



**THE
MINERALOGICAL SOCIETY
OF
NEW SOUTH WALES INC.**

C/o School of Natural Science
B.C.R.I. Parramatta Campus University of Western Sydney
Locked Bag 1797 Penrith South DC N.S.W. 1797

NEWSLETTER

MARCH 2009

The March Meeting will be held on Friday the 6th of March at 7.30 p.m. in the LZG14 lecture theatre on the ground floor of Building LZ in the Science campus of the University of Western Sydney on the corner of Victoria Road and James Ruse Drive in North Parramatta.

The March program will commence with reports to be given by Penny Williamson and Peter Beckwith

on the : - **2009 Tucson Mineral Show.**

The report will be followed by a lecture to be given by Arnold Van der Heyden on : -

‘The Sepon Gold Mine, Laos’

FORTHCOMING MEETINGS

Subject to circumstances some changes to the following schedule of program subjects and speakers may have to be made in due course.

April 3rd: 2009: There will be a description of the Mineralogical Society Website by Graham and Toby Ogle followed by a lecture to be given by John Rankin on : -
‘Early Collectors - George Smith’.

May 1st: Members Mini Auction.

June 12th, (Second Friday): Minitalk by Jim Sharpe on ‘Malachite, Azurite and Pseudomorphs’
Followed by lectures on ‘Gold’ by Paul Meszaros or on the ‘Burra Mine’ by David Colchester.

July 3rd: Talk by Bruce Myles on ‘Zircons from Malawi’ and Lectures on the ‘Burra Mine’ by David Colchester or on ‘Gold’ by Paul Meszaros.

August 7th: Society A.G.M. and the Betty Mayne Memorial Lecture to be given by Peter Williams on 'The Sunny Corner Silver Mines'.

September 4th: Talk on 'Scheelite in Australia' by John Chapman and a lecture on 'The History of Copper Mining in NSW' by Derek Dolstra.

October 9th, (Second Friday): Lecture on the 'Minerals of Mt Vesuvius' by Graham Ogle.

Field Excursion to the Shooters Hill Quarry (Blue Hill), south of Oberon Saturday 14th March 2009

On Saturday the 14th of March we will visit the Shooters Hill Quarry south of Oberon. Quarrying operations over recent times have exposed new opportunities and there are reports of some very good finds of smoky quartz crystals.

Collecting at this quarry can be hard work and good digging equipment is recommended. There is the possibility of extending the trip to Sunday 15th (overnight in Oberon), either to return to Shooters Hill Quarry if collecting results warrant, or to visit other localities in the Oberon district.

Please advise John Chapman if you wish to go on this excursion. Also indicate if you would like to stay over for Sunday 15th. A full itinerary and location details will be provided in due course. John may be contacted on (02) 9808 3481 (Home) or 0435085050 (Mbl) or by email at : - chapmanjr@optusnet.com.au

MAY MEETING MEMBERS MINI AUCTION

Members are advised that the meeting on the 1st of May will be in the form of a Mini Auction of members' mineral specimens similar to the auctions held in May 2007 and 2008.

A member can submit up to 3 **boxes** of specimens for a **silent auction**. There will be no need to pre-register your intention to sell in the silent auction. Just bring the box to the meeting, register and place the *Silent Auction* form on your box.

For this to be a success in the limited time available on the evening we need to work strictly to the planned program. Members selling minerals should be at the University by 6.30 PM. to allow time for setting up and inspection.

Members who wish to sell or bid must register. The owner as well as the auctioneer's clerk must note the purchaser's number or name on completion of the bidding for their specimen. Please bring a note pad and pen.

Transactions must be CASH ONLY and paid directly to the vendor at the completion of the auction. The Society will not handle any money. The Society cannot take responsibility for ensuring transactions are completed or enter into any disputes should they arise.

The Society will receive no commission. There will be no reserve on specimens but if a vendor is dissatisfied with the final bid, the vendor can make a higher bid in order to retain the specimen.

The number of specimens to be sold will depend on how quickly the sale can be conducted but at the last sale in May 2008 80 specimens were sold in about one and a half hours. Next May the sale will continue to finish when all specimens are sold or at the discretion of the auctioneer.

So that a catalogue can be prepared and distributed, please send details, name, mineral name and locality to Jim Sharpe. E-mail: sharpemin@dodo.com.au , phone (02) 9871 2502 or post to 190 Ray Rd Epping 2121, - not later than 18th April.

MEMBERS SHOULD ARRIVE AT THE MEETING NOT LATER THAN 7.10 SO THAT TIME IS AVAILABLE FOR REGISTRATION AND VIEWING.

The meeting will commence at 7.30 p.m.

2009 SOCIETY MEMBERSHIP FEES

To date only a little over half of the Society 2008 members have renewed their subscriptions for 2009. Fees were due from January 1st 2009 and members are urged to attend to their financial status promptly. 2009 Subscription renewal forms were sent out with the November Newsletter and would be available from e-mail-enabled member's computer files or hard copies are available from the Secretary or Treasurer at any Meeting.

Any members unsure of their financial status should check with the Treasurer, Jim Sharpe.

THE SOCIETY COMMITTEE

PRESIDENT:	Arthur Roffey	Tel: (02) 4572 5812
VICE-PRESIDENT:	Gary Sutherland	Tel: (02) 9871 1379
SECRETARY:	George Laking	Tel: (02) 9636 7145
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	David Colchester	Tel: (02) 9449 3862
	Dieter Mylius	Tel: (02) 9477 1060
	Graham Ogle	Tel: (02) 9876 5224
	Peter Williams	Tel: (02) 9685 9914

FEBRUARY 2009 MEETING

At the commencement of the February Meeting the Society President, Arthur Roffey, complimented and offered thanks on behalf of the Society to John Chapman who with a number of assistants had very competently and thoroughly organised the spread of **refreshment supplies** for the **Christmas Swap n' Sell Social** meeting in December.

Graham Ogle announced that the next meeting of the **MicroMineral Group** would be held at Andy Paterson's house in Belmont, Newcastle, on Saturday the 21st of March.

John Chapman advised that periodically he has received by e-mail **Newsletters** and sometimes other publications from other state **Mineralogical Societies**. He had previously been sending these out to the (N.S.W.) Society members when received but since some of these publications might run to a substantial number of pages and therefore megabytes of up-loading he advised that in future he would send out a notice that a publication had been received but then send the entire document only to those members specifically requesting this to be done.

In this connection Lin Sutherland reported that there was a new catalogue '**Minerals of Tasmania**' that had been published by the Tasmanian Department of Mines. It would probably be available electronically from Ralph Bottrill of the Tasmania Mineralogical Society and John Chapman would notify members in due course when he received notification.

Jim Sharpe was asked to introduce the guest speaker of the evening. Professor Ken McQueen is a Professor of Earth Science at the University of Canberra and has previously lectured to the Society in 2006 on aspects of the mineralogy of the Cobar area and last year in February on the Mount Boppy mine. Professor McQueen was clearly an expert on the mineralogy of the Cobar area and would be sharing some of his knowledge with the members this evening.

'Copper Revealed: the Story of the CSA Mine Cobar, NSW'

Professor Ken McQueen

Professor McQueen initially indicated by means of maps where the C.S.A. Mine is located and also where some of the other mines and deposits of the Cobar area are or were located such as the township of Eleuera of which there are now only relics.

Various copper and other mineralisation in the Cobar area was beginning to be identified in the late 1800s. In the spring of 1870 three tank sinkers, Charles Campbell, Thomas Hartman and George Gibb were traveling from Louth to Gilgunia and in camping overnight at an aboriginal waterhole noticed that there were brightly coloured green and blue coatings on rocks beside the waterhole. They collected a few samples and traveled on meeting along the way a couple, Henry and (Mrs) Sidwell Kruge. Before her marriage Mrs Kruge had worked in the Cornish mines as a 'bal girl', hand-picking the richer pieces of ore from sorting tables. She was able to identify the rock samples as copper ore. The tank diggers went back to the waterhole to collect more samples and then traveled to Bourke to register a mining lease that eventually became the Cobar Copper Mine and then the Great Cobar Copper Mining Company after an amalgamation with the South Cobar Mine in 1876.

Interestingly in researching the history of the Cobar discovery it was recently found that Campbell and Hartman had changed their names from Danish ones to English, Campbell's real name being Ferdinand Emilius Kempf and Hartman's was Jens Arnholdt Hartmann. They were actually Danish stonemasons and in coming to Australia initially because of the gold-rushes had changed their names possibly, in Campbell's case, because he had been avoiding military conscription in Denmark.

Once mineralisation at Cobar was discovered this sparked off a lot more exploration and prospecting. By late 1871 or early 1872 George Gibb, one of the original discoverers of the Cobar mine by then in association with another friend, John Connelly, had set up a prospecting group and they were reported to by a worker Thomas O'Brien, who had discovered a large iron oxide gossan about 11 km to the north of Cobar. After examining the gossan and deciding that it was worth claiming Gibb and Connelly set off to register a claim at Bourke, supposedly so concerned that others might discover what they were doing that they muffled their horse's hooves and traveled at night. Another problem was that in arriving at Bourke they discovered that they did not have enough money on hand to pay the required £20 for the registration and so had to approach two Bourke businessmen, the brothers Henry and Richard Nancarrow, to help finance the claim, in return for a share in the mine. The principals decided to name the new mine after the initials of the nationalities of the main claim-holders and since the Nancarrows were Cornish, George Gibb Scottish and Connelly Australian the C.S.A. mine was registered in February 1872.

A few views were shown of the town of Bourke in the late 1800s. It was an important centre in those days because it had been accessible by river boat along the Darling River from Melbourne and after the railway had been built which also brought more business a lot of trade passed through the town. The speaker was also able to show some remnants of the CSA mine gossan which can be found by mineralogists today including in one view a recent visit by a party which included John Chapman and Peter Williams.

In the 1870s the price of copper was then at an all-time high causing writers to refer to 'The Cobar Copper Mania' and the C.S.A. Mine principals were able to set up a company capitalized with a nominal capital of £40,000 in £1 shares. What became apparent over the next few years was that in spite of surface indications the payable ore was actually quite deep down and whilst by March 1874 the C.S.A. Mine had put down a shaft 150 feet no payable ore had been found. This was quite different to what had been happening at Cobar where the mining had rapidly found a lot of oxidized material quite near to the surface and then rich oxidized ore. Work continued for a while at the C.S.A. mine but by 1876 because of the lack of payable ore being found the site was effectively abandoned. Intermittently various groups made attempts to find ore at the C.S.A site sinking shafts further over the next three decades but it was not until 1905 when George Blakemore turned his attention to the C.S.A. mine that the first payable ore was found.

George Blakemore had set up the Great Cobar Mining Syndicate in 1893 with himself as manager and had considerably revitalized the Great Cobar Mine. In deciding to look at the C.S.A. mine he recognized that the site had experienced considerable leaching of the original surface ore and that earlier mining had not gone deep enough to find ore below the oxidized and leached zone and below the water table. Blakemore set up the C.S.A. Development Syndicate which continued shaft deepening until in September 1905 the shaft had reached 457 feet and hit the water table. Only a foot below this level the operators found very rich secondary lead and silver-bearing ore, the product of the leaching of metals from the above 457 feet. This discovery prompted a pegging boom in the area once it was known that there was rich ore at depth. Development was continued and financed by capital raised by floating the operation as the C.S.A. Mines Ltd with an issued capital of 44,000 £1 shares. From 1905 and over a three-year period the company produced over 5,000 tons of ore providing 1,250 tons of lead concentrates, 5,500 ounces of silver and even a small amount of gold.

At this point in his lecture Professor McQueen showed a number of slides of the C.S.A. mine workings, plant, machinery, workers and management personnel from the 1905-1910 period and also of some neighbouring operations by separate groups and companies such as the Tinto mine, later merged with the C.S.A. By this time the first indications of significant copper deposits had been found in the C.S.A. workings and from then up to the start of the First World War the focus was on extracting copper ore. With the start of the War the copper price initially dropped dramatically because most of the ore and concentrates had been getting sent to Germany to be refined and this practice was embargoed. By 1916 with the demand for copper that the War had by then produced the price had risen considerably and production was increased. To further aid production the company lobbied the state government to extend the railway from Cobar to the C.S.A. site. This was agreed to only after a Mines Department geologist had been sent to the mine to perform a resource assessment and establish whether there was sufficient ore at the mine to justify the cost of extending the railway. The assessment was probably the first that had been done at the C.S.A. and the geologist found that there was a copper resource of about 200,000 tons of 5.5% copper which would provide a mine life of from 4-6 years and justify the expense of the railway extension which was completed in 1918.

In 1918 George Blakemore now the company Chairman had promoted the construction of a copper smelting and electrolytic refinery at Kandos near Mudgee and near to supplies of coal, limestone and electricity to refine copper more cheaply than was then being done by the only other refinery in Australia, the Electrolytic Refining and Smelting Company at Port Kembla. Blakemore expected that the C.S.A. company would save about £20,000 a year by doing its own refining and also that the company would avoid paying a War Tax to the government which had been imposed on any company profits over a certain amount by putting some of its profits into infrastructure. Unfortunately the Kandos refinery had not been long built before the War ended, the price of copper plummeted and operations at the Great Cobar and C.S.A. mine ceased for a time. The Kandos plant had smelted about 55,000 tons of ore but the electrolytic refinery was never used.

Another serious problem for the C.S.A. mine next occurred in March 1920 when an underground fire took hold burning the considerable amount of timber used in shoring the stopes. An attempt was made to smother the fire by sealing off all the entrances but in gradually opening one entrance after some days to see if the fire was out it was found that it had continued. The decision was then taken to re-seal the mine and cease operations altogether. It was supposed at the time that the fire had been started by spontaneous combustion of high-sulphide ores in contact with timber.

The C.S.A. mine remained closed until 1962 although in the 1940s geological studies by more modern techniques including geochemical techniques and very deep drilling were promoted by the Bureau of Mineral Resources and the N.S.W. Geological Survey to assess deposits in the Cobar field with the view to re-opening some of the mines. Some of the Broken Hill mining companies became interested and managed to prove a significant resource at the C.S.A. site gradually establishing the presence of a number of other lodes in the area at greater and greater depths, some of the drilling going down to 1.8 kilometers. One of the newly discovered zones of mineralisation was called the QTS system, (from the Queenslander, Tasmanian and South Australian discoverers, - following the lead set by naming the C.S.A. mine after the nationalities of its discoverers).

With the confirmation of much larger ore deposits in the C.S.A. area the mine was considerably upgraded after 1962 with modern processing plants built and more shafts sunk into the newly discovered lodes. Ore production at the new C.S.A. mine commenced in 1964. At the time it was the most modern mine in Australia with mining being conducted in some places down to 1.48 kilometers the C.S.A. therefore being the second deepest mine in Australia after Mt Isa. Working conditions at that depth are very hot with the need to pump refrigerated air underground to the deepest levels.

In 1960 the main Broken Hill companies working in the Cobar area consolidated their interests and established a company Cobar Mines Ltd which took control of the C.S.A. site. Subsequently ownership of the C.S.A. mine has changed periodically and at the present time it is controlled by Glencore International AG.

At the conclusion of his lecture Professor McQueen answered a number of questions and reminded members that he had brought in a number of sheaves of notes detailing his lecture and which he had offered to the Society to sell for \$2 each with the money to be donated to the Kids with Cancer charity. [Spare copies of these notes are available from the Treasurer, Jim Sharpe. The notes by Professor McQueen on his lecture will also be reproduced in the Society website.]

THE AUSTRALIAN JOURNAL OF MINERALOGY

Subscribers to the Journal should have received copies of the issue, Volume 13, Number 1, June 2008 which has just been distributed. The issue had unfortunately become overdue because of substantial work pressure in the Department of GeoSciences of the Museum of Victoria where the Journal is edited. There is, happily, no shortage of interesting articles and contributors providing copy for the magazine. Over the next few months the Journal editorial team is expecting to bring out the December 2008 issue and catch up to the established schedule of publishing the two issues per year in June and December.

FORTHCOMING EVENTS

BACK FROM TUCSON MINERAL SALE

Over Saturday and Sunday the 7th and 8th of March from 10.00 a.m. to 5.00 p.m. at 52 Macpherson Road, Londonderry. Presenting a fine selection of mineral specimens, decorator pieces, faceting and cabbing rough, gemstones and beads. Also on display and for sale will be a quantity of fine quality alpaca products.

Inquiries to Arthur Roffey on (02) 4572 5812; to Peter Beckwith on 0412 333 150
or to John and Val Tunzi on (03) 5422 1720

The Glenn Innes MINERAMA 2009

The **Minerama Fossicking & Gem Show** is held every year over the second weekend in March, this year over Friday to Sunday 13th to 16th of March in the Glenn Innes & District Service Club, Grey Street, Glenn Innes. The event features the Gem Show with sales of mineral specimens, fossils, gemstones, fine jewellery, faceting rough, lapidary tools & supplies and arts and crafts and also displays of gem cutting and beading, lapidary work and an art exhibition.

Information on the Minerama may be found on the Web at : - www.minerama.com.au

CANBERRA ROCK SWOP 2009

The 2009 ROCK SWOP is being held in the EPIC site in Canberra again this year over Saturday and Sunday the 28th & 29th of March 2009 hosted as usual by the **CANBERRA LAPIDARY CLUB**.

A description of the Rock Swop event, location, program, facilities, accommodation, contact and inquiry numbers and Registration forms were circulated with the February Newsletter. More are available at the General Meeting from the Secretary George Laking or inquiries may be made to the Rock Swop convenor, Norm Menadue on (02) 6258 6631 or e-mail : - *nmenadue@optusnet.com.au*

GEMBOREE 2009

Over EASTER 2009: Friday to Monday, the 10th to 13th of April

The 45th Gemboree this year is being held in the Wimmera Field Day Site, Longerenong Road, Dooen, 12klm from Horsham, Victoria, hosted this year by the Horsham & District Lapidary Club.

The Site includes the large Moore Pavilion which will house most of the dealers and displays and there is ample room over the Site for a large number of tailgaters and campers.

Inquiries can be made to the Gemboree Committee at 22 Hutchesson Street, Horsham, VIC 3400. Accommodation inquiries may be made by the Internet on Google at *totaltravel.com/theWimmera*, to *tourism@hrcc.vic.gov.au*, to the Horsham Visitor Centre, *www.horshamvic.com.au* or by freecall to 1800 633 218.

19th Annual LISMORE GEMFEST

Presented by the **Lismore Lapidary Club** over Saturday and Sunday the 16th and 17th of May 2009 at the Lismore Showground, Lismore.

32ND JOINT MINERALOGICAL SOCIETIES OF AUSTRALASIA SEMINAR JUNE 2009

The Seminar is being held this year over the usual period of the Queen's Birthday long weekend in June, from Saturday 6th to Monday 8th of June. It will be hosted this year by the Queensland Mineralogical Society on the theme **Minerals, Mines & Collectors** and held in the Theatre of the Queensland Museum, Southbank, Brisbane.

Seminar presentations will be held through Saturday and Sunday with a swap and sell held on the Monday morning. The Seminar dinner will be held on Saturday night at a venue to be chosen but within easy walking distance of the Museum.

BLAXLAND GEM & MINERAL CLUB GEM SHOW

Over Saturday and Sunday August 15th and 16th 2009. 8 am to 4 pm Daily

In the Glenbrook Community Hall, Great Western Highway, Glenbrook, NSW
(Next to Glenbrook Theatre), Just west of Information Centre.

<http://www.freewebs.com/blaxlandgemmineralclub/BGMCshow.htm>

Displays of lapidary work and gem, mineral and crystal sales.

Refreshments available. Entry: Adults: \$3.00, Children \$1.00.
