *Health and Safety* regulations are adhered to at all times.

Trainees must ensure:

- that all work stations are left in a clean and tidy state;
- that all rubbish is removed and placed in the appropriate bin;
- and where applicable, machines are cleaned and oiled.

NOTE: The Tea Tree Gully Gem & Mineral Club Inc. will not be held responsible or liable for any person injured while using the club machinery or equipment.

Club Subscriptions
$25.00 Family.
$20.00 Family/Pensioner.
$15.00 Single.
$12.50 Single/Pensioner.
$10.00 Joining Fee.

In This Edition

Tuesday Faceting/Cabbing Group
Tuesday 1st Nov 2016

(L to R) Ron (faceting) and Irene (lapidary crafting).

(L to R) Jean, Ken, Rod, Janet Ian, Louise and Doug.

Melbourne Cup Lunch
Tuesday 1st Nov 2016

Ken, Irene and Janet selecting their lunch.

(L to R) Ken, Gwen, David, Doug, Jean, Ian, Irene, & Louise, all totally absorbed in the race & Janet absorbed in her IPad jigsaw.

MONDAY NOVEMBER 7 2016 ADVERTISER.COM.AU

CAN-DO: Ken Jewell in the shed where his collection takes pride of place. Picture: MARK BRAKE

A collection you'll drink to

JAMES HETHERINGTON
CITY NORTH MESSENGER

NORTHFIELD resident Ken Jewell has put away a few beers in his time, but it has never been about quenching his thirst, it has always been about the can.

He has been collecting cans from around Australia for 34 years. It started with the Brisbane Commonwealth Games in 1982 and a group of Brisbane Bitter beers.

"I wrote to the brewery asking for a set and they put me on to a collector in Brisbane," Mr Jewell, 72, said.

"We made a deal, I sent him some SA cans and he sent me the Brisbane Bitter ones.

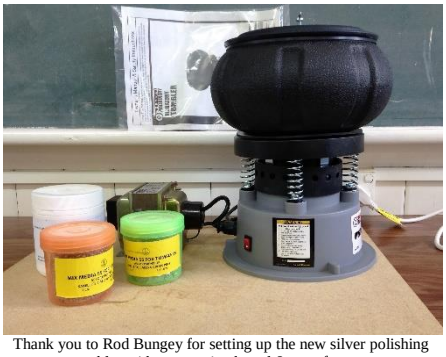
"The only thing was, he sent empties and I sent them full.

"I didn't realise you were meant to send them empty."

His collection has grown to more than 3000, most of which cover the walls of his beer shed.

Mr Jewell's wife, Brenda, has no issues with her husband's collection, so long as they stay out of the house.

Thank You.



Thank you to Rod Bungey for setting up the new silver polishing tumbler with a mounting board & transformer.

Thank you to Ron Lewis for making 2 storage units for sanding sheets/discs in the lap room.

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Augie's December Selection

Amethystine Quartz with Haematite, Jinlong Iron Mine, Guangdong Province, China.

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The South Australian MESA journal has now gone online. I have subscribed to the online journal and had planned to supply the club library with a USB-stick copy for members to access and read. However, this arrangement is rather cumbersome as the club has no means to access the journal file for reading purposes. Instead, I will provide a hyperlink in the club newsletter each quarter to assist any member wishing to have a read. Regards, Mel Jones.

Click link to open the November MESA Journal.

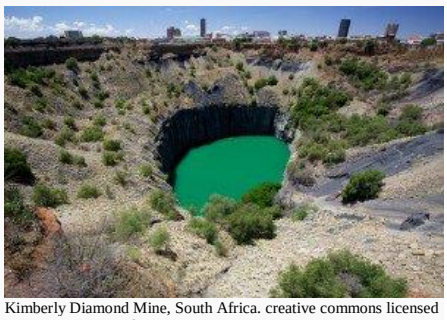
NB. Back issues to 1996 can be downloaded from there.

Contributed by Doug Hughes…

Are diamonds rare? Myths and misconceptions about diamonds.

by Seth I Rosen.

Diamonds are our most popular gemstone. That hasn't always been the case. It was only in the last century that diamonds became readily available. Prior to that, rubies and sapphires were the most popular gems, especially for engagement rings.



Kimberly Diamond Mine, South Africa. creative commons licensed (BY-SA) flickr photo shared by string_bass_dave

The popularity of diamonds is due primarily to the DeBeers organization. They set up the first large-scale diamond mines in South Africa. Then they began one of the most successful advertising campaigns in history, convincing consumers that engagement rings should always have a diamond.

With proper encouragement, the movie industry displayed its most glamorous women, draped in diamonds. As-a-result, diamonds soon became a top status symbol for the rich and famous. This peaked with the Marilyn Monroe movie, '*Diamonds are a Girl's Best Friend'*.

Even after winning the consumers' admiration, DeBeers continued their advertising. With the discovery of diamonds in the Soviet Union, a new campaign was created to sell anniversary bands. These made good use of the small, but nice quality diamonds the Soviet Union produced.

DeBeers mined considerably more rough diamonds than they sold and they have a large warehouse of uncut diamonds in London.

While the DeBeers company did wonderful things for the diamond industry, not everything about DeBeers is nice. As diamonds were discovered in other parts of Africa and South America, DeBeers managed to get control of the rough diamond supply. The tactics used to gain control of these rough diamond supplies are alleged to include murder and kidnapping.

DeBeers maintained monopolistic control over the diamond market for several decades. They carefully released only enough rough diamonds to satisfy then-current demand, while continually adjusting the degree to which the rough diamonds were made available.

This caused continually escalating prices, and of course, it increased the *perception* of rarity. DeBeers mined considerably more rough diamonds than they sold and they have a large warehouse of uncut diamonds in London. As-a-result, they were not allowed to do business in the US, Canada, and a few other countries.

DeBeers in Caesar's Palace, Las Vegas. creative commons licensed (BY-SA) flickr photo shared by mrkathika

In the last couple decades of the 20th century, things began to change. Satellite technology, that was designed to find likely oil reserves, also showed the geology likely to hold diamonds. As-a-result, new discoveries began to multiply. Australia was one of the first developed nations to discover major diamond resources. DeBeers was able to make a deal with them to distribute all the rough, except for the very rare pink diamonds.

They also made a deal with the Soviet Union to distribute their rough diamonds. However, shortly after the break up, the Russians let their contract expire and began to sell the diamonds themselves.

The latest major diamond reserve was found in Canada. DeBeers could not make a deal with the Canadians, who are cutting and selling the stones themselves.

It is difficult to tell what the future will hold. Several sites are being explored and it is likely more diamond deposits will be found in the near future. DeBeers still controls approximately 75% to 80% of the diamond rough. The other suppliers have so far been content to sell at the same prices as DeBeers. However, if the law of supply and demand ever catches up to the diamond market, prices are likely to drop considerably. It is difficult to tell how this would play out, but DeBeers has a large inventory of uncut diamonds and would be in an excellent position for a price war.

Myths and Misconceptions

Here are some popular myths that you need to be aware of…

MYTH: Diamonds are rare.

Diamonds are the hardest material found on earth. Other than that, they hold no unique distinctions. All gem grade materials are rare, composing just a tiny fraction of the earth. However, among gems, *diamonds are actually the most common*. If you doubt this ask yourself; "How many women do you know that do not own at least one diamond?" Now ask the same question about other gems.

In the constellation Centaurus, there lies a white dwarf, that has crystallized into a diamond 2,500 miles in diameter and weighing 10 billion, trillion, trillion carats.

While we are still learning about the interior of the earth, current information shows that diamonds are likely the most common gem in nature.

Outside the earth, diamonds are also common. A recent discovery shows that some stars collapse on themselves, creating giant diamond crystals. In the constellation Centaurus, there lies a white dwarf, that has crystallized into a diamond 2,500 miles in diameter and weighing 10 billion, trillion, trillion carats.

Species	1 carat	1-5 carats	5+ carats
Diamond	$4,300/ct	$13,600/ct	$44,500/ct
Ruby	$5,050/ct	$9,500/ct	$100,000/ct
Emerald	$5,470/ct	$9,030/ct	$23,000/ct
Sapphire	$10,000/ct	$16,000/ct	$34,000/ct
Alexandrite	$3,600/ct	$15,000/ct	$70,000/ct

As you can see, diamonds are very costly, but not the most expensive gem in any size. If you were to do a comparison of other qualities, the results would be similar.

Elongated, Cut-Cornered Barion Triangle Cut Tsavorite Garnet by Daniel Stair

Are Diamonds Rare? Continued…

MYTH: Diamonds are precious.
Precious means valuable. In the 18th century, a French jeweler began describing gems as either precious or semiprecious. The categories are still used in merchandising but are frowned upon by professionals as they are nearly meaningless distinctions.

For example, garnets are considered semiprecious, but tsavorite garnets have sold for as much as $10,000 per carat. That seems pretty "precious" to me!

On the other hand, diamonds are only very valuable in their better grades and medium to large sizes. Small, low-quality diamonds are available in quantity for just $1 a-piece. A quick search of eBay and you will find several diamonds under $20. These are far from precious.

MYTH: Diamonds are the most brilliant gemstone.

Not counting synthetics, there are at least 15 minerals with a higher refractive index than diamond!

Brilliance is determined by the cutting and the refractive index of the material. Diamonds have a very high refractive index of 2.41. Diamonds have the potential if properly cut to be exceptionally brilliant. However, this is nothing compared to the 2.9 RI of rutile. Not counting synthetics, there are at least 15 minerals with a higher refractive index than diamond!

MYTH: A person can make a lot of money selling diamonds.

As the Internet has continued to proliferate and GIA has established well-accepted grading standards for diamonds, margins on cut diamonds have become extremely thin. It is not uncommon for a diamond dealer to make gross margins inside of 5%. Compare that to virtually any other industry and you won't think it is such a great business.

MYTH: Diamonds have more "fire" than any other gemstone.

Diamonds are known for their fire or dispersion. This is the ability to separate white light into the color of the rainbow. Diamond has a dispersion of .044, which is quite high. However, it is a far cry from gems like rutile with a dispersion of .330!

Colorless and native to New York, Herkimer diamonds are fun to find.

Contributed by Doug Hughes…

10X Loupe for Gemologists and Jewelers

by Donald Clark, CSM IMG

Standard gold triplet 10X loupe.

The simple 10X loupe fits in your pocket and costs less than any other piece of gemological equipment. You'll learn more with it than any other instrument, and it's easier to use than most other tools. You can see why many call the hand loupe the gemologist's best friend.

The 10X Loupe Standard for Evaluating Gems

Loupes come in several varieties. Watchmakers prefer the kind held by the eye socket. Other professionals prefer loupes worn like eyeglasses or clipped onto glasses. Some types sport fancy features like illumination and built-in tweezers. Gemologists prefer the hand loupe.

For gemologists, the 10X loupe (with ten-power magnification) is the standard for hand-held gem identification. Although you'll find more powerful loupes, the depth of field (the area that's in focus) is so small above 10X that they're hard to use. Instead, use a microscope when you need higher magnification. With lower-powered magnification, you just can't see as much detail.

You may encounter the following terms when shopping for a 10X loupe.

Triplet: a loupe with three lenses, which reduces distortion around the edges.

Color correction: a special lens coating to ensure you see natural colors, not colors distorted by passing through the loupe.

These features increase the price.

The standard for judging diamond quality is what an expert can see in good lighting with a triplet, color-corrected 10X loupe. Gemologists use this same standard for evaluating coloured stone quality, too. However, you don't need to purchase such an expensive variety for your gemological studies. You can get as much information and enjoyment from a less expensive model.

How to Use a 10X Loupe

Using a loupe gracefully takes some practice but soon becomes second nature.

Before you focus on anything, consider the light around you.

To evaluate cutting and polishing, you need to see the gem surface. Shine your light down on the stone. This is simple in a room with overhead lighting. If your best source is a window, position yourself so the light comes over your shoulder. Most importantly, avoid casting your shadow on the stone.

To see the inclusions in a gem, you need to see the interior. Place your light behind the stone and shining through it.

With minimal adjustments and a little thought, you can often see both the surface and interior of a gem. Having too little light to see well is usually the only limitation.

When you open a loupe, the cover becomes a handle. To focus your loupe, slide your index finger through the opening, then rest your hand against your cheek to steady the loupe. Now, you only have one hand to move for focusing.

Keep both eyes open to reduce eye strain.

Position the gem in front of the loupe.

Next, move it slowly towards and away from the loupe until it comes into focus.

Practice adjusting the focus from the top surface to the far side. On a small gem, you can get the entire stone in focus at once. On a larger gem, you'll have to focus on one area at a time.

Examining Gem Exteriors with a 10X Loupe

To judge the quality of a gem's lapidary work, you need to study its surface.

Surface Observations

A smooth, glass-like surface is the sign of a perfect polish. You may see pits or scratches. However, if they are few and invisible without magnification, they'll have little effect on the beauty of the gem.

Sometimes, you'll see a stone with small pits covering its entire surface. Although invisible to the naked eye, they do affect the gem's brilliance. If you compare the stone to non-pitted stones of the same species, you'll see the reduction in brilliance more readily.

Occasionally, you'll have trouble distinguishing whether marks are on the surface or inside the gem. To resolve this, rotate the gem so the light reflects off the facets.

Contributed by Doug Hughes…

10X Loupe for Gemologists and Jewelers *Continued…*

When a facet acts as a mirror, inclusions beneath it disappear. However, scratches on the surface remain visible.

Girdle

An unpolished girdle reveals the gem cutter was in a hurry. (A custom gem cutter would finish this off). Diamonds are an exception. Gem cutters cut them differently than colored stones because of their extreme hardness. Rounded, unpolished girdles are common in diamonds.

Facets

To further evaluate cutting quality, look at the facet meets. On a well-cut gem, they form sharp corners. All the facets in a row will be the same size and shape. You'll frequently see facets vary in size and corners that don't meet or overlap. If the differences are small, they won't affect a gem's beauty significantly. However, as the problems increase, the brilliance of the gem suffers.

Examine the sharpness of the facet edges. Due to diamond's hardness, they have the sharpest edges. This clue helps identify them. The edges of harder colored stones, such as rubies and sapphires, and cubic zirconia come in a close second. Softer gems (below a nine in hardness) usually have slightly rounded facet edges. Once in a while, you'll encounter a custom-cut gem with exceptionally sharp edges in a material of only 7 or 8 hardness. Although you may be unable to appreciate all the subtle decisions made cutting a gem like this, you can spot the workmanship by the polish, meets, and facet edges.

Culet

Next, turn the gem upside down and look at the culet. Sometimes, gems carried together in paper wrappers suffer chips on the culet. This is called paper damage. Again, if invisible without magnification, this won't impact the gem's beauty significantly.

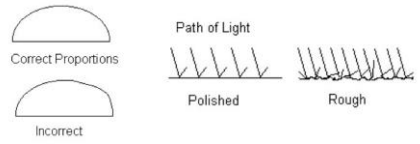
I hope you see how lapidary quality affects a gem. While a minor imperfection or two is acceptable, lots of sloppy work diminishes a gem's beauty, even if the individual instances are invisible to the naked eye. If you're a novice gemologist, using a 10X loupe gives you your first chance to appreciate this.

Examining Cabochons with a 10X Loupe

Start examining a cabochon by judging the polish, just as you would a faceted gem. Look for any scratches or pits that will reduce the amount of light reflected from the surface.

Next, check for contour evenness. A cabochon's surface should have an even curvature. Look at the cab from both ends and both sides. The shape, or curvature, should be a mirror image from side to side. No area should be thicker than its opposite. There should be no bulging.

Now, hold the gem so light reflects off its surface. Then, move the gem so the light travels across the top. On a properly cut surface, you'll see the band of reflected light glide evenly over it. On a surface with irregularities, the band of light will begin to snake. You'll most likely see this on the very top of the gem. You may not see a small, flattened area when viewing from the side but you will as light passes over it. Since light won't flow smoothly over this flattened area, you should consider the cabbing work second-rate. (If you look closely at that area, you'll likely find poor polishing, too).



Left, correct and incorrect cabochon contour proportions. Right, light won't move smoothly over an improperly polished surface.

Examining Inclusions with a 10X Loupe

The study of inclusions is one of the most interesting and useful elements of gemology. When you examine gems, you'll encounter quite a variety. Gemologists define an inclusion as anything internal that affects the flow of light. While this sounds negative, you'll also find some beautiful inclusions in natural gems. As you identify them and learn how they formed inside the gem, you may even find them nothing short of incredible.

Fractures

You'll find fractures the easiest category of inclusions to identify. Emerald gems almost always have internal fractures. However, they're uncommon in most other gems. Tiny, internal fractures that don't reach the surface have minimal effect on a gem's durability. (Emerging from cutting without damage attests to that). On the other hand, larger fractures or those close to a thin edge pose risks. Fractures that reach the gem surface can absorb liquids. Over time, they will absorb dirt and skin oils, causing a loss of brilliance.

Emerald vendors may fill these fractures with oil of the same refractive index (RI) as the gem. This treatment makes the fractures less visible and reduces the likelihood they'll absorb skin oils. To see these filled fractures, look very closely and get the light on them from just the right angle. If you see a multicolored radiance, like an oil slick, you've spotted one.

Sometimes, a fracture will stand out, interrupting the flow of light. Other times, the fracture is pressed together so tightly that light will flow right through it. This type will show a bright, multicolored flash when light strikes it from the correct angle.

Most fractures have at least a slight bit of curvature. You must look carefully to see this. If you encounter a perfectly straight fracture, you've likely found a cleavage fracture. Gems have cleavage planes, much like the grain of wood. Along the cleavage plane, the gem splits easily. Finding a cleavage fracture in a gem signals a notable weakness.

Mineral Inclusions

Minerals, whether small bits of debris or whole crystals, are another common type of inclusion. They can be spectacular. Afghan peridot sometimes contains clusters of tourmaline that look like flies. Tiny spinel crystals arranged in a plane sometimes include another spinel.

Some mineral inclusions are opaque, such as black "carbon" spots on diamonds. How much they interfere with the passage of light depends on their size and number. Other inclusions are transparent. Their visibility depends on their RI. If this differs significantly from the surrounding crystal's, they will jump right out at you. In other cases, like spinel in spinel, they're nearly invisible. To see them, you need a dark background behind the gem and light coming from the sides.

Silk is a pattern of very slender, thread-like crystals. It's found in several gems but is particularly common in corundum, spinel, and garnet. You'll get the impression you're looking at a gem through a fine layer of silk, if the crystals are fine enough and all arranged in the same direction. The greater the silk saturation, the more the gem's brilliance will suffer. (However, these inclusions also produce asterism in prized star sapphires).

Voids

You'll also see many voids or cavities in your gems. As crystals form, they sometimes trap gas bubbles inside. Cavities may also contain liquids or other crystals. For gemologists, finding two or three fillings in one void is a rare treat and significant clue for gem identification.

Healing Fractures

Sometimes, you might see what looks surprisingly like a fingerprint in a gem. That is called a healing fracture. At some point in the past, the crystal broke. When the conditions for growth returned, the crystal healed or grew back together.

Continued next page…

Contributed by Doug Hughes…

10X Loupe for Gemologists and Jewelers *Continued…*

"Amethyst" with gas and water inclusions, Morocco. Trilliant cut, 15.53 cts. © All That Glitters. Used with permission.

Other Inclusions

Fractures, minerals, and voids are the primary types of inclusions you'll commonly encounter. However, you'll also find some interesting inclusions in specific gems. For example, peridot may contain lily pad inclusions, small black spots surrounded by a curved fracture that look just like lily pads. These are common and easy to spot. Rubies and sapphires may show something similar. Sometimes, they contain opaque inclusions with fractures around them, though not as beautiful or symmetrical as those in peridot. These indicate the gem has been heat treated. The inclusions burst due to heating, creating the fractures.

You can identify demantoid garnets by their distinctive, horsetail inclusions. If you ever find these, you'll have no doubt about what you're seeing.

Evaluating Colouring with a 10X Loupe

Color in gems may not always be distributed evenly. For example, lapidaries cut stones such as ametrine and watermelon tourmaline to show off the separate colors. In most gems, however, you need to look carefully to see them.

Zoning

Amethyst may show colour zoning, areas of dark purple surrounded by lighter purple or even colorless quartz. By careful cutting and orienting the color in the culet, you can make the gem evenly coloured when face up. This will bring the most eye appeal to the gem. The value of the gem decreases if you can see the zoning face up or with slight tipping.

See example of colour zoning top of next column.

Amethyst Colour Zoning.
Sapphires also commonly show zoning. Again, if you can't see the zoning face up, it doesn't affect the value of the gem.

Banding

While the color zones in an amethyst are random, the zoning in a sapphire occurs in straight bands. They're present even if they're not distinct enough to be seen with the naked eye. To see them best, view the gem with a 10X loupe from the bottom with light coming from behind it.

You should look directly on to the plane of color to distinguish the banding. Due to the cutting, you'll only see the banding in one facet at a time. To see this takes a bit of practice, but it's worth learning.

Once you see the banding, check if it's straight or curved. Any curvature you see will be subtle but significant, so look carefully. If the banding or stria is curved, the sapphire is a flame-fusion synthetic. (Straight banding can be due to natural or synthetic origin).

The curvature is subtle.
Banding Curvature in a Synthetic Sapphire.

Advice for Beginners

You can get a lot of information from your 10X loupe. If you're a beginner, you'll probably have dozens of questions after trying out the hand loupe. They will direct you to your next level of study. Just remember two things: practice makes perfect and take your time. Gather as much information as you can from your loupe inspections.

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Contributed by Doug Hughes…
A feature from the International Gem Society
https://www.gemsociety.org/article/just-ask-jeff-what-is-the-white-paper-test/

What is the White Paper Test?

by Jeff Graham

What is the White Paper Test?

The white paper test is something every faceter should know and use, this is particularly true for a new cutter or somebody who does not have a lot of experience buying rough. It is essentially an easy way to get a close approximation of what (color and how saturated) a piece of rough will cut like.

To do the Test

Take a piece of rough you want to check and put it on a white piece of paper in NORMAL daylight.

No light behind the rough, and get it away from any bright light source (like a show dealers halogens in their cases) try to make sure that it is mixed light (incandescent and florescent).

Above: As you can see the Tourmaline crystals in the picture easily pass the test. You can see good colour.

What you see in good average day light is close to what the stone is going to look like when it is cut.

If it the stone is black looking with no (or very little) colour, you do not want it.

You want rough that will show at least some colour flash when you test it this way. Also, it is a good idea to look at the rough this way under each type of light (incandescent and florescent) and check to see what colour(s) it is and how it looks, especially if you are buying Sapphires or Spinels.

A good habit to get into is to do this test on rough you are cutting and then compare the results, it will help you when it comes time to buy rough in a big way.

Cheers Doug

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Cortana, Tell Me A Short Story.

Once there was a beginning. Soon after, there was a middle.

The end.

Contributed by Doug Hughes…

Second Newsletter June to July 2016.

The Malbunka Copper Mine Project

(MCM Project).

Dehne and Maureen McLaughlin July 2016.

This newsletter is the second about mining undertaken in 2016 in the desert of Central Australia at the Malbunka Copper Mine by Dehne and Maureen McLaughlin and supporters for the recovery of discoidal azurite specimens on white kaolinite matrix described as "azurite suns". This newsletter covers the last three mining periods at the mine based on our schedule of 6 nights' mine work and 4 nights in Alice Springs. Dehne took several days off during the last field break between trips 6 and 7 to support the Creation Ministries outreach at the Alice Springs annual show.

Craig Bosel had gone back to Perth and our new Hard Worker from Western Australia, Seb (Dr Sebastian Staude, Geologist and Field Collector), turned up in Alice Springs after a 2-day gravel road drive in his 4WD across the desert via the Great Central Road that runs 1126 km from Laverton in Western Australia to Yulara near Ayers Rock in the Northern Territory. Now this is one keen guy.

You may remember how proud we were of our improved camp set up. We arrived back at the mine on 12th June 2016 to find every tent ransacked, several of them slashed, every pillow, sheet, sleeping bag and blanket stolen, food stolen or destroyed etcetera and a pile of important kitchen stuff piled up ready for loading in their car on top of our bedding and multiple other items.

PHOTO 1. *We do not usually leave our personal tent in such a mess. My mining clothes are so crappy that only one new mining shirt was stolen. Not miners as they left Maureen's helmet and lamp in the tent. If the thieves were so hard up for bedding, we would have gifted or bought them bedding and food etc. as the cost of delay to the mining operation is higher than the value of the stolen camp gear. They stole a pillow I hated. Bless them*!

The thieves, an Aboriginal group in a white 4WD station wagon, were interrupted in their looting by a passing Government Geological survey vehicle.

Without a bag of old blankets from my late mother that we had fortuitously stored underground we could not have dealt with the cold weather that week. Returning to Alice would have been the only option. There are no time extensions in the Project schedule as the Bass Strait ferry bookings we have for our two vehicles are set in stone.

It's one of the crazy things about transport to Tasmania. Maybe it's done to keep us on the island and visitors away.

So, after camp patch up, we got on with the core business. Seb had bought his own 4WD in and swag so he was good to go. Our first task was to finish a 0.5 metre cut across a 2.5 metre width into the Adit face that Craig and I had started preparing at the end of trip 4. There was 4 years of wet weather waste rock dumping and 30-year-old fossickers rubble that needed removing to advance the face.

PHOTO 2. Carrying a large slab containing suns from L3 in the Adit Drive during Trip 6 and Adit Drive cut 3. Ray Grant photo.

Reopening of the Adit face, now called the Adit Drive (AD) was an important step in the Project. It was preceded by a reinterpretation of the geology of the azurite deposit, triggered by depletion in azurite mineralisation in the Up-Dip Drive (UDD) in L1 and L2. The first four weeks work in 2016 that included 2 metres of driving in the DDD had shown that azurite richness was excellent specimen wise and constant and that the kaolinite host lens with its interbedded sandstone and quartzite layers was not tapering as originally expected but was thickening. This was proven by hammer drilling into the floor to find the depth of kaolinite as described in our first newsletter. As the boundary between the DDD direction and the AD is marked by a 0.5 down throw fault, it made sense to open the old Adit Drive centred on the anticlinal cusp and start pushing an exploration tunnel to test if the azurite mineralisation persisted to an acceptable level of quality and quantity. Seb added to this by pointing out on Trip 5 that the brecciated copper oxide rock he had noted in a quarry behind our mine hill suggested that the copper mineralising system could be continuous from our waste rock dump area exposure of the same brecciated material documented in previous newsletters 120 metres to the east to the quarry. Google sat photos suggested a linear ~ E-W trend is possible. We had been deterred from re-entering the Adit Drive as past exploration indicated unfavourable groundwater impact on the azurite and a tapering of the kaolinite lens. Could we punch through this?

An important feature of the Adit Drive (AD) cuts was the exposing of the kaolinite and quartzite injectite at the base of the drive, the same layer encountered in the down faulted DDD as seen in Newsletter 1 Photo 5. And, this injectite 1.5 and 2 metres into the tunnel was becoming enriched not just in atacamite but chrysocolla and azurite. You may say "well so what!". Well add this to the large azurite disks found in sandstone/clay contact in this area we have both a serious large scale injectite being encountered not identified previously and an increase in copper mineralisation in the whole vertical face of the drive.

***PHOTO 3**. Trimming with fine wood chisels at the collecting face in the Down Dip Drive with Seb looking on with bated breath. This drive has been developed over the last 4 years as a fall-back face to the UDD. Exploration is always a must.*

Once Seb and I completed the 0.5 metre cut in the Adit Drive and carried out collecting, we moved to the DDD, our 2016 bread and butter area, and completed over the remainder of the week a 0.5 metre cut. Collecting the L1 to L3 layers took 3.5 days.

So, the three of us mined away for 6 days during Trip 5. Seb was happy with his rocks he took home. He had never seen so much azurite in one place. Maureen and I enjoyed his company and humour and admire this young man's dedication to field collecting. Yes, Germans do have a sense of humour and we hope to stay in contact when he returns to Germany.

***PHOTO 4**. An excellent thick crystalline azurite sun in matrix seen insitu during Trip 5 with Seb in the DDD. 5 inches in diameter.*

Trip 6 was a big change in personnel. Maureens son flew into to Alice Springs, a veteran of the early mining efforts and fresh from building bushwalking tracks in the Hobart area and playing 6 games of basketball a week as well as Ray and Cynthia Grant arrived from Arizona via Western Australia in their 4WD. Ray and Cynthia visited the mine in 2012 and Dehne and Ray published a detailed article on the mineralisation in Rocks and Minerals in the Nov-Dec issue in 2012. So we ventured out again with 3 vehicles in convoy after a 3 day break in Alice and recommenced mining our last cut for 2016 into the DDD. While Tim, Maureen and…

Continued next page…

The Malbunka Copper Mine Project

Continued…

…Dehne got stuck into the mining face with big hammers, Ray and Cynthia set up camp using their own camping system as they had been out of remote area camping practice for 4 years. We had a tent for them as a second worker had dropped out but their giant blow up bed needed their own tent. Beware the giant blow up beds as they love taking up room and then deflating at the wrong time. Strechers are recommeded.

So we had 5 people at once for a week in the wild yet to be increased by two for a short period from the Northern Territory Government (NTG). The NTG is remapping the local 1:250,000 geological map sheet last published by the BMR in 1964. Some of the survey team, Nigel and Jake, visited during T6. We showed them the underground workings, provided a copy of our 2012 Rocks and Minerals mine article and requested any feedback on information they may collect on the local and regional plunge of the anticline we were mining in.

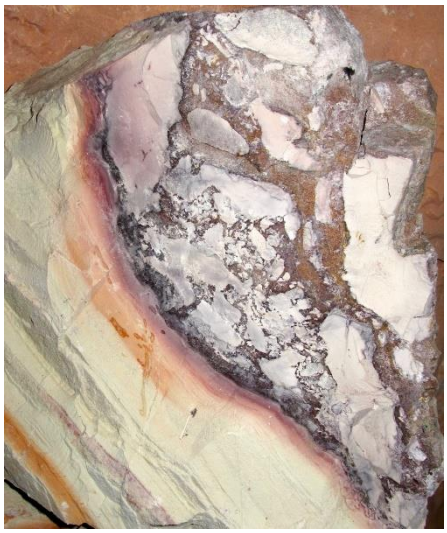


PHOTO 5*. Sandstone injectite cross section showing shredded kaolinite clasts. We love this stuff as it speaks of the dynamic hydraulic environment that formed this unique azurite deposit. Rays Photo. Facebooked it as well.*

Information on our mine anticline plunge could be useful in firming up reserve estimates beyond year 5. The sedimentary lens containing the kaolinite/azurite association is not exposed on the opposite side of the hill to the mine and one interpretation is that, instead of tapering out as previously thought, it could continue subsurface below a quarry containing brecciated rock with copper oxides. The possibility of an intersection of brecciated and mineralised rock from a near vertical fracture zone with the azurite containing clay lens is quite possible and exciting.

The 2.5 metres of new driving down the Adit Drive in 2016 has demonstrated an increase in copper mineralisation volume and distribution in the total 2 metre vertical face.

Coupled with the azurite mineralisation in the DDD encountered in 2016 which parallels the Adit Drive, the persistent mineralisation in the anticlinal down dip cusp and near anticlinal limbs gives cause to be optimistic over the future of the Project. In these favourable circumstances, marketing becomes the limiting factor on financial income, not production.

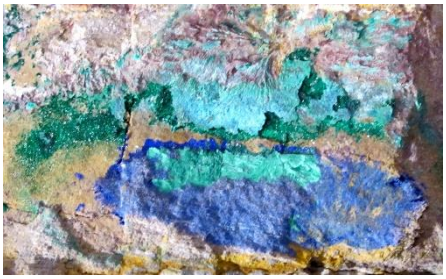


PHOTO 6. *Adit Drive cut 3, azurite, atacamite, azurite and chrysocolla plus malachite.*

PHOTO 7. *Atacamite in vughs overlaying malachite surrounded by chrysocolla. Atacamite crystals are also embedded in chrysocolla. Adit Drive, C4.*

Photos 6, 7 above and 8 and 9 below are examples of Adit Drive mineralisation.

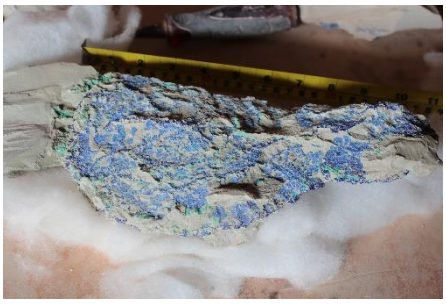


PHOTO 8. *From Adit Drive inside roof channel intact azurite piece as mined, 28cms (11 inches) long with portions altering to malachite. These large often 3D azurite pieces are only found in roof channels in the mine, which are now only present in new roof channels exposed at the Adit Drive. Another reason to keep up exploration driving on this face.*

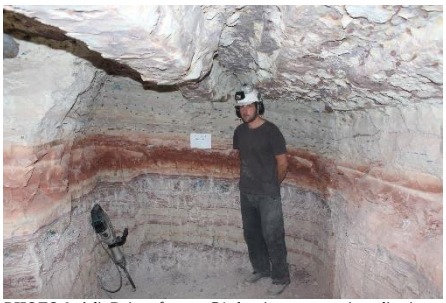


PHOTO 9*. Adit Drive after cut C4 showing copper mineralisation exposed in vertical walls. Note the roof channels from which large azurite specimens were extracted. Tim Hughes for scale and good looks.*

PHOTO 10*. Outstanding Adit Drive azurite sun specimens before packing.*

In the last newsletter, we complained about the storm water entering our DDD workings. The water was supposed to go down to the Adit Drive. Not anymore. We now divert the water to two sump areas in the DDD having created a new additional large sump in the DDD area to ensure both faces can be accessed despite vagaries in the desert weather.

PHOTO 11*. Sometimes it gets cold at the mine and rain threatens again coming up the valley from the south west. We had a lightning storm one night we had never witnessed before at the mine. Cynthia, Maureen and Dehne by fire. Photo by Ray.*

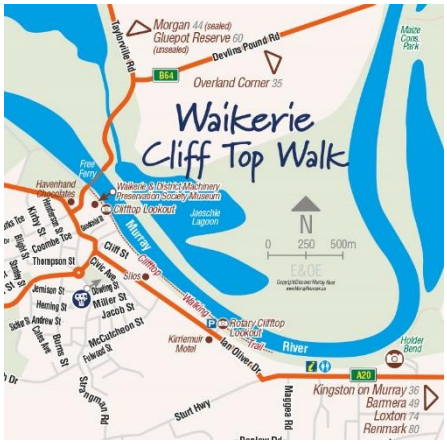
The CLC planned to bring out a group of traditional Aboriginal owners (TAOs) to the mine during T6 and has happened each year over the last 4 years, but it never came off. There was a group of 4 Aranda men related to the TAOs (good guys-Williams) who dropped by out of the blue before sundown one day who said hi, took some phone photos and then took off into the sunset. So, we had a sought of an inspection.

We are confident we have minimised the risk of bad people stealing gear left at the mine and look forward to mining in 2017. We hope portaloos are not in demand by the locals.

Which brings us to the matter of mine workers and visitors for 2017. We seek some healthy mine workers for 2017 over June and July who can push rock in a wheel barrow 7 hours a day for at least two days in our 6 day mine working week. Other jobs such as shovelling, jack hammering and undercutting with some collecting are not quite as taxing. Even us seniors do that. This is paid work which if you are a collector has a blue lining to the job. Anyone who wishes to casually visit the mine would need to have their own 4WD transport and can look after their own camping and catering needs, including water and fuel. We would apply for all required Aboriginal land travel permits. We treat everyone nice but the workers (max of 2), come in with us in our two vehicles, use the accommodation tents and are catered for by us. Due to the remoteness and difficult access to the mine everyone travels in together. Short term visitors can leave the mine on their own when it suits them. Anyone interested in being involved in this unique Project please let us know by email and we can provide you with a draft field timetable which we harden up in January 2017 just before Tucson. ***Cheers Dehne and Maureen McLaughlin July 2016.***

Contributed by Janet and Mel.

Walking Murray Riverside at Waikerie, SA. 11th July, 2016.



Information gathered while on the above walk…

'Paddle Boats – The past.'

From the 1860s, paddle steamers often with a barge or two in tow, serviced all the towns, pastoral stations, and settlers between Goolwa in SA, Echuca in VIC, and Burke in NSW. They carried all goods required by people in these isolated areas, including farm machinery. On the return trip down river they carried bales of wool, bags of wheat, boxes of dried fruit and other goods. Wheat was railed from Goolwa across to Port Victor (Victor Harbor) for transport overseas on large sailing ships.

Blanchetown also became a port at this time; goods were off loaded there and transported to Adelaide. But in 1878, after much planning of where a railway line should run, it was decided to extend it from Kapunda to the river edge at Morgan, where a large wharf was built. Here the paddle-steamers unloaded their goods for faster rail transport to Port Adelaide. As many as 6 or 7 trains left Morgan each day for Adelaide, and so it continued for many years until road and rail transport here and Victoria finally ended the days of busy river traffic.

'PS Ruby'

Paddle steamers 'Ruby', 'Gem' and 'Marion', among others, carried passengers between Morgan and Mildura on holiday trips, something our village settlers could never afford, but they could stand here on the cliff-top and watch as the steamers passed by, at night with many lights showing along the vessel. One settler wrote (in 1900) that they looked like 'floating Christmas trees'.

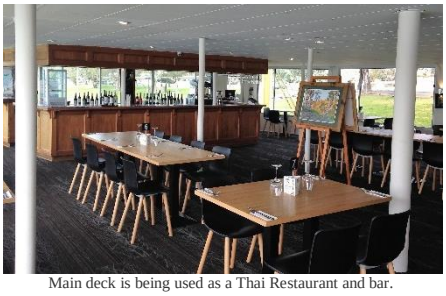
People of importance, such as members of Parliament, the Governor and his party, and other state dignitaries regularly travelled this way to inspect the progress or otherwise of settlements.

Waikerie did not have electric lights in the town until 1928. From about 1910 carbide lights were in use at major street crossings. These were lit each night by one of the town's reliable teenagers.

Paddle Boats – The present…

Of the remaining large paddle boats on the Murray River today, tourism and accommodation are their main function and use. At Waikerie, we were surprised to find the 'Murray River Queen' currently in a fixed mooring and being used for public accommodation and as a floating restaurant; not river tours.

The '*Murray River Queen'*, a unique floating Backpackers Hostel also offers public accommodation. A relaxing Café and Thai Restaurant on the Deck showcases scenic views of the majestic Murray River and the Riverfront. (While dining at the restaurant, the manager/owner said that soon they will be moving the boat to be moored at Renmark.)



Main deck is being used as a Thai Restaurant and bar.

Thai for lunch.

Main Course.

Sweets.

The 90-foot channel

The 90-foot channel, shown here delivered water to the blocks on the lower side of West Road. It was the second channel built by the village settlers.

The first channel they built was at the 40-foot level and ran along Ramco Road, as far as The Avenue.

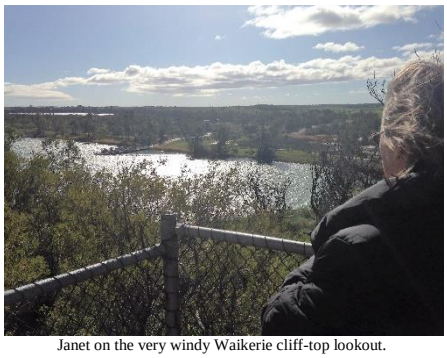
This 90-foot channel, built about 1895, delivered water by gravity, with a fall of approximately 7-feet per mile (1.3 metre per kilometre).

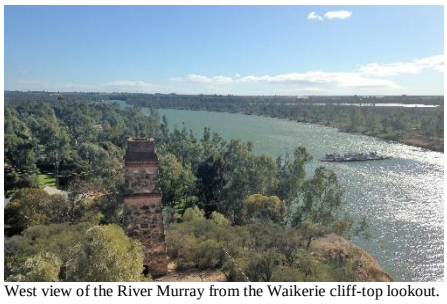
With the updating of the channel and electrification of the pumps during the 1960s, use of this section was discontinued, and provision made for water to the 90-foot pipeline via a line down Stanley Street.

Heading along the 90-foot channel toward the cliff-top lookout.

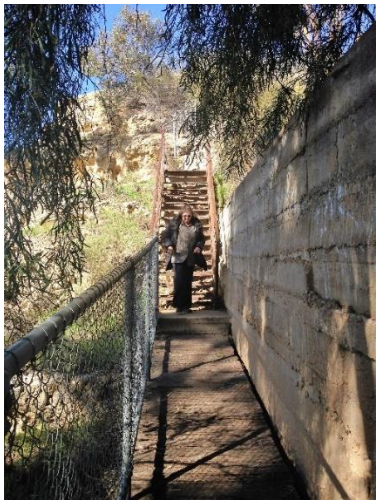
Walking Murray Riverside at Waikerie, SA. 11th July, 2016. *Continued…*

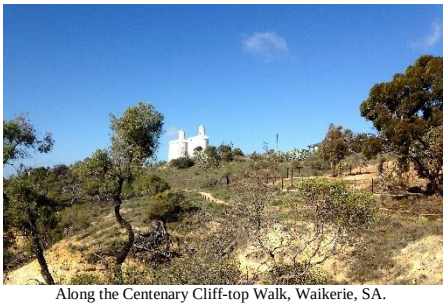

Start of the Centenary Cliff-top Walk, Waikerie, SA.


Janet on the very windy Waikerie cliff-top lookout.

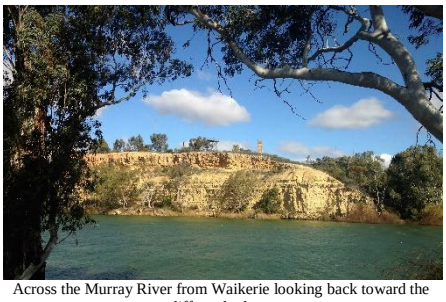

West view of the River Murray from the Waikerie cliff-top lookout.

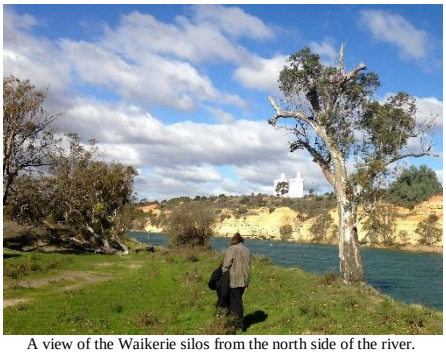

East view of the River Murray from the Waikerie cliff-top lookout.


Janet stepping down from the Waikerie cliff-top lookout.


Along the Centenary Cliff-top Walk, Waikerie, SA.


Looking west from Holder Bend back toward Waikerie, SA.

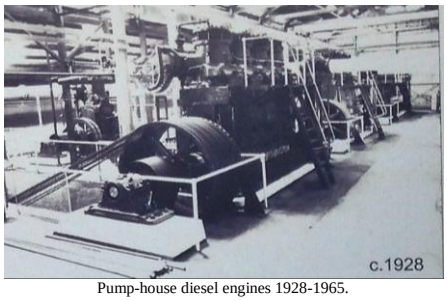

Across the Murray River from Waikerie looking back toward the cliff-top lookout.


A view of the Waikerie silos from the north side of the river.


Waikerie water tank.


This, six cylinder, Worthington-Simpson, two-stroke, upright, marine type, crude oil pressure diesel engine was installed into the Waikerie Pumping Station along with three smaller units in 1928.


Pump driven via rope belts by the engine shown behind/above.



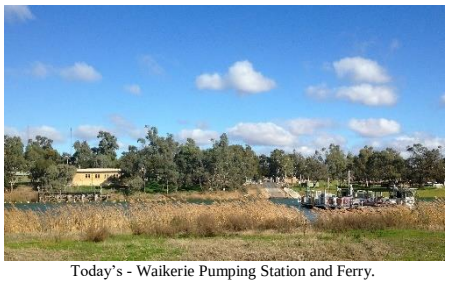
Pump-house diesel engines 1928-1965.

In 1928, the existing pumps were replaced with three new Worthington-Simpson diesel powered units which resulted in a substantial decrease in running costs. Diesel fuel was brought to Waikerie by rail from Birkenhead in rail tanker trucks. These were shunted onto a side line at the railway station and the oil was gravitated by means of a pipeline to holding tanks on a prepared terrace above the pump-house.

When all engines were operating, they consumed 1200 gallons of diesel fuel every 24 hours.

Power from the diesels was transmitted to the pumps by rope drive. The larger unit had 35 ropes, each 100 feet in length. Ropes for each engine/pump unit were kept pliable with dressing of commercial lanoline.

In 1965, these diesel units were replaced by an all-electric-power pumping station.


Today's - Waikerie Pumping Station and Ferry.

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In My Opinion…

Text extract taken from the November 2016 Silicon Chip magazine.

Publisher's Letter

Renewable energy is seriously damaging the Australian economy…

No doubt most readers know about the state-wide blackout that occurred in South Australia in September. Let me summarise what happened. It seems that the wind blew just a bit too hard for their much-vaunted wind turbines and they all automatically feathered their blades to stop self-destruction. Up to that point, the wind turbines had been pumping out power at a huge rate and their sudden throwing in the towel meant that the power shortfall had to come from somewhere else. Since South Australia no longer has proper base-load power stations, it had to come from Victoria via the fabled "interconnector". But the load was too much for it and it suddenly became the "disconnector". Everything else fell in a heap after that.

Of course, after the blackout occurred, a bunch of their spindly transmission towers then blew over and that did not make the job of restoring power any easier. It is only now that people are starting to realise that you actually need a powered grid to allow wind farms to generate power. They cannot simply start up on their own! In that way, they are exactly like the tens of thousands of grid-tied solar systems installed right throughout Australia. As their owners are painfully aware, if you get a blackout, your shiny solar panels and inverters are prevented from generating power by the "anti-islanding" feature.

Actually, given the serious difficulties involved, it is incredible just how quickly the energy distributors managed to reconnect power to most of the population. But it could all happen again, anytime the wind blows at more than about 90km/h, which is not much more than a stiff gale.

So, I wonder if many people died in their home during the blackout because their life support system stopped? How many hundreds of millions of dollars of production were lost? When you consider the serious disruption to blast furnaces at Whyalla and Port Pirie and the interruption to production at mines at Olympic Dam and elsewhere, it might run to a lot more.

This problem of intermittency of wind and solar power and the need for expensive backup generation has been well-documented in the past. In fact, not only do South Australian electricity consumers pay the highest rates in the country, the cost of their peak power (when the wind stops) has risen as high as $14000 per megawatt!

And, while the South Australian government politicians like to boast that their state has the highest proportion of power generated by renewables, ultimately they rely on Victoria's dirty brown coal power stations in the Latrobe Valley, via the interconnector / disconnector. How much longer can that happen, since Victoria seems to be heading down the same "renewable" energy dead end?

Finally, just in case anyone thinks that South Australia was subjected to a really severe weather event, just consider that when Cyclone Yasi hit Queensland in 2011, it did not blackout the whole state – far from it. Even during that severe event, the disruption to the State's grid was relatively modest. And, more recently, consider Cyclone Matthew which just ravaged Haiti, Florida and some of the southern United States. Florida was not "blacked out" although about 2.2 million homes and businesses were blacked out for a short period.

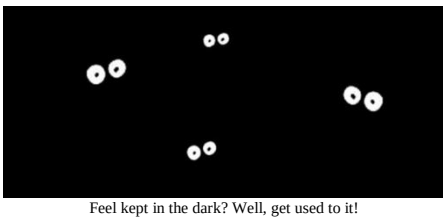
I am actually optimistic about the outcome of this South Australian calamity. It should make all Australians aware that this religious crusade to produce more and more renewable energy will not just cost all taxpayers and electricity consumers lots of money if we keep going as we are. It will mean loss of employment to untold thousands of people as businesses realise that Australia is not a good place to operate. Let us hope that sanity will be restored.

Leo Simpson

Blacked out Adelaide - King William Street view.

Blacked out Adelaide city - viewed over the Festival Theatre.

"In my opinion…"



Feel kept in the dark? Well, get used to it!

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Extract taken from a recent HEMA email that I received…

HEMA hyperlink to source

How to survive in Australia's deserts…

Australia's deserts are some of the harshest and most remote landscapes on the planet, which means your Outback adventure can end in disaster if you travel unprepared.

Explore Australia's deserts safely and lawfully with these tips for travelling through the country's harshest and most remote regions.

1. Carry plenty of water (2-3 litres per person per day), food and fuel (allowing for 30-50% extra for sandy areas) plus enough food and water for an additional week just in case. Plan to be totally self-sufficient.

2. Avoid travelling during or just after wet weather, as dirt roads will quickly become impassable and can take weeks to dry out. Check with local authorities on road closures and road conditions or you could be facing a large fine.

3. Make sure your vehicle is in first class mechanical condition and carry a good kit of tools, essential spare parts, two spare tyres and a tyre repair kit. Know how to check your vehicle over and make basic repairs.

4. Don't drive at dawn, dusk or night because this is when stock and wildlife are most active.

5. Summer temperatures can be scorching and even midday in winter can be hot enough. Always drink plenty of water and wear a hat and sunscreen to avoid dehydration and sunburn.

6. In the event of a breakdown, stay with your vehicle. A vehicle is a larger target to see for emergency services, and will offer you valuable shade or warmth depending on time of day.

7. Do an accredited first aid course and carry a comprehensive first aid kit that is easy to access. Learn some survival skills such as how to contact the RFDS and police using your radio, bush navigation, how to start a fire and collecting water.

8. It's imperative that you have a backup system involving a person at 'home base' who you regularly contact and advise of your travel plans. Give them a map of the area where you are going and a phone number list and instructions as to what to do and who to contact if you stop calling.

***

After reading tip **8** above, I remembered that David Roberts had told me about a travel tool that he can use to maintain contact either for family updates or for sourcing emergency resources/help if required. He called it, "***SPOT***".

SPOT

http://au.findmespot.com/en/

FEATURES

TRACKING

SPOT GEN3's customized tracking features takes your **SPOT** experience to the next level. Only with **SPOT GEN3**, is tracking motion-activated regardless of the level of tracking you choose (Basic, Unlimited or Extreme). A vibration sensor tells your **SPOT** to send track updates when you are moving and to stop when you do.

S.O.S.

With the push of a button, GEOS International Emergency Response Coordination Centre provides your GPS coordinates and information to local response teams - for example contacting 9-1-1 responders in North America and 1-1-2 responders in Europe The S.O.S. button is for emergencies only.

CHECK IN

Let family and friends know you're ok when you're out of cell phone range. Send a pre-programmed text message with GPS coordinates or an email with a link to Google Maps™ to your contacts with your location. With a push of a button, a message is sent via email or SMS to up to 10 pre-determined contacts and your waypoint is stored in your **SPOT** account for later reference. Your stored waypoints can be easily integrated into a **SPOT** Shared Page or **SPOT** Adventure account.

HELP/SPOT ASSIST

Alert your personal contacts that you need help in non-life-threatening situations. Or, use **SPOT Assist** for professional services on land. (Additional service required).

CUSTOM MESSAGE

Stay in touch while off the grid by sending your custom message. Set up a message before leaving to send to contacts with your GPS location. Use this feature as a secondary OK message or transfer your personal help alert to this message function if you are using a **SPOT Assist** service on your Help button.

SPOT Gen3 Video Promotion

Download SPOT Gen3 Brochure

Download SPOT Gen3 User Guide

SPOT GEN3 GPS Messenger Unit AU$220.00

To Activate your 'SPOT' you will need to Purchase an Annual Service Plan.

Basic Annual Subscription (mandatory) USD$164.99

Includes:

- SOS
- HELP
- Check-in/OK
- Custom Message
- GPS Tracking at 10 minute intervals for 24 hours.

Unlimited Tracking (optional) for an additional USD$49.99:

You get all the features in the Basic Annual Subscription as well as being able to set the tracking to 5, 10, 30 or 60 minute intervals. SPOT Gen3 will send tracks at your chosen rate for as long as your device is turned on and moving (no need to re-set after 24 hours). Tracking doesn't stop until you do.

Can be purchased via this Australian link.

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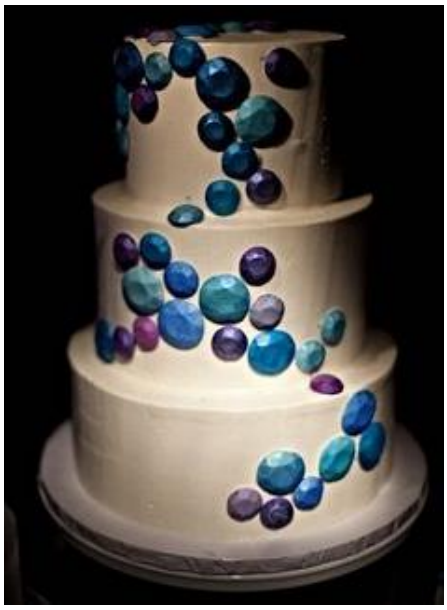
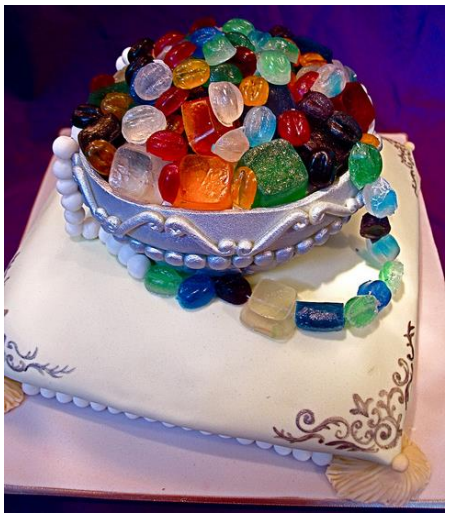
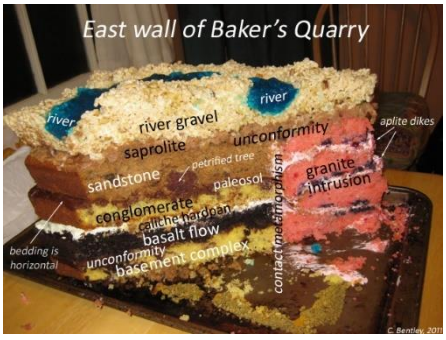


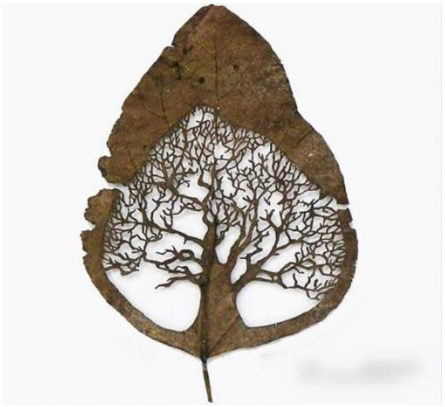


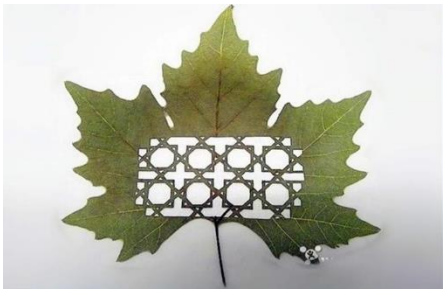
Agate Cookies.



Contributed by Doug Walker…

Leaf Artistry





Contributed by Doug Walker…

Hide or take a picture?

Some Humour Contributed by Michael Mabbitt…

Now this would be a fork in the road.

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Cortana, Tell Me A Story.

How about a short fairy tale?
"A prince, a kiss, and happily ever after."
The end.

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Can you remember these trolley buses in Rundle Street and the noise their electric motor made when starting off?

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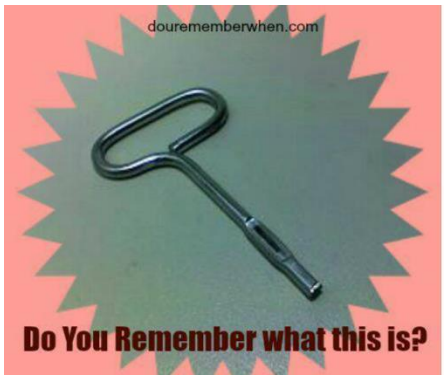

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Contributed by Don Lymn…

Hotel Coobowie.

MEMORIES – Gypsum, Salt Crystals, and Fossils -1991

Remember when we went to Coobowie and then on to Marion Bay
To fossick for Gypsum and Salt Crystals and all on a bright sunny day.
We followed instructions and unlocked the gate and the convoy followed right through,
We travelled for miles across dry salt plains, but where was the lake? - no one knew.

Pink Lake, York Peninsula, SA..

At last the Ranger came along and promptly ordered us out!
"This 'ere track is for fire trucks see, that's what it's all about."
We slowly turned 'round and made our way back to the road,
A bit further on another gate, and a truck with a heavy load.

Salt Crystals.

At last we found that elusive lake with salt the brightest pink
Such crystals there so square and neat, it really makes you think,
How can they form so perfectly under the water there
But they dissolve away to nothing when exposed to the sun and air.

Stromatolite, Marion Bay, South Australia.

We paddled around in the water as we gathered our treasures there
Gypsum, salt crystals and stromatolites, we all did take our share.
On our way, back to Coobowie we all went our separate way
Some fishing, some swimming and some shelling, out in the wide-open bay.

Klein Point Limestone.

Remember Klein Point and its fossils, where we searched all day by the shore,
Big ones, flat ones, thin ones, curly ones, we found them there for sure.
We used our little hammers to belt those fossils free
And when we found a good one, we shouted out in glee.

Example of fossilized cone shell.

Those fossils lay hidden for hundreds of years and are now being found by man
From tritons, cones and cowries, to the tiny delicate fan.
By one o' clock we had our fill and soon we were on our way
And our thanks go to our leaders for this pleasant weekend away.

Nancy Lymn.

***

Contributed by Ian…

Sarah Spencer Leader Messenger - Extract from The Advertiser Wednesday 16th November 2016

Lerps Leaching on Our Trees

Insects are attacking river red gums across the northeast in the worst infestation in 50 years, Tea Tree Gully Council says.

Sap sucking Cardiaspina psyllids are stripping the trees of foliage and leaving large sections of dead leaves.

Tea Tree Gully aborist Andrew Nichols said the lerp insects were "rife through our suburbs" after thriving in the wet weather.

"Lerps florish in wet conditions and we have lost a lot of the habitat for smaller birds that prey on lerps," Mr Nichols said.

"While the trees look stressed, it's rare for a previously healthy tree to die from a single infestation.

He said the trees would be watered and Mulched over summer, which would help most of them to recover.

According to the Primary Industries Department, the psyllids lay up to 700 eggs on a leaf stalk and the "crawlers" search for a place to settle on the plant.

The insects live for one to two months.

"Lerp insects rarely cause the death of trees, although defoliation may be severe and there may be some dieback," the department says.

"In some cases, other insects move in to attack the tree and the tree subsequently dies."

Mr Nichols said if residents were concerned about a tree on council land, they could log it at teatreegully.sa.gov.au

An arborist should be contacted for problems with trees on private land.

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Members' Noticeboard

2017 Show Dates

Sat 11th – Sun 12th March 2017
GEMKHANA – Victoria – Gem and Mineral Show.
Time: 9.30am to 4.30pm. Venue: Quest Shepparton Racing Complex, Goulburn Valley Highway, Kialla, VIC. (7km south of Shepparton, VIC.)

Sat 18th – Sun 19th March 2017
Canberra Lapidary Club Rock Swap.
Time: 8.30am to 5.00pm. Venue: Exhibition Park in Canberra – Wagtail Way (Camping Ground) – outdoor event Cost: Free Details: Fossickers & dealers. crystals, minerals, rough & cut gemstones, opals, fossils, jewellery. Food available. Sieve for sapphires http://www.canberralapidary.org.au/

Fri 14th – Mon 17th April 2017
GEMBOREE 2017.
The 53rd National Gem & Mineral Show, GEMBOREE 2017 will be held in Lithgow, NSW
For Newsletters and full details visit
http://aflaca.org.au/gemboree/

Sat 17th – Sun 18th June 2017
Tea Tree Gully Gem and Mineral Club Show.

Mineral/Crystal Sale

Gus Paskalis

Sat 3rd Dec to Sun 11th Dec 2016

9am - Dusk

8 Stirling St TUSMORE

All Welcome.

All enquiries: 0409 842 022

Saw For Sale

GEMMASTA GS.10

10 Inch Power Feed Saw

Complete with - Board, Motor and Hood

Excellent Condition

Price New - $3,100

For Sale - $1,400

Contact Tony Bailey at 0400293057

Useful Internet Links

2016 Australian Gem & Mineral Calendar: Gem & Mineral Calendar

Adelaide Gem and Mineral Club: AGMC

AFLACA-GMCASA: AFLACA-GMCASA

Australian Federation of Lapidary and Allied Crafts Association (AFLACA): AFLACA

Australian Lapidary Forum: Australian Lapidary Forum

Broken Hill Mineral Club: BHMC

Enfield Gem and Mineral Club Inc: EGMC

Flinders Gem, Geology and Mineral Club Inc: FGGMC

Gem and Mineral Clubs Association of South Australia: GMCASA

Metal Detectors - Garrett Australia: Garrett Australia

Metal Detectors - Miners Den Adelaide: Miners Den Adelaide

Metal Detectors - Adelaide Agent for Garrett Australia: Shell Lap Lapidary Supplies Pty Ltd

Mineralogical Society of SA Inc: MinSoc

Murraylands Gem and Mineral Club Inc: http://www.murraylandsgmc.org.au/

NQ Explorers: NQ Explorers

Prospecting Australia: Prospecting Australia

Shell-lap Lapidary Supplies: Shelley's Lapidary Supplies Pty Ltd

Southern Rockhounds: Southern Rockhounds

The Australian Mineral Collector: The Australian Mineral Collector