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. 0417 859 443 Email: ieverard@bigpond.net.au
Secretary: Claudia Gill. 0419 841 473 Email: cjjrgill@adam.com.au
Treasurer: Russell Fischer. Email: rfischer@bigpond.net.au
Membership Officer: Augie Gray: 0433 571 887 Email: teatreegullygmc@gmail.com
Newsletter/Web Site: Mel Jones. 0428 395 179 Email: teatreegullygmc@gmail.com
Web Address: https://teatreegullygemandmineralclub.com

November Edition 2019

"Rockzette"

Tea Tree Gully Gem & Mineral Club News

President's Report

Hi All,

As you all know this month's meeting is AGM time. I would like to see you all there.

Get well Mal Knott.

Please check all notices on pages 1, 2 and 20.

Cheers,

Ian.

Diary Dates / Notices

See Notices on Page 2

1) Priority Notice
2) Subs Reminder
3) Christmas Hamper Donations

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Happy Birthday

Members celebrating November birthdays:

04th – Alan Harris.
07th – Claudia Gill.
19th – Delaney Lawrance.
23rd – Graham Gill.
27th – Allan Rudd.

***

2019 Melbourne Cup Luncheon
at the TTGGMC clubrooms @ 12MD
Tuesday November 5th, 2019.
Bring a plate of food to share and join in with fellow members…see you there.

***

TTGGMC AGM
at meeting on
Thursday November 7th, 2019.

***

Christmas Lunch at the clubrooms on Sunday 8th December 2019 – arrive 12.30pm for a 1.00pm start. Bring salad and/or sweets. Bring own drink. Meat and bread rolls supplied.

***

General Interest

Pages 3 to 5:
Augie's November Agate and Mineral Selections…

Pages 6 to 8:
Augie's November Mineral Matters – Fordite…

Pages 9 & 10:
Ian's 2019 Agate Creek Finds Part 2…

Pages 11 to 16:
'Newcastle and Rail – The Never-ending Story' – Part 13 of 24…

Pages 17 & 18:
Members Out & About, The Happy Wanderers, Ellen & Gerry's European River Boating Safari – Part 2…

Page 19:
General humour, etc…

Page 20:
Members' Noticeboard and Links…

***

Club Activities / Fees

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. Supervised by Doug Walker (7120 2221).

Wednesday Silversmithing
Wednesdays - 7 pm to 9 pm.
All are welcome. Supervised by Augie Gray (8265 4815 / 0433 571 887).

Thursday Cabbing
Thursdays - 10 am to 2 pm.
All are welcome. Supervised by Augie Gray (8265 4815 / 0433 571 887).

Friday Silversmithing
Fridays - 9 am to 12 noon.
All are welcome. Supervised by John Hill (8251 1118).

Faceting/Cabbing/Silversmithing Fees:
A standard fee of $3.00 per session applies – to be paid to the session supervisor.

In the interest of providing a safe working environment, it is necessary to ensure everyone 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 always.

Everyone using the workshop must ensure:

- that all club equipment (e.g. magnifying head pieces, faceting equipment, tools, etc.) used during the session, is cleaned, and returned to the workshop after usage.
- that all workstations 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 or dried.

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	

The Tea Tree Gully Gem & Mineral Club Inc. is not and cannot be held responsible or liable for any personal injuries, loss or damage to property at any club activity, including, but not limited to, meetings, field trips, all crafts and club shows.
An indemnity is to be signed by all participants before each and every field trip activity they attend.

*** Priority Notice ***

The Club's A.G.M. will be held in one week's time.

We are seeking a new Treasurer as a matter of urgency.

Russell is regrettably having to stand down for health reasons, therefore a replacement is required.

The duties are not onerous or time consuming, and Russell will do a complete handover with whatever training is required.

Please give this your serious consideration.

Thankyou.

***

Christmas Hamper Donations

The Club is running a Christmas Hamper Raffle again this year.

Your donation toward the prize(s) can now be made…please bring to the clubrooms.

NOTE: if you are intending to donate anything containing chocolate, please leave this until the 11th hour, as the rooms can heat up during Summer and anything meltable left there will undoubtedly do so!

Thankyou.

***

Subs Reminder

Membership subs are renewable annually in September.

Any not renewed by the end of November will incur a $10.00 re-joining fee.

Subs may be paid in person on any Tuesday, Thursday or Friday morning,

by cheque to the P.O. address

or by direct deposit

to the bank account.

Ask Ian or Augie for details.

(Note: if you're not financial, you have no voting rights at the A.G.M.)

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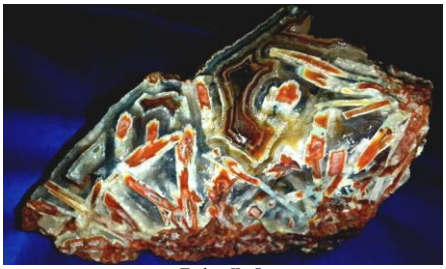
Augie's November 2019 Agate Selections – Turkey II.


Turkey II - 1


Turkey II - 2


Turkey II - 3


Turkey II - 4


Turkey II - 5


Turkey II - 6


Turkey II - 7


Turkey II - 8


Turkey II – 9


Turkey II - 10


Turkey II - 11

Augie's November 2019 Agate Selections – Turkey II. *Continued…*

Turkey II - 12

Turkey II - 13

Turkey II - 14

Turkey II - 15

Turkey II - 16

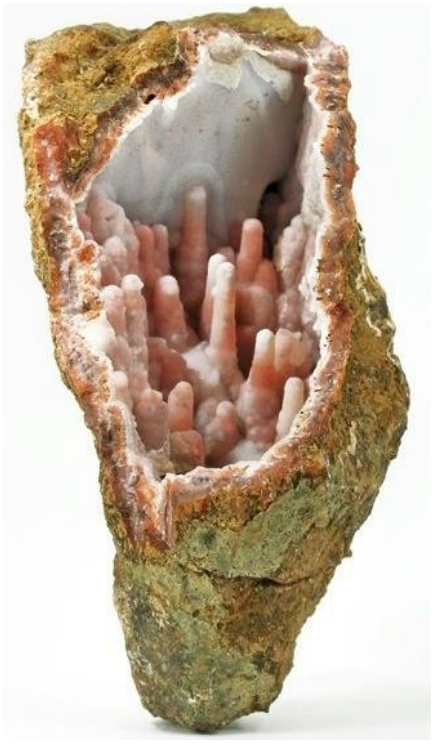
***

Augie's November 2019 Mineral Selection.

Amethyst - Warmbad, Orange River Valley, NAMIBIA.

Cacoxenite.

Cerussite on Barite, Mibladen, MOROCCO.



Chalcedony - Atlas Mtns., MOROCCO.

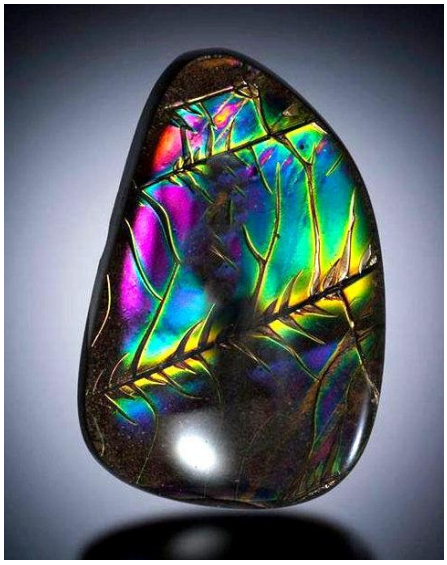
Chrysoberyl Cyclic Twin - Ratnapura, SRI LANKA.

Fluorite & Calcite - Weishan, Dali Autonomous Prefecture, Yunnan Province, CHINA.

Augie's November 2019 Mineral Selection. *Continued…*

Descloizite - Berg Aukas, NAMIBIA.

Erythrite & Conichalcite - Encontrada Mine, SPAIN.



Fire Obsidian - Glass Buttes, Lake Co., OREGON.

Fluorite on Pyrite with Calcite and Sphalerite - Milpo mine, Atacocha mining district, Pasco province, PERU.

Malachite & Azurite - ZAIRE.

Malachite & Chrysocolla - Shaba, CONGO.

Orange Quartz - Orange River, SOUTH AFRICA.

Scolecite, Nashik District, Maharashtra, INDIA.

Smoky Quartz - Mount Malosa, Zomba District MALAWI.

Smoky Quartz - Val Val, Surselva, Kanton Graubünden, SWITZERLAND.

Mineral Matters - Fordite

Fordite is also known as **Detroit Agate**.

This one's tricked a lot of unsuspecting novices, because it's not actually a stone.

It is, in fact, a build-up of layers of automotive paint which has hardened enough to be cut and polished.

It was formed from a build-up of automotive enamel paint as overspray on tracks in spray booths of the Ford Motor Co. back in the day when cars were hand spray-painted, a now automated process for all but the most expensive vehicles. After painting, the cars were passed through ovens, baking the paint which, after many repetitions, built the overspray layers up into the tens and even hundreds. When it got in the way, it was just chipped off.

Today's process involves electrostatically magnetizing the paint to adhere to the car bodies, resulting in no overspray to accumulate in the spray booths, and therefore no more "Fordite".

In recent years, it has become a collector's item, mainly due to its incredible colours and patterns, with a resultant huge jump in value. Collectors are now paying over $100 for cabochoned good examples.

Fordite 01.

Fordite 02.

Fordite 03.

Fordite 04.

Fordite 05.

Fordite 06.

Fordite 07.

Fordite 08.

Fordite 09.

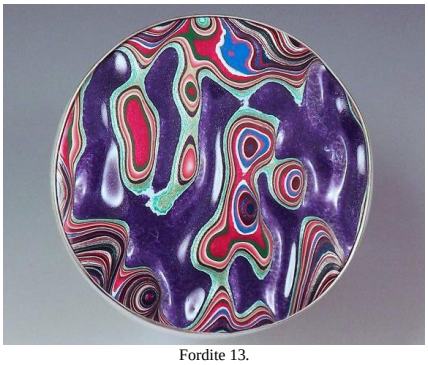
Mineral Matters - Fordite –

Continued…

Fordite 10.

Fordite 11.

Fordite 12.



Fordite 13.

Fordite 14.

Fordite 15.

Fordite 16.

Fordite 17.

Fordite 18.

Fordite 19.

Fordite 20.

Continued next page…

Mineral Matters - Fordite –

Continued…

Fordite 21.

Fordite 22.

Fordite 23.

Fordite 24.

***

Fordite - YouTube Links…

https://www.youtube.com/watch?v=QgvXBHufsbg

https://www.youtube.com/watch?v=11a7IdhaB4U

https://www.youtube.com/watch?v=4ZUj6VdB4DY

Working with Fordite (article) link …

https://www.rockngem.com/fordite/

***

What is a Gemmologist?

By Augie Gray

Gemmology is the scientific study of gem-stones, so a gemmologist is someone who has undertaken several years' study and passed the requisite examinations of an organization such as the GIA (Gemmological Institute of America) or one of its overseas equivalents e.g. the Gemmological Association of Great Britain, or Australia.

A gemmologist is the person who has the sad task of informing you that the beautiful "Ruby" in grandma's ring that you have just inherited is, in fact, a Garnet or, worse still, glass.

A gemmologist normally undertakes a minimum of two years intensive training into the scientific identification of precious, semi-precious and ornamental gem materials. This encompasses geology and mineralogy, in order to understand the occurrence and structure of the various stones. It covers physical and optical properties, and all the various enhancements, simulants and synthetics.

If one takes a piece of jewellery containing a gemstone in for an insurance valuation, the valuer or appraiser cannot assign a value to the item unless a gemmologist has first identified the stone. As a gemmology tutor many years ago, I used to take to the first class of each year a suite of twelve 4mm round brilliant (diamond) cut colourless gemstones. To all intents and purposes twelve identical stones, but some appearing to have a bit more "sparkle" than others. These 12 stones were: ***Quartz***, ***Topaz***, ***Strass***, ***Danburite***, ***Synthetic Spinel***, ***Synthetic Corundum***, ***YAG*** (*Yttrium Aluminium Garnet*), ***Zircon***, ***GGG*** (Gadolinium Gallium Garnet), ***Cubic Zirconia***, ***Strontium Titanate***, ***Diamond***, and of course, now we have the latest diamond simulant – ***Moissanite***.

The object of the exercise being to demonstrate to a class of new students what they were setting out to achieve – the ability to correctly identify each of the twelve stones.

It's quite frightening to think that there are very few gemstones these days which cannot be produced in a laboratory. Even common and relatively inexpensive stones such as Amethyst (purple Quartz) are being synthesized.

The synthesizing and treatment of gemstones has been around for a very long time. Synthetic Ruby was being commercially produced by the Verneuil process in 1902. It is estimated that over 95% of the natural (earth mined) Sapphires on the market today have been heat treated to enhance their colour, and probably 70% of all Sapphires on the market have been produced synthetically.

A synthetic gemstone is one which is identical in all respects to its natural counterpart but has been man made. A trained gemmologist can tell the difference. A jeweller (if not a gemmologist) isn't.

Apart from the various processes for creating synthetic gems – hydrothermal, flux, fusion, Czochralski and skull melt, there are innumerable treatments, some of which are bleaching, coating, dyeing, filling, flux healing, heating, impregnation (stabilizing), irradiation, lasering, lattice diffusion, oiling and waxing.

Simulants are rife - a very high percentage of "turquoise" being sold on the internet is, in fact, dyed Howlite or Magnesite. A good 90% of the Malachite being sold on sites like eBay has been man made (& is usually not identified as such!) The list goes on and on.

A gemmologist can do more than merely identify a stone. He (or she) can tell you if that red stone is a Ruby, or not. If it is, he can tell you whether it's natural or synthetic. If synthetic, he can identify which of the several processes was used to manufacture it. If natural, he can usually identify the origin of the stone by its colour and/or inclusions. If treated, he can identify the treatment.

A gemmological qualification is a virtual "must have" for anyone in the industry these days. This is your BASIC qualification. There are a number of post graduate courses available, such as the DDT (Diploma of Diamond Technology), Appraisals, Pearl Grading, Opal Grading and others.

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Latest advances in South Australian geoscience and resource sector news

Click/Tap on this hyperlink to access the OCT 2019 edition of the MESA journal...

Ian’s 2019 Agate Creek Finds - Part 2 - mainly from Simpson’s Patch –


01 Agate, Simpson’s Patch, Agate Creek, QLD.


02 Agate, Simpson’s Patch, Agate Creek, QLD.


03 Agate, Crystal Hill, Agate Creek, QLD.


04 Agate, Crystal Hill, Agate Creek, QLD.


05 Agate, Simpson’s Patch, Agate Creek, QLD.


06 Agate, Simpson’s Patch, Agate Creek, QLD.


07 Agate, Simpson’s Patch, Agate Creek, QLD.


08 Agate, Black Soil, Agate Creek, QLD.


09 Agate, Crystal Hill, Agate Creek, QLD.


10 Agate, CrystalHill, Agate Creek, QLD.

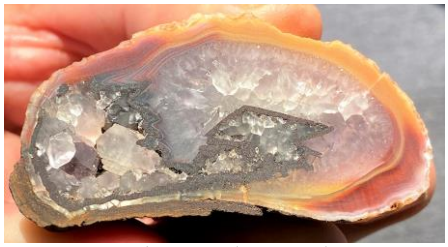

11 Agate, Simpson’s Patch, Agate Creek, QLD.


12 Agate, Simpson’s Patch, Agate Creek, QLD.


13 Agate, Simpson’s Patch, Agate Creek, QLD.


14 Agate, Simpson’s Patch, Agate Creek, QLD.


15 Agate, Simpson’s Patch, Agate Creek, QLD.


16 Agate, Simpson’s Patch, Agate Creek, QLD.


17 Agate, Simpson’s Patch, Agate Creek, QLD.

Ian’s 2019 Agate Creek Finds - Part 1 - mainly from Simpson’s Patch – *Continued…*


18 Quartz, Simpsons, Agate Creek, QLD.


19 Quartz, Simpsons, Agate Creek, QLD.


20 Quartz, Simpsons, Agate Creek, QLD.


21 Quartz, Simpsons, Agate Creek, QLD.


22 Quartz, Simpsons, Agate Creek, QLD.


23 Quartz, Simpsons, Agate Creek, QLD.


24 Quartz, Simpsons, Agate Creek, QLD.


25 Quartz, Simpsons, Agate Creek, QLD.


26 Quartz, Simpsons, Agate Creek, QLD.


27 Quartz, Simpsons, Agate Creek, QLD.


28 Quartz, Simpsons, Agate Creek, QLD.


29 Quartz, Simpsons, Agate Creek, QLD.

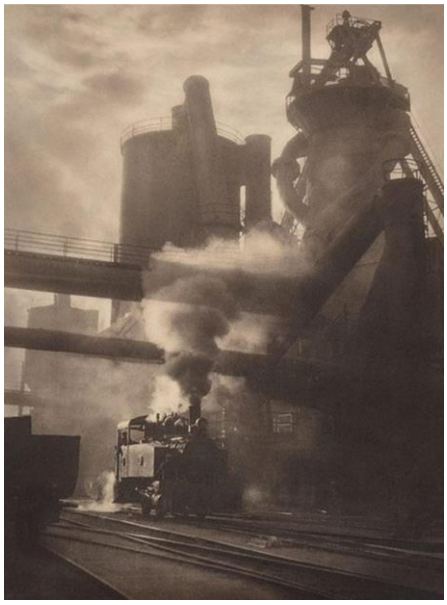

30 Quartz, Simpsons, Agate Creek, QLD.


31 Quartz, Simpsons, Agate Creek, QLD.

Contributed by Mel Jones…

'Newcastle and Rail – The Never-ending Story'
by Garry Reynolds
Part 13 of 24…

The Newcastle City waterfront today where Aborigines once fished from canoes, convicts hewed coal and a railway system developed and disappeared over a period of 160 years. Source: *Familypedia*.



A tank locomotive works up steam amidst the sunshine peaking through the BHP Steelworks in Newcastle. The Works has been demolished after it closed in 1999 but it was not the first major heavy industry in Newcastle. *Source: Harold Cazneaux*.

Newcastle becomes a heavy industry railway hub

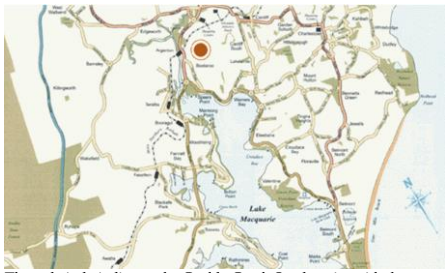
A lot of people when they think of railways and heavy industry in Newcastle would think immediately of the Broken Hill Pty Ltd (BHP) steelworks. Yes, after all it was a Newcastle icon sitting on the Harbour shores opposite the City. At its peak in the early 1970s, it contained a dense private railway network of 85kms of standard-gauge track and 6kms of narrow-gauge with nearly 500 turnouts and hundreds of sidings.

However, the Hunter Region initially became known from the late 1880s as the heavy industry hub of Australia supported by a growing rail network through the establishment of a smelter at Cockle Creek. The site is 13 kilometres south-west of Newcastle and 2 kilometres north of Lake Macquarie, adjacent to today's suburb of Boolaroo.

The Works had a rail spur at Sulphide Junction from the Great Northern Railway Line which had just joined Sydney and Newcastle in 1889 with the completion of the ill-fated first Hawkesbury River Railway Bridge.

In the beginning

In its earliest days, the district of Cockle Creek was named after the seashells found along the stream of the same name. While its floodplain attracted a community of Chinese gardeners, it also attracted an innovative man called, John Black. He not only owned a colliery but was way ahead of his time in establishing a profitable Angora Sheep herd. Intriguingly, the lateral thinker brought what was to become his large family home by ship from England in kit form strapped to the side of the vessel.



The red circle indicates the Cockle Creek Smelter site with the Main Northern Line (former Great Northern Railway) adjacent. *Source: Pasminco.*

In 1895, much of Northern NSW was underdeveloped when the management of a London-registered company, known as the Sulphide Corporation (Ashcroft's Process) Limited, set its sights on establishing a smelter at Cockle Creek. They were confident they could make a commercial success of the new electrolytic zinc refining process developed by Edgar Ashcroft.

And here we see a hint of the strengthening, ongoing and interwoven links between Broken Hill, Cockle Creek, Newcastle, coastal shipping, the NSW and South Australian Government railways and the private Silverton Tramway. As well there were close ties to coal mining and zinc and lead production and refinement and steel production at BHP Newcastle. Of course, all were linked by many personal and business relationships including some fiery moments with workers and unions and a fatal shootout.

So who was Edgar Ashcroft (1864-1938) who invented the smelting process that catalysed all these connections?

Edgar was an English electrical engineer and metallurgist who initally accepted the offer of a position with BHP at Broken Hill to direct the installation of its electric light plant. In the early 1890s, he also formed a close relationship with Dr Carl Schnabel, a German metallurgist, who shared Edgar's professional interest in experimenting with the treatment of silver-lead sulphide ores which predominated in Broken Hill.

Soon after arriving, Ashcroft was restless to to make progress when he saw the rich bounty in Broken Hill. In 1894, he patented a complex electrolytic process for recovering zinc from refractory sulphide ores.

Later that year, he left BHP. With the financial support of a group of mining company promoters, he tested the process successfully on a small scale at Broken Hill and in England, with the support of Dr. Schnabel.

This, with earlier experiments with lead ores, was the genesis of the launch of 'The Sulphide Corporation (Ashcroft Process) Ltd.'

Bringing back to mind, the Australian Agricultural Company's investment with London capital in the early 1830's in the Newcastle coal industry, the Sulphide Corporation was floated in London in 1895 with a capital of £1,100,000. It employed some of these funds to purchase Ashcroft's process and the 'Broken Hill Central Mine' silver, lead and zinc deposits.

So the Company had the ore, it had the technology and it had the venture capital to back the innovation. Now it needed the right site which had fuel, water, transport and labour to transport and smelt the ore and take it to markets in Australia and overseas.

However, the Sulphide Corporation Pty Ltd, which became Pasminco in its final stages in the late 20th and early 21st century, wasn't rushing in. It looked at other sites before deciding on Cockle Creek.

The Corporation realised in the 19th century, across the world, it took more than one ton of coal to smelt a similar quantity of minerals. Because coal was generally weight-for-weight less valuable than minerals, it made good logistical and economic sense to transport the minerals to the coal rather than vice versa. The Hunter Valley of NSW presented several opportunities.

When the Sulphide Corporation looked at sites in the Hunter Region, it considered likely spots at Teralba, Dudley, West Wallsend and Redhead, as well as the site of an old smelter at Port Waratah, which later became part of the BHP steelworks.

The proposed site at Dudley, North of Lake Macquarie, was opposed almost immediately, not by residents but by landowners at Norah Head who offered land free to the Sulphide Corporation in an effort to get it to build South of Lake Macquarie.

Continued next page…

Of course, this was not going to be the first metallurgical smelter in Australia. Earlier ones had been established especially with copper deposits in South Australia in the 1850s at sites like Burra and Kapunda. They tended to use wood turned into coke as fuel. While this appeared viable in the short run, the denuding of trees in the countryside around the plants eventually created major environmental problems in the landscape and for farmers.

Anyway, by March 1896, the possible sites had dwindled to two in the Newcastle District – Cardiff [where a major locomotive construction and maintenance facility would be established by the New South Wales Government Railways (NSWGR) in 1928] and, of course, Cockle Creek.

The latter was chosen because it was close to a coal supply and to the Great Northern Railway Line. It was also in relatively easy reach by rail to the Port of Newcastle. In fact, the coming of the Sulphide Corporation led to improved wharfage and a call for deepening of the Newcastle Harbour.

In the end, the reasons for choosing the Newcastle area were explained by the Corporation's first Chairman, the Earl of Kintore, a former Governor of South Australia. Newcastle's backloading opportunities with the metallurgical ore linked with the coal industry shipping were almost unique.

"The place selected for the erection of the company's works is Newcastle, New South Wales, which offers exceptional advantages for the purpose, being situated on the sea, with good port and harbour facilities, and having ample supplies of coal in the immediate vicinity. It has also the advantage of possessing good wharfage and railway accommodation and an abundant supply of salt and fresh water, all of them essential for our purpose. Newcastle is also a port of call and coaling station for steamers to and from all the leading Australian ports so that freights can be easily arranged for both in respect of plant and machinery and the company's ores and products."

Cockle Creek Railway Station

Cockle Creek Station c1900. *Source: Flickr.*

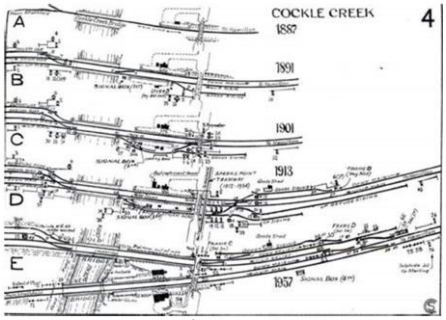
One of the site attracters mentioned was the railway.

For a good period, Cockle Creek Railway Station (1887) and its adjacent six-span bridge made of riveted steel girders perched on ornate cast iron piers were signficant features of the rail journey North from the Hawkesbury River to Broadmeadow and the branch line into Newcastle.

The Great Northern Railway in this section was originally built as a single line with a small platform at Cockle Creek. However, the Line's designers were looking optimistically and pragmatically to the future when they built the nearby bridge over Cockle Creek to accept a second track. Beyond the bridge, a junction (which became known as Sulphide Junction) was formed, with branch lines heading toward collieries in the West Wallsend area.

By 1891, the line through Cockle Creek had been duplicated and Up and Down side platforms had been built, while additional trackwork had been laid for access to the collieries and to provide a local goods siding. The duplicated main lines then crossed the original bridge as planned.

Over succeeding years, additional trackwork, sidings and a back platform were added with a number of signal boxes as the traffic became heavier with the line between Sydney and Newcastle and the industrial traffic developing at the Cockle Creek Smelter, especially during WW1 and WW2.



The development sequence of Cockle Creek Station. *Source: ARHS.*

In 1957, a new bridge and station were constructed South of the existing station and bridge. The original bridge was retained for use for the West Wallsend Railway and Cockle Creek Power Station until the 1970s when the tracks from the West Wallsend collieries was re-laid to form a new junction and use of the old bridge ceased.

Approaching Cockle Creek Station with a suburban end-platform 'Yankee Car' set of carriages routinely starting from Newcastle Station pulled by a coaled-up 30 class tank engine. *Source: Weston Langford.*

The foundations for growth but a toxic legacy laid

In 1896, the early links with Newcastle and BHP commenced, not with a steelworks, but with the establishment of the Sulphide Corporation Ltd. The Corporation was the fore-runner of heavy industry in the Region and without its success after initial false starts, BHP might never have established its Newcastle steelworks.

Initially, the Corporation said it would spend £60,000 building the smelter which would use 1,500 tons of coal a day, five days a week. This was ambitious in the midst of a major economic depression and drought across the nation but they ploughed on.

By July 1896, there were 600 men working on the construction of the smelter at Cockle Creek. There was a sense of urgency too as the Corporation needed to move swiftly. You see, a cashed up BHP making large profits from its rich silver, lead and zinc deposits at Broken Hill was moving to purchase the old Port Waratah site on Newscastle Harbour and another smelting company was negotiating to buy land on the Newcastle coast at Dudley.

Pushing on regardless, in 1897, the world's first electrolytic zinc works was opened at Cockle Creek. It was designed to the inventor's specifications and under his control. But …. and it was a big 'but', although Ashcroft's theory appeared sound, in large-scale practice there were lots of new challenges in implementing a complex 20-stage process using breakthrough technology. Almost immediately, a batch of nasty financial surprises awaited the Corporation.

From the start, both the plant and process had to be modified, and it was clear that Ashcroft lacked the financial nous and managerial experience to achieve the financial returns he promised the investors. In less than a year, Sulphide's Cockle Creek Works was almost totally dismantled in trying to fix it!

Meanwhile, the nervous London investors were alarmed to find that Ashcroft had over-estimated the potential profits and under-estimated costs of the construction and operation of the Works. Later he claimed that low-grade ores had been responsible for the commercial failure.

The Sulphide Corporation wasn't looking for excuses but solutions so it made a clean but bitter break from Edgar Ashcroft and totally dissociated itself from his process. As he was turfed out, the Corporation's Board didn't hold back on giving him a serve by leaking to the reputable industry journal, 'The Australian Mining Standard', that in the Corporation's mind Ashcroft had made: *"…a very large amount of money in selling what he knew was worthless."*

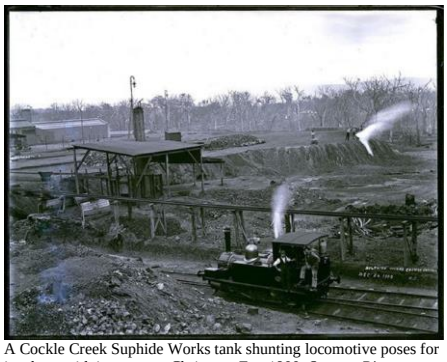
The revamped Cockle Creek Smelter belching toxic emissions in 1900. *Source: Pinterest.*

The accusation was never substantiated but it left an acrimonious legacy and this would not be the last in the Corporation's history even up to 100 years later.

Ashcroft returned to England where he continued as a research scientist in the metallurgical field. Meanwhile, the Sulphide Corporation invested more of its rapidly depleting capital pursuing a more orthodox path as a mining smelting company but not before it had advanced the electrolytic process further than any other company in the world and had spent £250,000 with nothing to sell at the end!

So, although it was originally intended to extract zinc by the electrolytic process from ore sourced from Broken Hill, the Cockle Creek Works was now converted to smelting lead from Broken Hill using blast furnace technology.

With further technological breakthroughs in the following decades, the smelter, with the support of an expanding rail network, eventually produced profits from processing large quantities of zinc and lead from Broken Hill ore and sulphuric acid and superphosphate.



A Cockle Creek Suphide Works tank shunting locomotive poses for its photo with its crew on Christmas Eve 1900. *Source: Pinterest.*

By World War I, with new processes and judicious management, the Sulphide Corporation Works had become one of the largest employers in NSW producing record outputs and profits from the War effort. The plant produced materials used to manufacture explosives in both this conflict and WW2.

Cockle Creek Sulphide Works employees proud of their contribution during WW1. *Source: Newcastle Herald.*

How did the lead and zinc ore get from Broken Hill to Cockle Creek?

Initially, the transport of the ore across half of Australia was a convoluted process made worse by State rivalries and private and public rail partnerships with a long sea journey around the Australian coast thrown in.

A key part of the supply chain, aside from the coal and limestone from NSW, was the anachronistic 58km narrow-gauge line owned and operated by the Silverton Tramway Company (STC). It ran from Cockburn on the South Australian-side of the State Border, East to Broken Hill in New South Wales. From 1888-1970, it was the link between the standard-gauge NSWGR and the narrow-gauge South Australian Railways (SAR) lines. Not only did it supply ore for smelting at Port Pirie but for shipment to the Port of Newcastle and then by train down to Cockle Creek.

With its name, it is no surprise to find that the Silverton Tramway was originally conceived as a way to transport silver ore from the newly-discovered deposits at Silverton 26 kms North-West of Broken Hill to the smelters at Port Pirie. However, when discoveries of silver, lead and zinc deposits followed at Broken Hill, the Tramway was extended to that rich field.

So why a private line?

Partly it was due to the NSW Government refusing to allow the SAR to extend its narrow-gauge line from Port Pirie across the border. Yes, those inter-colonial rivalries again.

So, the 'Silverton Tramway Act of 1886' was passed by the NSW Government, permitting the narrowgauge line to be built by the STC. The Act also permitted the NSW Government to buy out the Company and assets after 21 years. There were conditions though. A major provision was that a payment of 21 times the average revenue of the previous seven years of operation would need to be made by the Government, while the Company could be obliged to alter the track gauge at any time at its own expense. Both major impediments to change.

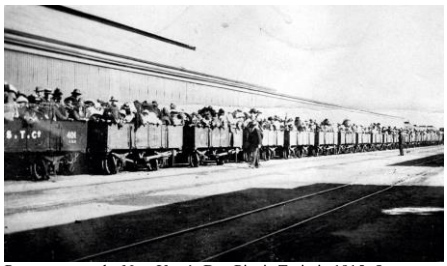
Initially, train services were operated by SAR locomotives until the STC acquired its own engines. In late 1888, a deal was reached for the SAR to assume responsibility for the main line workings with the STC operating services to the various mines and sidings in Broken Hill. This ceased in mid-1893, with the private company once again operating all services.

The Line had six stations between Cockburn and Sulphide Street in Broken Hill. When NSW opened a standard-gauge line from Broken Hill East to Menindee in 1919, the Broken Hill Station terminated at a separate station 200 metres East of Sulphide Street Station – now they were inter-state rivalries!

The former Silverton Tramway's Sulphide St Station in Broken Hill, now a railway museum. *Source: Australia for Everyone.*

The Battle of Broken Hill around a train of ore wagons

While ore and other goods and passenger traffic kept increasing, a major incident occurred on January 1, 1915 involving the Silverton Tramway which gained international attention.



Passengers on the New Year's Day Picnic Train in 1915. *Source: State Library of South Australia.*

New Year's Day began with plenty of festive cheer as 1,200 men, women and children boarded a string of 40 of the Silverton Tramway Company's open concentrate trucks which often carried ore destined eventually for Cockle Creek Smelter at Newcastle. The crowd were out for a short 14 km rail trip to Penrose Park for the annual Manchester Unity Lodge Picnic.

Author, Nicholas Shakespeare, paints the picture from here:

"The ore wagons had been hosed out and wooden planks set up for passengers to sit on. Under them there was space to pack away chairs, blankets and wicker hampers containing lemonade and lamb sandwiches, which would be consumed beneath the gum trees while families watched the running and obstacle races.

Dressed in their freshly-laundered best summer clothes, some holding parasols, hundreds of lighthearted men, women and children chatted and waved as the train jolted forward and headed out towards the desert. Australia had been at war since August 1914 – many of these picnickers had brothers, fathers and sons in the Commonwealth Expeditionary Force, which had reached Suez only a few weeks before. Yet today was a day to forget the war. On that Saturday morning, few places on Earth were as peaceful as the red landscape surrounding Broken Hill, or so remote."

Little did the passengers realise in the scorching heat of the Outback in mid-Summer they would soon be in the heat of the Great War prior to Gallipoli.

As the train departed, two Afghan former Broken Hill camel-drivers, Badsha Mahommed Gool, now an ice-cream vendor, and Mullah Abdullah, a local imam and halal butcher were preparing for a murderous onslaught as a personal vendetta and their contribution to the War against the infidels. They were referred to as Muslim "Ghans" who had immigrated to Broken Hill from a part of the British colony of India, now called Pakistan.

Though politically and religiously motivated, the men were not members of any formal armed force although they had gained military experience in Turkey before the Great War.

A replica ice-cream cart at White Rocks Reserve. *Source: Australiaforeveryone.*

The duo to launch their own guerrilla-style operation under a homemade Ottoman flag attached to the ice-cream cart which they used to transport their weapons and ammunition to the ambush site. It is believed to be the only enemy attack to take place on Australian soil during World War I.

Their plan was to shoot the locomotive driver and the fireman on the footplate, hoping the uncontrolled train would send the 40 packed ore wagons to destruction and their innocent picnicking passengers to their doom.

As the distance between the ice-cream cart and the executioners closed to only 30 metres, the Afghans opened fire with up to 30 shots from their Snider and Martini Henry rifles from behind the spoil from the Tramways water pipeline trench.

In '*The Monthly*' in November 2014, Nicholas Shakespeare again writes vividly of the unfolding disaster on the train:

"Less than ten minutes after leaving the station, the train slowed down, the driver having been warned that sand had drifted across the line. The engine stoker was standing out on the footplate when he noticed a red cloth fluttering above a white cart. His first thought: someone's exploding defective ammunition. But he dismissed it. No one would be venturing out with a powder magazine on New Year's Day.

The white cart was parked close to the tracks, on the other side of a trench. As the train steamed closer, the stoker read the words painted on the side – "Lakovsky's Delicious ITALIAN ICE CREAM. A Food fit for Children and Invalids" – and relaxed.

"It's rather late for an ice-cream cart to be going out to Silverton," he observed.

The driver smiled. *"I suppose some poor old beggar's hoping to make a bit for himself."*

They chugged past. The driver noticed what looked like an insignia on the red cloth. What this was, he couldn't make out. Then a breeze sprang up, the cloth unfolded, and the driver saw a yellow crescent, like a banana, and a star.

At that moment, a pair of white turbans bobbed up from the trench – dark faces, the tips of rifles – and the driver heard two gunshots. One bullet hit the sand, spitting dust against the engine. The second bullet struck the brake van, embedding itself in the woodwork.

"What's that?" asked someone.

"It's the Germans," joked another.

The Germans! In Broken Hill! Everyone laughed. They thought it was a stone pinging against the side.

The two turbaned men continued to fire at the train, ducking down after each shot to reload or to take cover in case anyone shot back.But no one shot back. No one had any idea what was going on.

Two girls yelled "Happy New Year!" at the spectacle of two dark men in red jackets and frost-white turbans. They imagined the shots were being fired in honour of the passing train.

A guard of honour. A stone. Children taking pot shots at rabbits. Each wagonload formed its own interpretation.

One passenger, registering two men lying on the embankment above the pipeline trench, assumed that something was wrong with the water pipe – a leak? – and these men were attending to it.

Another, seeing a cow on the right-hand side, wondered if some idiot was trying to shoot it.

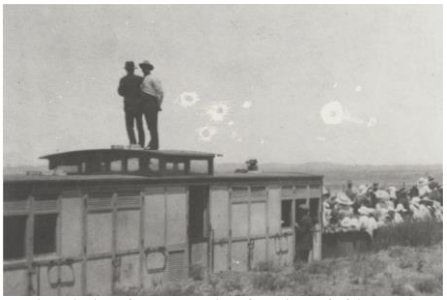
Yet another picnicker, thinking it was boys firing blanks, shouted: "Stop fooling around, or someone will get hurt!"

Then a dairyman's 17-year-old daughter, Alma Priscilla Cowie, standing beside her boyfriend, Clarence O'Brien, slumped to the floor. When O'Brien reached out to hold her, he saw that the back and top of her head had been blown away."

Alma Cowrie. Source: The Monthly.

Once people started collapsing, the awful reality dawned on the frolicking picnickers and panic and terror exploded. In all, 10 passengers were hit with 3 killed instantly.

Following the shooting, the crew propelled the train down the track to the Water Pump Station for help. Meanwhile, the two Afghans fled and eventually holed up at a location known as White Rocks, where a replica ice-cream cart stands today.



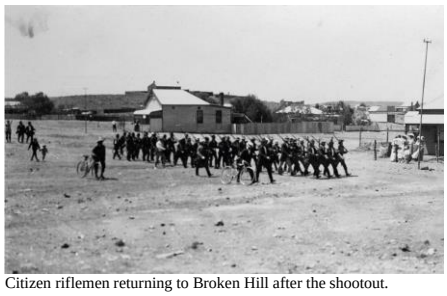
Keeping a lookout for more attackers from the roof of the guard's van. *Source: Travelin.*

Removing wounded and dead from the train at the Silverton Tramway Pump Station. *Source: BCCC.*

As word of their fatal attack spread, the Afghan duo was encircled on the granite slopes below White Rocks by an enraged posse that comprised, eventually, 53 troops from the 82nd Infantry Battalion, 10 policemen, members of the Volunteer Rifles – and basically anyone with a gun who wanted to have a go. This was a militia, desperate in its determination to leave no work for the hangman!

After a 90-minute battle involving the exchange of hundreds of rounds of ammunition, the evergrowing surrounding force closed in but not before, despite the volleys of rifle fire and his daughter's quite reasonable protestations, local man, Jim Craig, kept chopping wood in his backyard near White Rocks and was killed by a stray bullet from 500 metres away. When your times up…

As the multitude rushed the two Afghans, Gool stood with a white rag tied to his rifle but was cut down by gunfire. He was found with 16 wounds, his body so severely ripped apart that he died in hospital a few hours later after being taken there with his partner, Mullah Abdullah's corpse.



Citizen riflemen returning to Broken Hill after the shootout. Source: The Monthly.

Later that day, both bodies were disposed of in secret by the police as an angry mob was seeking revenge in the streets. Shouting "Remember our women who were shot", the swelling band marched on 'Ghantown' on the

fringe of Broken Hill, only deterred by civilians and military forces with fixed bayonets lined across the road outside the camel drivers' camp from creating more mayhem.

Frustrated, the mob moved on to set fire to 'The German Club'. When the fire brigade arrived to put out the blaze, the crowd cut the hoses on the fire carts, leaving the building to burn to the ground.

The next day, the mines of Broken Hill fired all employees deemed enemy aliens under the 'Commonwealth War Precautions Act 1914'. Six Austrians, four Germans and one Turk were run out of town by the public. Shortly afterwards, all enemy aliens in Australia were interned for the duration of the WW1.

Back at the railway, the Silverton Tramway Company refunded all the fares for the picnic train and the money was used to launch a public relief fund.

A hundred years later, after the Australian Government had refused requests to fund a commemoration of the event, a local ceremony marking the centenary of the massacre was held at Broken Hill Railway Station on New Year's Day, 2015.

A new Beyer Peacock- Locomotive 22 - freshly rolled out of the Manchester Works in England ready for export to the Silverton Tramway at Broken Hill for work on the heavy ore trains. *Source: Flickr.*

Broken Hill Railway Station was built in 1919 after what had become to be referred to as - 'The Battle of Broken Hill'. The new line East to Menindee was so isolated that the rolling stock and building materials all had to be transported from NSW by sea to South Australia, then by narrow gauge railways of the SAR and STC.

As Broken Hill did not have a reliable water supply for the town and mines, the new line was initially used primarily for the haulage of water wagons from the Darling River at Menindee. In 1927, the line to Menindee was connected to the rest of the NSWGR network through Parkes. During the drought years of 1944-46, well over a thousand rail trips with water gins (tanker wagons) were made between Broken Hill and Menindee. In 1960, a water pipeline was eventually built from Menindee to Broken Hill. In 2018, work is nearing completion on a 270km water pipeline from the Murray River at Wentworth to Broken Hill to make its supplies more reliable.

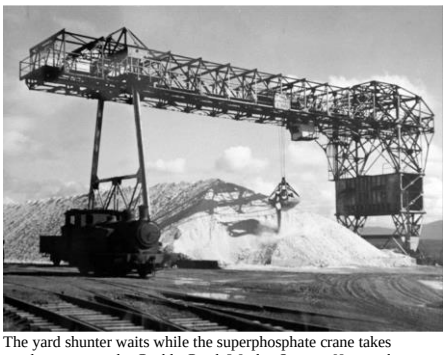
Other pipelines have been considered in the mining industry with the proposal to overtake the standard gauge rail connection from Broken Hill to Port Pirie carrying completed in 1970 with a slurry pipeline.

A Silverton Tramway ore train. *Source: Railpictures.*

Ore train sidings at Broken Hill Marshalling Yard with the large mullock heap behind. *Source: Hiveminer.*

Meanwhile, back at Cockle Creek

Not long after the shooting at Broken Hill, in 1917, a full-scale lead refinery was constructed and commissioned at Cockle Creek which took more and more of Broken Hill's ore with the massive demand due to WW1. However, when world metal prices fell in 1922, as plants worldwide came back on stream, lead smelting at Cockle Creek was discontinued. The Works then focused on producing sulphuric acid, superphosphate and fertilizers. In 1924, a cement plant was added. Later the production of zinc and lead was resumed.



The yard shunter waits while the superphosphate crane takes another scoop at the Cockle Creek Works. *Source: Newcastle Herald.*

All this industrialisation at Cockle Creek was linked to its excellent rail access and from 1912-1930 the staff and labourers were also assisted with transport options by the arrival of a steam tram which ran through the area.

Development leapt ahead again in 1927, when a power station was built by Caledonian Collieries Limited, eventually serving several towns and 17 mines until its closure in 1976.

When the Great Depression hit during 1929, things became so tough that in 1931 many men were laid off and camped outside the Works hoping to secure a day's work now and then.

The Corporation's directors and salaried staff agreed to take a 20% wages cut to minimize costs to keep the Plant open.

The Sulphide Corporation gradually recovered until it was running flat out in WW2 and in 1942 the Works was declared a 'protected industry'. This freed the Corporation from wartime restrictions stopping its workers from joining the forces and helping it to get priorities on rail transport and other scarce resources.

After the War, there was a spirit of optimism in 1949, when the Sulphide Corporation entered into some major investments at Cockle Creek. It opened its own coalmine to supply the Works, particularly its large cement plant. It also announced a massive upgrade to double sulphuric acid production and introduce a new process of zinc refining. Then the sky fell in!

In 1950, Sulphide Corporation was suddenly plunged into dire financial circumstances and entered voluntary liquidation. It was taken over and became a wholly-owned subsidiary of Consolidated Zinc Corporation (CZC) Ltd. And here we have another connection between Cockle Creek and Broken Hill.

For in 1905, CZC commenced extracting zinc from mine tailings at Broken Hill. Interestingly, a mining engineer and future US President, Herbert Hoover, was a key player in investigating the potential of the tailings before commencement of operations.

After its initial success in processing other companies' waste, CZC moved on to constructing its own underground mines in Broken Hill, extracting silver, lead, zinc and gold. Just a few years prior to its takeover of the Cockle Creek operation, CZC merged with the Imperial Smelting Corporation to form Consolidated Zinc in 1949.

In the mid-1950s under Consolidated Zinc, zinc production expanded at Cockle Creek as did the suphuric acid and superphosphate plants and in 1961 a new zinc-lead smelter was commissioned. This ushered in a new era of employment, expanded export revenue for the Company and the Port of Newcastle, and provided a 40% boost to Australia's zinc-lead smelting capacity.

But it's always a roller coaster ride in the mining and smelting industry and Cockle Creek had been on the ride since its inception back in 1887. Now, the Sulphide Corporation, which operated the Works as a fully-owned subsidiary of Consolidated Zinc, became part of another merger of corporate convenience.

W44 ore train at Molong. Source: Wikipedia.

While Consolidated Zinc had built-up substantial financial resources, it had struggled to develop viable new mining projects to complement the Cockle Creek operations. At the same time another miner, Rio Tinto, had substantial development opportunities but lacked the cash to pursue them. In 1962, the two companies merged to become the Rio Tinto – Zinc Corporation (RTZ) and its main subsidiary, Conzinc Riotinto of Australia (CRA), would eventually become today's Rio Tinto Group.

Meanwhile, back in the mid-1960s, RTZ formed a subsidiary called Greenleaf Fertilisers Limited. It constructed a large plant on Kooragang Island in the Hunter River near BHP's Steelworks to complement its Sulphide Works at Cockle Creek.

And where were the Railways during all of this?

Twin Beyer Garratt AD60-class locomotives at Fassifern 10kms from Cockle Creek. *Source: Steamtrainstories.*

W44

In the mid-1960s, to haul the concentrates the NSWGR ran block trains of 16 wagons (with the designation W44) on the State's longest regular freight route (approximately 1,300kms) with a load of just over 1,000 tonnes. There was a smorgasbord of three types of locomotive power – steam, electric and diesel-electric.

The block train was hauled by a single 49 class diesel locomotive on the relatively flat single line from Broken Hill to Parkes. Here, a 36-class and AD60 class Garratt steam locomotives (sometimes there was double heading by Garratts) took over the journey to Molong where the 36-class was replaced by another AD60 for the journey to Lithgow. From here, a 46-class electric locomotive took the train to Gosford (the then limit of electrification) where another AD60 Garratt would take over for the haul to Sulphide Junction and the Cockle Creek Smelter.

The rail link to the smelter was an important change in the pattern of transporting concentrates from Broken Hill as previously they had gone by sea to Cockle Creek. In the 1970s changes to the smelter allowed lower grade material to be used which was sourced from other mines and the running of W44 declined along with the scrapping of the steam locomotives.

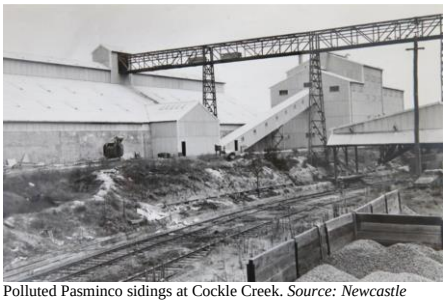
A major incident occurred when on 26 October 1974 there was a head-on collision near Meelea Loop on the single Broken Hill Line between an interstate freight and the W44 ore concentrate train. The collision derailed 14 carriages. Sadly, a train fireman, injured in the collision, subsequently died.

Locomotive 3820 and a 60-class Garratt arrive pre-dawn at Sulphide Junction after a long journey of the ore train from Broken Hill - this combination hauled it on the final leg from Gosford to Cockle Creek. *Source: Steamtrainstories.*

More changes at Cockle Creek

Then in 1988, a new entity was formed called Pasminco. Yes, it resulted from another merger!

This time it was between the lead and zinc assets of North Broken Hill Holdings Ltd and CRA Ltd. Once again, a massive investment program was announced for the Cockle Creek site including a suite of new environmental measures. However, with hindsight, this proved insufficient to address a toxic leagcy.



Polluted Pasminco sidings at Cockle Creek. *Source: Newcastle Herald.*

Alarm bells rang in 1991, when surveys revealed that the Cockle Creek site with its own rail yard and the surrounding Government Railway, light industrial zone, residential areas and waterways had been significantly impacted with land, water and air pollution over many decades.

Not only was the site polluted from over a century of operations, but the surrounding area also needed varying degrees of remediation. Concerns escalated when testing found workers from the smelter, and adults and children who lived and worked nearby, had higher levels of lead in their bodies than normally expected in the Australian population, with all its health implications.

The following year, the Company announced plans to develop a buffer zone around the plant to ensure the site could meet current and future lead-in-air goals. This satisfied the NSW Government which approved further expansion of the Cockle Creek Works.

The roller coaster ride continued when even though Pasminco reached a peak with 800 staff, it suddenly had to cut costs everywhere in a major corporate bloodletting. The 'slash and burn' management action failed and the Company entered into voluntary administration in 2003 effectively marking the end the life of the Cockle Creek lead and zinc smelter but, unfortunately, not its toxic legacy. The real legacy at Cockle Creek had become apparent – long-term severe local environmental impacts.

The situation has generated many studies, reports and court action right after the plant's closure up to today. Various companies have sought to reuse the site with industrial or housing development, it being near Australia's largest salt lake - Lake Macquarie – and a number of shopping centres and, of course, Cockle Creek Railway Station, which itself was relocated over the years when a new rail bridge was constructed over the Creek.

Cockle Creek Railway Station and Bridge Mark 2

The 'Newcastle Flyer' racing along Cockle Creek. *Source: Steamtrainstories.*

By the mid-1950s, the original Cockle Creek Railway Bridge of 1887 was deteriorating and in need of replacement. Accordingly, in 1957, new platforms and station buildings were erected at Cockle Creek in a new location, but only a short distance away from the original station. The Main Northern Line was deviated from the original formation and this required the construction of a new steel truss bridge over Cockle Creek.

Even though the original platforms were placed out of use, coal trains to and from the West Wallsend collieries continued to use the original bridge, while mainline trains used the new platforms and new steel bridge. The earlier bridge was retained for use for the West Wallsend Railway and Cockle Creek Power Station until the 1970s and its decks were removed in 1992.

A streamlined 3801 which used to head the 'Newcastle Flyer' under trials at Sulphide Junction near Cockle Creek in 1986 after restoration by the HVTC not-for-profit group training organisation in the Hunter. *Source: University of Newcastle.*

To be continued with Part 14 of 24 next month…

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Ellen and Gerry's European River Boating Safari 2019 - Part 2

Continuing our journey, we spend a leisurely morning cruising to Bamberg. Again, a beautiful old city where we enjoyed a guided tour through the old Town Hall and the Bamberg Cathedral with some free time to explore the city on our own.

Bamberg.

The next day took us to the Main-Danube Canal and a visit to Nuremberg where we visited the Zeppelin Field which is quite an amazing site to see and a short history lesson on the past of the German third Reich. And then again free time to explore and wander the cobblestone streets which surround the town square. Afterwards we had our bus transfer to take us to Regensburg where we changed onto our new boat. This was to happen because of the lack of water in the Danube. It was no problem at all as it was the identical boat and we had the same room again. The only inconvenience really was that we had to pack our suitcases and we lost our fantastic crew.

Regensburg.

Regensburg was specially celebrated as the beginning of Bavaria and after a walking tour to see the stone bridge, the oldest Bratwurst kitchen, the Regensburg Cathedral and the very well preserved medieval town of Regensburg, we were treated to a Bavarian Lunch, Bavarian afternoon tea and Bavarian dinner, as well as a great performance by the Bavarian Devils, a three man oom-pah band.

Passau.

The next day should have started with a short stop at Passau but we were running quite late to get through one of the big locks before Passau so we didn't have the chance to stop there but only saw it as we floated past. But we had the most lovely day cruising along to our next destination Linz. Linz was our first stop in Austria where we had a leisurely stroll around and docked overnight. The next morning everybody was up early because nobody wanted to miss the most charming Wachau Valley. It was definitely one of the highlights and first stop was in the morning with a tour of the Melk Abbey and a stroll back down through the town back to the boat.

Melk 1.

Melk 2.

In the afternoon, as we continued cruising the Wachau Valley, we were served a glass of Kaiserspritzer and onion tart, both very delicious local delicacies, on the upper deck Our second stop was a visit to the quaint village of Duernstein, overlooked by the ruins of the castle where Richard the Lionheart was imprisoned during the time of the Crusades.

Duernstein 01.

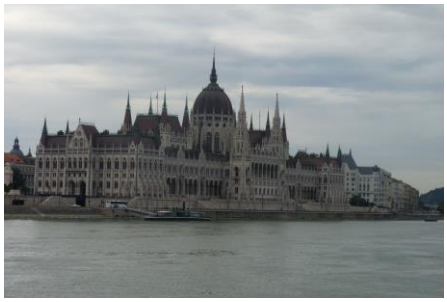
Duernstein 02.

Duernstein 03.

Vienna 01.

Vienna 02.

Overnight, we arrived at our two-day destination, Vienna. After breakfast, we were taken on an extensive sightseeing tour of Vienna, with our first stop at the Naschmarket where we were treated to some tasting of wine, cheese and some cakes. Then a drive around the Ringstrasse with all their impressive buildings and a walking tour in the heart of the city. After that, you could either use the afternoon to stay in the city or take the bus back to the boat which we decided to do, as we had the next day free to explore more of the city on our own. Which we did, using the Underground-train to get into the city and visit a very big Fleamarket, to Gerry's delight. Although we did not spot one miner's lamp but lots of other antiques. Back at the boat, we had the Captain's Fairwell cocktail party, followed by the Captain's Farewell Gala Dinner.



Budapest 01.

Continued next page…

Ellen and Gerry's European Rhine River Boating Safari 2019. – *Continued…*

Budapest 02.

Budapest 03.

Budapest 04.

And during the night we sailed along to arrive the next morning and last of our sailing days in Budapest. It was quite a sight to sail along these beautiful buildings, like the Royal Palace, Mathias Church and the very magestic Parlament House. Afternoon was enjoyed with a sightseeing tour of Buda and Pest and all was capped off with an illumination evening cruise to see Budapest by night.

Budapest 05.

Budapest 06.

Budapest 07.

On drive around Woerthersee.

Next morning it was time to say goodbye to all and start the next part of our holiday. It was time to leave as we desperately needed to get away from being spoiled to death and three cooked meals a day!!!

After traveling by train from Budapest to Salzburg, we picked up our hire car and have now been traveling through parts of Austria we have never visited before. It is lovely countryside and Gerry has gone absolutely mad photographing as much as possible.

Near Woerthersee 01.

Near Woerthersee 02.

Near Woerthersee 03.

Most places we stayed a couple of nights and we are now in Velden on the Woerthersee where we lodge in a nice B&B on the side of the mountain. We had a boat tour around the lake to Klagenfurt, also did day trips to different places and made the most of the area and the lovely weather we are still experience.

Graz 1.

Graz 2.

Granatium Museum 1.

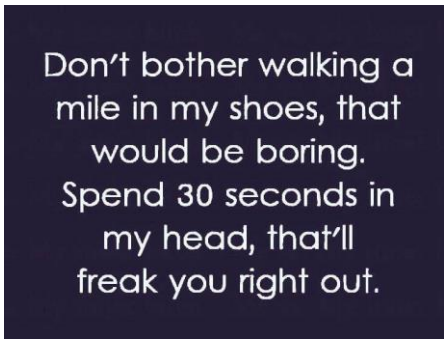
Granatium Museum 2.

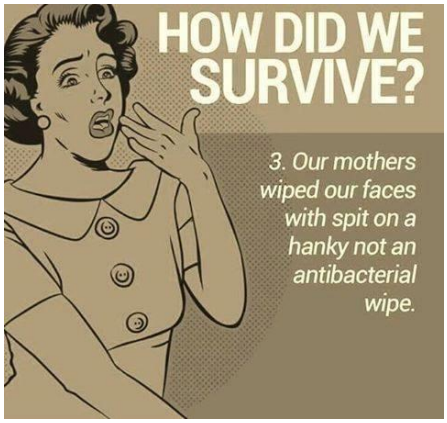
Granatium Museum 3.

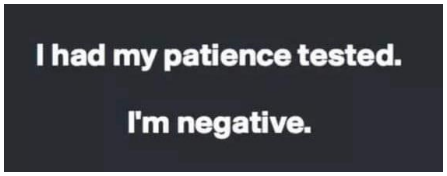
Gerry and Ellen - '*The happy wanderers*'.

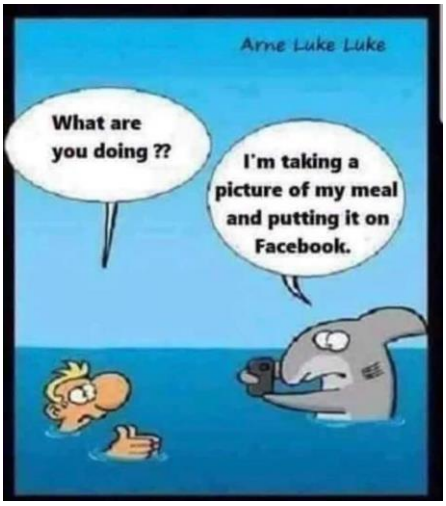
Contributed by Mike Mabbitt…

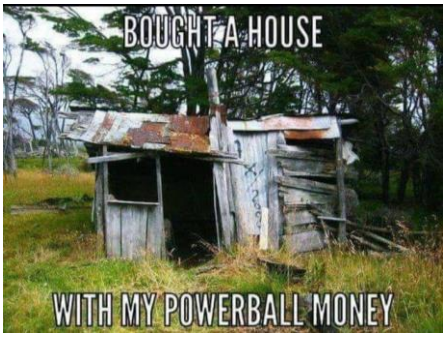
Why do I bother pushing one for English? I still get someone that can't speak it!











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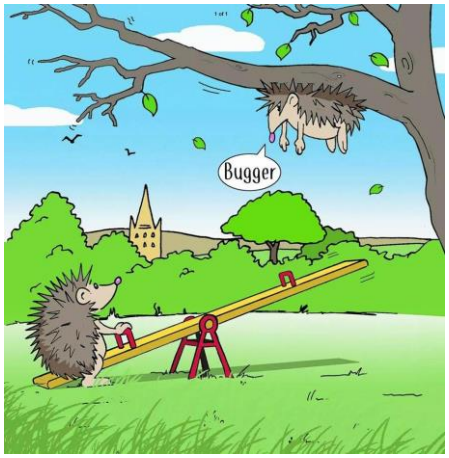
Contributed by Augie…



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Contributed by Doug Walker…

Don't get yourself into a Paddy now…

Murphy says to Paddy, "What ya talkin into an envelope for?"
"I'm sending a voicemail ya fool!"

19 Paddies go to the cinema, the ticket lady asks "Why so many of you?"
Mick replies, "The film said only suitable for 18 or over."

I went to the cemetery yesterday to lay some flowers on a grave. As I was standing there, I noticed 4 grave diggers walking about with a coffin. 3 hours later and they're still walking about with it. I thought to myself, they've lost the plot!

My daughter asked me for a pet spider for her birthday, so I went to our local pet shop and they were £70!!! Blow this, I thought, I can get one cheaper off the web.

Statistically, 6 out of 7 dwarfs are not Happy.

My neighbour knocked on my door at 2:30am this morning, can you believe that 2:30am! Luckily for him, I was still up playing my Bagpipes.

Sat opposite an Indian lady on the train today, she shut her eyes and stopped breathing. I thought she was dead, until I saw the red spot on her forehead and realised, she was just on standby.

When I was in the pub, I heard a couple of plonkers saying that they wouldn't feel safe on an aircraft if they knew the pilot was a woman. What a pair of sexists. I mean, it's not as if she'd have to reverse the bloody thing!

Local Police hunting the 'knitting needle nutter', who has stabbed six people in the rear in the last 48 hours, believe the attacker could be following some kind of pattern.

Just got back from my mate's funeral. He died after being hit on the head with a tennis ball. It was a lovely service.

Paddy says "Mick, I'm thinking of buying a Labrador. "Bugger that" says Mick, "have you seen how many of their owners go blind?"

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Members' Noticeboard

Southern Rockhounds
Dig it up, Clean it up, Cut it up & Polish it up

Please enquire about any event by using our contact page.
We will reply to all enquiries.

UP COMING EVENTS

Our next Gem Fair will be on:

First Full Weekend in November

10am till 5pm - Sat

and 10am till 4pm - Sun.

17 Gerald Crt, Christie Downs SA

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CONTACT
Stuart – 0407 726 841
Trevor – 0419 859 119

CLUBROOM & WORKSHOP
Hamlyn Rd
GLOSSOP SA 5344

RIVERLAND GEM & MINERAL CLUB

SHOW & SALES

JANUARY 25th & 26th 2020

Loxton Lutheran School

Luther Rd Loxton

AIRCONDITIONED BASKETBALL STADIUM

Saturday 9:00 – 4:00pm Sunday 9:00 – 3:00pm

DEMONSTRATIONS
Wire Wrapping
Faceting
Cutting & Polishing Stone

Refreshments & Snacks Available
Admission : Adults $6.00 Children Under 14 FREE

GOLD CRYSTALS | MINERALS JEWELLERY DISPLAYS GALORE | OPAL NOVELTIES

Email riverlandgemclub@yahoo.com.au

Find us on Facebook

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Mineral boxes and flats for sale

Mineral box sizes

Sold in bundles of (10)or 100

3.5 x 3.3cm……($1.50) $12.00
4 x 4cm……($1.50) $13.00
5 x 5.2cm……($2.00) $15.00
6.2 x 7.5cm……($2.50) $18.00
7 x 7cm……($2.50) $19.00
7 x 9.5cm……($2.50) $20.00
8.5 x 9.5cm……($3.00) $22.00
9.5 x 9.5cm ……($3.50) $23.00
13 x 9.5cm……($4.00) $25.00
13 x 12.5cm……($4.50) $30-00

Flats sizes

395 x 265 x 50mm…. $2.50
400 x 270 x 75mm…. $3.50 **NEW SIZE**
398 x 290 x 98mm ….$4.00

Greg Vort-Ronald
0413796279 or **luv2paint@iprimus.com.au**
all boxes and flats are folded together, no staples required
(Prices subject to change)

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Contributed by Allan Rudd…

Sister Mary Ann

Sister Mary Ann, who worked for a home health agency, was out making her rounds visiting homebound patients when she ran out of petrol. As luck would have it, a Petrol station was just a block away.

She walked to the station to borrow a petrol can and buy some petrol. The attendant told her that the only petrol can he owned had been loaned out, but she could wait until it was returned. Since Sister was on the way to see a patient, she decided not to wait and walked back to her car.

She looked for something in her car that she could fill with petrol and spotted the bedpan she was taking to the patient. Always resourceful, she carried the bedpan to the station, filled it with petrol, and carried the full bedpan back to her car. As she was pouring the petrol into her tank, two of another faith watched from across the street.

One of them turned to the other and said, 'If it starts, I'm turning Catholic.'

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Useful Internet Links

2019 Australian Gem & Mineral Calendar: Click here...
Adelaide Gem and Mineral Club: Click here...
AFLACA-GMCASA: Click here...
Australian Federation of Lapidary and Allied Crafts Association (AFLACA): Click here...
Australian Lapidary Club Directory: Click here...
Australian Lapidary Forum: Click here...
Broken Hill Mineral Club: Click here...
Enfield Gem and Mineral Club Inc: Click here...
Flinders Gem, Geology, and Mineral Club Inc: Click here...
Gem and Mineral Clubs Association of South Australia: Click here...
Gemcuts: Click here...
Lapidary World: Click here...
Metal Detectors - Garrett Australia: Click here...
Metal Detectors - Miners Den Adelaide: Click here...
Metal Detectors - Adelaide Agent for Garrett Australia: Click here...
Mineralogical Society of SA Inc: Click here...
Murraylands Gem and Mineral Club Inc: Click here...
NQ Explorers: Click here...
Prospecting Australia: Click here...
Southern Rockhounds: Click here...
Tea Tree Gully Gem and Mineral Club: Click here...
The Australian Mineral Collector: Click here...