



THE
MINERALOGICAL SOCIETY
OF
NEW SOUTH WALES INC

C/o School of Natural Science
B.C.R.I. Parramatta Campus, Western Sydney University
Locked Bag 1797, Penrith South DC, N.S.W. 1797
Website: www.minsocnsw.org.au

NEWSLETTER

JUNE 2017

The June Meeting will be held on Friday the 2nd of June at 7.30 pm in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville.

The program will include a talk to be given by Neil Cooper who will describe the displays in the clubrooms of the **Parramatta and Holroyd Lapidary Club**.

The talk will be followed by a lecture to be given by Simon Peckover on : -

‘The Origins of the High Grade Sapphire Deposits of Kings Plains.’

If any members have specimens of sapphires or sapphire-containing specimens they are invited to bring these in to display to the Meeting. Please label your specimens to ensure you get them back.

Members who attended the recent Tallawang Field Trip are also invited to bring in significant specimens found on the trip to display.

Forthcoming Meetings and Programs

July 7th: There will be a lecture given by Peter Williams on **‘The Origin of the Metamorphic Stones of Stonehenge’**

August 4th: Society **Annual General Meeting** followed by the Betty Mayne and Edna Walker **Memorial Lecture**. This year the Memorial Lecture will be given by Society member Lee Spencer on gemstones in Burma/Myanmar titled **‘Up the Irrawaddy’**.

September 1st: Lecture on **‘Quartz Crystals from the Manuka Silver Project, Cobar District’** to be given by three speakers, Ian Graham, Angela Lay and Stephen Harris.

October 6th: Lecture on **‘Searching for Gold in Kalimantan’** by Mark Walford.

WELCOME

Welcome to new member Elfie Grebert of Blacktown

FIELD TRIPS

A number of field trips are scheduled or being planned for the next few months. As follows :-

Collecting in Bungonia SCA and Morton NP under a Science Licence.

Three members have registered interest in attending the Bungonia-Tolwong field trips.
You may participate in either.

Field Trip Bungonia State Conservation Area: Bushwalking Expedition to Spring Creek – Block-Up locality for overnight camp on 3/4th June **or** 8/9th June and 15th/16th June.

Field Trip to the Tolwong Mine from Tolwong Homestead is dependent on participating members having a 4WD to drive the party from Tolwong Homestead to drop-off point. Scheduled for 28-30th June 2017.

An invitation has been extended to members of The Amateur Geological Association of the Hunter Valley and to members of The Australian Mining Heritage Association to participate in the above field trips.

If you are available to bushwalk and bush camp on any other days, please indicate dates you would be available as dates are flexible.

Australian Museum Visit

Tuesday 20th June is Albert Chapman's birthday. A visit to the Australian Museum has been arranged to view the Albert Chapman Collection from noon to 3pm.
Entry Fee for adults is \$15 and \$8 for concession holders.

ANTSO Visit

A visit to ANTSO mineral processing department is planned for the 18th or 19th July.
This is not a general tour but a visit to one of its departments.

Contact Edward Zbik by e-mail ecjz@optusnet.com.au or phone (02) 9638 6586 or SMS 0401 538 480 to register your interest in any field trip or visit as above.

Report on the Visit to the Tallawang Magnetite Mine

A large open-cut pit 36m x 183m x 60m deep with four levels below the base of the open cut extending south. The Tallawang magnetite deposit provides a source of high-grade magnetite for coal beneficiation and represents a rare example of an economic Fe-skarn developed in the Palaeozoic Lachlan Fold Belt of eastern Australia. Magnetite is one of the first minerals to crystallise out of magma.

Visit 8/9th April 2017

Attendees: Grahame Ogle, Denis O'Brien, Doug Austin, Brian England, Naomi Estelle, Teresa and Edward Zbik

Expected Minerals

Haematite, Limonite, Magnetite, Chalcocite, Chalcopyrite, Pyrite, Pyrrhotite.

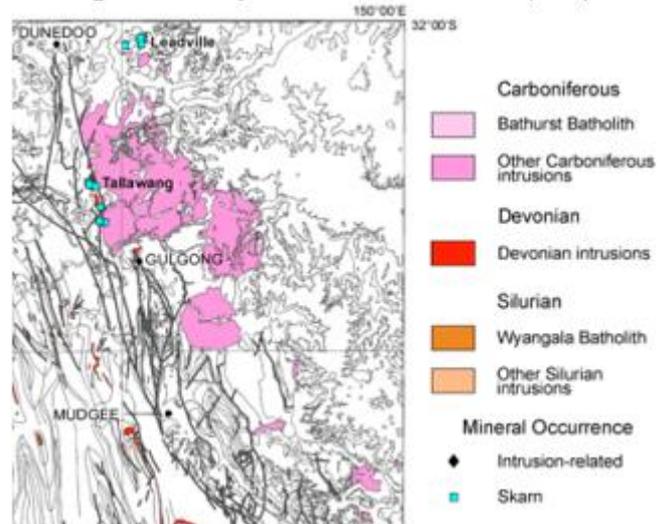
History:

Tallawang Iron Ore Quarry. Between 1902 and 1927 over half a million tonnes of magnetite and haematite iron ore was quarried at Tallawang, north of Gulgong for the Hoskins Steelworks at Lithgow.

Mineral Geo Profile.

The Tallawang skarn deposits have a complex geological history with the skarn being related to earlier, more mafic, intrusions. The Tallawang magnetite deposit consists of two major zones of magnetite that formed in the *Silurian Dungerees Volcanics* (418Ma), adjacent to the western boundary of the deformed Tallawang Granite, a sill-like microgranite of probable Early Permian age.

The skarns have a complex history: an early metasomatic event overprinted by at least two stages of deformation. The second deformation is interpreted to be part of the Kanimblan Orogeny. Initially, a **magnetite-garnet (grossularite-andradite)-hedenbergite skarn** assemblage formed at a temperature of ~600° to 650°C.



The magnetite skarns were then brecciated prior to a hydrous stage involving the deposition of additional **magnetite**, with **chlorite-rich hastingsite, hastingsite-hornblende, allanite, epidote, quartz, apatite and pyrite**. The mineralisation was then overprinted by lower amphibolite facies regional metamorphism. This metamorphic event has been dated at 360Ma. Peak metamorphic conditions occurred at the range 530° to 590°C, according to **garnet-biotite** geothermometry (slightly higher temperatures are obtained from the **garnet-cordierite** geothermometer. Finally, a retrograde **chlorite-epidote-calcite-quartz-actinolite** assemblage formed at around 350° to 365°C, under greenschist facies conditions. Following this, minor post-tectonic **pyrite veining** and late brittle deformation, caused by the emplacement of the late Early Carboniferous Gulgong Granite, represents the final mineralising event. Pyrite at Tallawang is intimately intergrown with Skarn magnetite, although textural studies indicate that pyrite invariably developed later in the paragenesis than the bulk of the magnetite.

Debate continues whether Tallawang was likely to have been extracted from mafic and felsic metavolcanics and metasediments of the Silurian Dungerees Volcanics in a magmatic / meteoric convection system rather than from the nearby Tallawang Granite. The Early Devonian Tallawang Granite was the heat source for skarn formation.¹

Photo Gallery:



Walking along access road to open cut



Tailings dump at rear of cars, magnetite dump in foreground



Upper bench roadway



Tallawang is a hard rock quarry with steep walls



Mid bench entry portal-now closed



60m deep



Tallawang magnetite



Mid bench

60m deep



Actinolite on skarn



Garnet (grossularite-andradite)



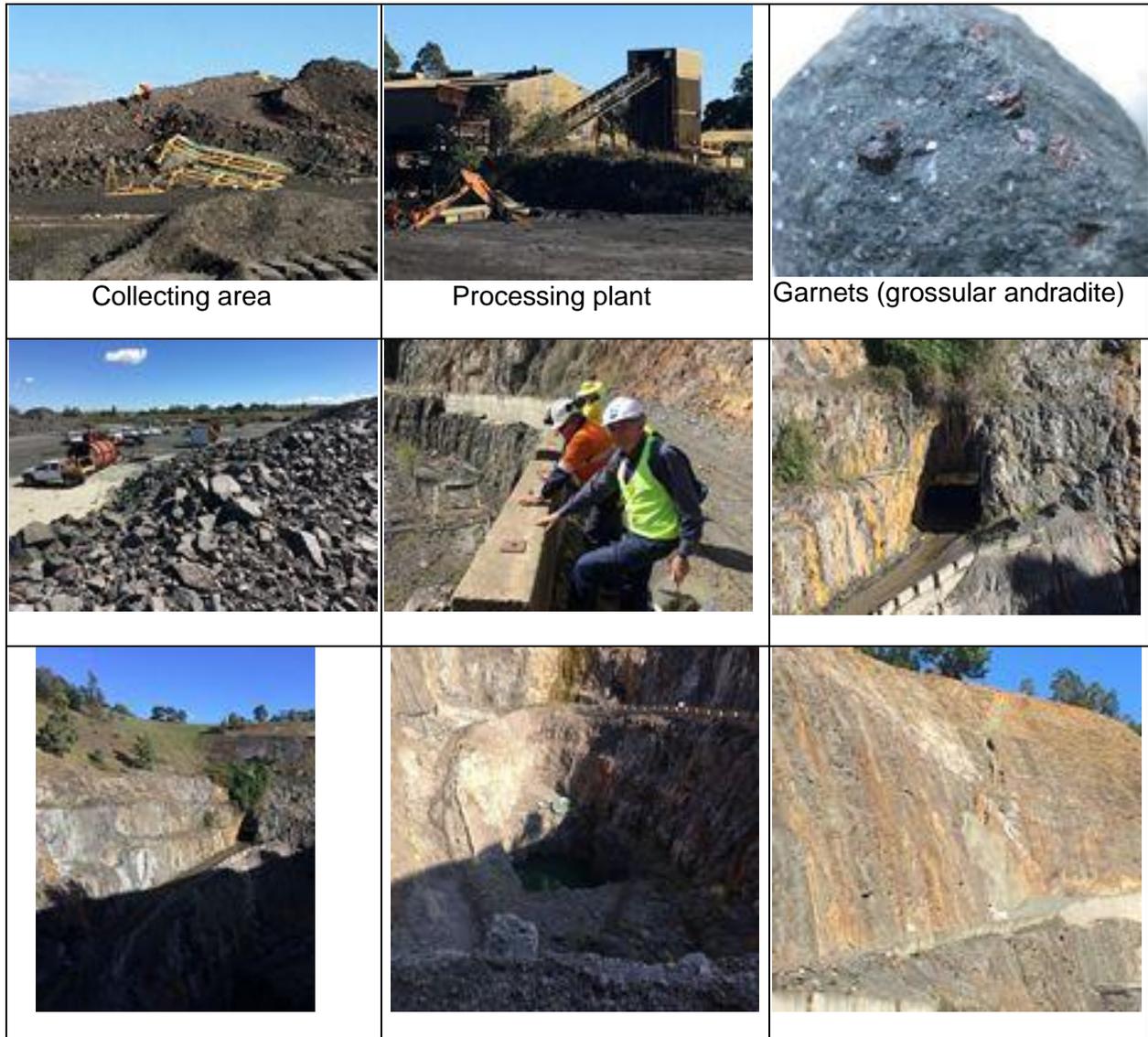
Actinolite on skarn



Garnet (grossularite-andradite)



Core drill hole through Magnetite



Photographs by Denis O'Brien, Graham Ogle and Edward Zbik

Ref:

¹ Peter M Downes, MINERALISATION IN AND ADJACENT TO THE HILL END TROUGH
Geological Survey of New South Wales, Department of Mineral Resources, 1999

² Iron. Mineral Industries of New South Wales No 21, GSNSW

Members are asked to bring along specimens of Magnetite from their collections to display.

LIBRARY BOOKS AND MAGAZINES

If any member has any outstanding library books and magazines they are asked to return them. AJM Vol 14 No 2 has been on loan for some time. Librarians are Simon Tanner, Peter Beddow and Ed Zbik. The Library books are in the process of being re-catalogued, provided with numbers and labels, a complete inventory compiled and the librarians need to see and account for all the books and magazines.

The SOCIETY COMMITTEE

PRESIDENT:	Dieter Mylius	Tel: (02) 9477 1060
	E-mail:	<i>dieterm@internode.on.net</i>
VICE-PRESIDENT:	John Chapman	Tel: (02) 9808 3481
	E-mail:	<i>chapmanjr@optusnet.com.au</i>
SECRETARY:	George Laking	Tel: (02) 9636 7145
	E-mail:	<i>bglaking@tech2u.com.au</i>
TREASURER:	Graham Ogle	Tel: (02) 9868 4446
	E-mail:	<i>grahamo@diabetesnsw.com.au</i>
COMMITTEE MEMBERS:	Peter Beddow	Tel: (02) 8810 8446
	David Colchester	Tel: (02) 9449 3862
	Geoff Parsons	Tel: (02) 9548 3289
	Simon Tanner	
	Edward Zbik	Tel: (02) 9638 6586
	E-mail:	<i>ecjz@optusnet.com.au</i>

The MAY MEETING

The program at the May Meeting was the annual Member's Mini-Auction which was conducted as usual by Dieter Mylius as the auctioneer ably assisted by Arthur Roffey demonstrating each lot as they came up for bidding. There were 66 individual specimen lots with a number of silent auction trays and the total sales would have been between \$2,700 and \$2,800.

FORTHCOMING EVENTS

The BANKSTOWN GEM & MINERAL FAIR

To be held in the Arena Sports Club at 140 Rookwood Road in Yagoona, over the weekend of the 3rd & 4th of June. Saturday 9.30 am to 5 pm, Sunday from 9.30 am to 4 pm.

The Fair is supported by the Bankstown & Districts Lapidary Club.

There will be a large range of items on sale including jewellery, gemstones, beads, opals, gem rough, carvings, fossils, crystals and mineral specimens.

Refreshments available, plenty of parking, admission fees, \$7 per adult.

For more information on the Bankstown Show contact : - Peter on 0412 333 150

Or the Club website www.bankstownlapidary.com

WINDSOR GEM & MINERAL FAIR

Over Saturday and Sunday the 17th and 18th of June at the Windsor Function Centre, on the corner of George and Dight Streets, Windsor. Saturday 9.30 am to 5 pm, Sunday 9.30 am to 4 pm.

'Jewellery, gemstones, beads, opals, gem rough, carvings fossils, crystals and mineral specimens from all over the World. Sales, dealers and displays. Entry fees \$7 for adults and children under 18 accompanied by parents are free. There will be a lucky door prize of a 9ct gold and sapphire pendant awarded after a raffle draw on Sunday afternoon. The Show is supported by the Hawkesbury Valley Lapidary Club.'

For more information email Peter Beckwith at peterrare@optusnet.com.au

PARRAMATTA HOLROYD LAPIDARY CLUB 57TH ANNUAL EXHIBITION

Theme: "India and the Sub- continent"

To be held over Friday to Sunday, the 18th, 19th & 20th of August, from 9am to 4pm each day.
At the Clubrooms at 73 Fullagar Rd. Wentworthville, NSW. Entry is free.

Demonstrations of Club activities; Rocks & minerals for sale; Members work for sale;
Plant sales; Activities for the kids. Refreshments - Sausage sizzle, Devonshire teas.

BLAXLAND GEM & MINERAL CLUB SHOW

Being held over Saturday and Sunday, August 19th and 20th 2017 in the Glenbrook Community Hall, Great Western Highway, Glenbrook, NSW.
(Next to Glenbrook Theatre), just west of the Information Centre.
From 8 am to 4 pm daily. Entry: Adults: \$3 Children \$1
Displays of lapidary work and gem, mineral and crystal sales.
Refreshments available.

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

THE JOINT MINERALOGICAL SOCIETIES OF AUSTRALASIA 40TH ANNUAL SEMINAR

The 2017 Seminar will be held over Wednesday the 4th and Thursday the 5th of October in the Hahndorf Resort Conference Centre, Hahndorf, S.A. and is being hosted this year by the **Mineralogical Society of South Australia.**

The Theme will be '**Copper Minerals - Copper State**'

The entire seminar with a program of events including a number of field trips will run from Saturday the 30th of September to Friday the 6th of October.

The formal proceedings, opening address and lecture program will take place over the two days of Wednesday the 4th and Thursday the 5th of October with various activities including field trips scheduled from October 1st through to the 6th. Additional field trips are planned for the 9th – 14th October to the north of S.A, and to locations and collections in and around Broken Hill.

The Seminar will be based in the historic German settled village of Hahndorf, only 30 minutes' drive by car from Adelaide City. A range of accommodation options are available including at the seminar venue. The theme of 'Copper Minerals - Copper State' has been selected in view of South Australia's early copper mining history. A number of field trips to copper, uranium and phosphate deposits are currently being planned. There are a number of tourist-interest places to visit in the region including dozens of wineries.'

Contact : Harold Gallasch
 Phone: (08) 8388 7218
 email: gallasch@bukartilla.com.au

GEMKHANA 2017

The Gemkhana will be held again this year in the Hawkesbury Showgrounds at Clarendon near Richmond over Saturday to Monday, the 1st, 2nd & 3rd of October from 10.00 am to 5.00 pm on Saturday & Sunday, and from 9.00 am to 12 noon on Monday.

The Gemkhana is presented by the Gem & Lapidary Council of NSW Inc. and is the Annual Gem & Mineral Show and Competition of Lapidaries from all over NSW. Since the venue last year was very successful and geographically convenient to Sydney the Gemkhana is being held again in the Hawkesbury District Showgrounds, at Clarendon. The Showgrounds are directly opposite the RAAF base, on the Windsor Road approximately mid-way between Richmond and Windsor, turn-off on to Racecourse Road. There is unlimited parking in and just outside the Showgrounds which are a fairly short walk from Clarendon railway station.

'Featuring Competition, Exhibitions, Dealers, Demonstrations and Tailgating; Sales of minerals, fossils, jewellery, lapidary equipment, faceting rough stones and slabs, silver work and gem cutting activities.'

Illawarra Lapidary Club Inc. - 2017 Jewellery Gems and Minerals Festival

Sat 4 Nov, 9am – 4pm and Sun 5 Nov, 9am to 2.30pm

At Heininger Hall, Ribbonwood Centre, 109 Princes Hwy, Dapto

Entry: Adults \$3, children under 12 years free

Featuring: Gemstone Faceting, Cabachon Cutting, Silvercrafts, Jewellery Making and Valuations, Mineral Group, Club and Fossicking Information, Refreshments, Raffle and Kid's Games.

Dealers Selling: Lapidary Supplies, Minerals, Jewellery, Crystals, Findings, Fossils. Beads and Opals.

Enquiries: Lynne 0428310697

<http://www.illawarralapidaryclub.com.au/>
