Mineralogical Society of Western Australia (inc.)

February 2002

Volume 3, Issue 1

Forward Diary 2002

Presidents Report

Welcome to 2002, I trust that all members and families enjoyed a prosperous and safe holiday season.

Reports concerning the December Quiz night were encouraging our thanks go to the tireless efforts of our Secretary/Treasurer John Reeve-well done.

The coming year promises to be an informative and entertaining one. A total of three fieldtrips have been planned not to mention the joint seminar in Brisbane in June. A series of lectures have been arranged including those given by Professor Peter Williams and Dr Louisa Lawrence. Also an interesting programme of educational workshops is planned including the following topics : mineral chemistry, physical properties, mineral asociations, mineral classification and the rock forming minerals.

I look forward to seeing you all at the **February 6th meeting.**

February 6th Club Meeting

April 3rd Club Meeting

June 5th Club Meeting

August 7th Club Meeting

October 2th Club Meeting

December 4th Club Meeting

Newsletter Contents.

Presidents Report

Wodigina Report

Eastern States Calendar

This is for those travellers amongst us.

March 2002

Sat 2-Sun 3 MAR 2002
 North Brisbane Lapidary Club
 Gem and Jewellery Show
 Hendra Secondary College
 Widdop Street Hendra
 9am - 5pm Sat
 9am - 3pm Sun
 More info: <u>http://www.home.acenet.net.au/</u>
 raywil/index.htm
 eMail: <u>nbrislap@hotmail.com</u>

 8 - 10 MAR 2002 (2nd Weekend - Fri, Sat Sun) Minerama Glen Innes Northern NSW Held at the Glen Innes RSL Hall 10am - 7pm Fri/Sat 10am - 3pm Sun Field Trips Held from 7-11 March Featured Mineral: Arsenopyrite Enq: 02 6732 2397 PO Box 307 Glen Innes
 gitourne@northnet.com.au

- Mar 8-11 Victorian Gemkhana Albury Showground, Fallon St, Albury, NSW
- Mar 16-18 Canberra Rock Swap Exhibition Park, Federal Hwy, Canberra
- Mar 16-17 Aust. Gold & Prospectors Expo Ballarat Exhibition & Ent Centre Western Hwy, Ballarat, Vic
- Mar 16-17 "Back from Tucson" 52 MacPherson St, Londonderry, NSW
- Mar 29-31 Warwick Annual Easter Rock Swap Warwick Showgrounds, Warwick, Qld
- 29 MAR 1 APRIL 2002 (Easter Break) NATIONAL GEMBOREE 2002 Rockhampton, Qld.
- Torrington Family and Market Day 30 March 2002 (Easter Saturday) 9.30am - 3 pm Stall Holders welcome - \$5 table Enq: 02 6734 6284

Editors Corner.

Well here we are in February already where does the time go.Please accept my apologies for the newsletter being late,this is due to a cantankerous computer.Again I must urge you to make some contributions to the newsletter for this year.This is more for your benifit than mine.

June 2002

June Queen's Birthday Weekend 2002

25th Joint Mineralogical Society Seminar : Oueensland will host the 2002 Joint Mineralogical Society Seminar. The theme is 'Speakers Choice', to give the authors (and attendees!) a smorgasbord of mineral subjects. Queensland Museum, Southbank, Brisbane for the Oueens's Birthday weekend of June 2002 For More information contact · Tony Forsyth via email or watch this space for more information as it comes to hand .

The Wodgina pegmatite field, Pilbara, Western Australia: a brief mining history

Many of the pegmatites in the Pilbara were discovered during a cassiterite mining boom in 1902-5. At Wodgina, cassiterite was discovered in the Main Tantalite vein as well as in all the cassiterite-greisen veins associated with spodumene pegmatites at Mt. Cassiterite to the south in 1903. Tantalite was recognized at the Main Tantalite vein in 1905, during the peak of cassiterite mining. Pegmatite mining ceased by 1909, although some minor production occurred in 1917. During 1925-1929 the Wodgina Main Tantalite vein and adjacent alluvial deposits were worked by a group controlled by Lady Deborah V. Hackett-Moulden (1888-1965) and Mr. N. S. Young. Tantalum ore was sold mostly to Fansteel Metallurgical Corporation, Illinois, USA but smaller amounts also went to Japan and Great Britain. E. S. Simpson visited the pegmatite in 1927 and first identified the large masses of white, cesium-bearing beryl at the northern end (Simpson 1929, p. 100). He estimated that there was probably 520 tonnes insitu and 180 tonnes eposed as alluvial material. An additional 30 tonnes of beryl was exposed from nearby spots on the same pegmatite.

In 1931, Lady Deborah Hackett-Moulden (the widow of Sir John Winthrop Hackett, a founder of the University of Western Australia in 1913 and co-owner of the West Australian newspaper) as Chairman of Directors, and N. S. Young, as Secretary, formed Tantalite Ltd., an Adelaide-based company and obtained the main leases at Wodgina, Strelley and Tabba-Tabba. With funds raised by the private investors, Tantalite Ltd. restarted mining from the Main Tantalite pegmatite. In 1943, the Mineral Production Board of the Common-wealth Government Department of Supply and Shipping took over operatorship of the principal tantalum deposits in the Pilbara- the Strelley, Tabba Tabba, Pilgangoora and Wodgina districts - under war-time authority. The government continued tantalite production at Wodgina and Strelley (Hickman 1983; Blockley 1980; Ellis 1950) and arranged for beryl to be mined also.

A. S. Giles was hired by the Government to mine beryl from the Main Tantalite vein at Wodgina for export to New York City. At that time Alec L. Kennedy, as the supervisor appointed by the army, had 80 men mining tantalite from alluvial, eluvial and bedrock deposits at Wodgina. Some single masses of tantalite were found up to 90 pounds in weight (Ellis 1950, p.17). Giles hired 8 local aboriginals to do the mining; of the men available they were the only men who were capable to do the work. The task was to ship the mined beryl in 70 ton lots to New York for refining and use (probably for the atomic bomb work of the Manhattan Project). The reason for only shipping 70 tonnes at a time was so if one ship did not arrive due to Japanese attacks, all the material would not be lost. They mined 730 tonnes in 11 months from the beryl that outcropped at the north end of the pegmatite. The beryl was exposed over a 60 ft by 20 ft area; after mining, the beryl was recognized as extending to 15 feet deep. One mass of whiteberyl reached 11.6 by 7.3 by 5.5 metres in size (Blockley 1971, p. 86). The material was shipped to New York in cloth sacks (Giles 1956).

After World War II, in late 1945 the Australian government returned all the tantalum properties (Wodgina, Tabba-Tabba and Strelley) to Tantalite Ltd. Tantalite Ltd. though, no longer possessed enough funds to continue mining. Dr. Deborah V. Buller-Murphy (the former Deborah Hackett-Moulden who remarried Basil Buller-Murphy in 1936 and had received an honorary doctorate of Laws from the University of Western Australia in 1932) tried to raise the funds by going public but the Capital Issues Control Board refused to allow a public flotation. During this time Buller-Murphy used her personal funds to enable the company to survive. After 8 years of no dividends or production, Tantalite Ltd. did the best it could and gave an option to purchase Wodgina, Tabba-Tabba and Strelley to J. G. Donaldson of Melbourne.

In 1953-54, Donaldson formed Northwest Tantalum N.L. and acquired all the leases, equipment, and unprocessed ore of Tantalite Ltd. for 52,740 pounds (paid in cash and 15,000 pounds worth of NW Tantalum NL stock). For the shareholders of Tantalite Ltd. this represented a loss of only 8 pounds per share from their original investment in the 1930s - an improvement over a complete loss and in-debt without the sale. In November 1953, the change took place with Joseph Bates, the World War II caretaker at Wodgina being replaced by Alec L. Kennedy, the previous government mine manager. Donaldson offered the stock to the public in Melbourne and it was oversubscribed. The new company had an official valuation of one million pounds with 4 million shares issued. Wodgina was brought back into production with the shipment, circa 1955, of 601 pounds of tantalite concentrate and 392 pounds of cassiterite concentrate to Wah Chang Corporation, New York, USA. Six barrels of poorly sorted white beryl was also sold at a loss to mis-informed buyer.

By April 1955, NW Tantalum NL knew that Wodgina was uneconomic at a current grade of 1.3 pounds of tantalite per tonne of ore. Wodgina mining was stopped, a new general manager, C. O. Newey, was appointed and the company went into liquidation. Basil Buller-Murphy, Deborah's spouse, wrote to her after this news "It looks as though the tantalite business is likely to fold up. Well, if it does piss it good by. At least North West Tantalum was a fairy-god mother in discharging liabilities. If a company can not extract a profitable return from Wodgina these days it is no avenue for the efforts of individuals however enthusiastic -- and your enthusiasm should be about thread bare by now. (Buller-Murphy 1955)."

The leases were relinquished and the property was repegged by L. J. Wilson. He mined the property by himself for alluvial tantalite. J. A. Johnston & Son Pty. Ltd. purchased the Main Tantalite pegmatite from L. J. Wilson in 1960. Circa May 1967, Johnston & Son sold a 90% interest in Wodgina to Avela Pty. Ltd. who sold a 90% option on the property to Goldrim Mining in 1968 (Collver 1980, in WAMEX open file report 3144).

(Continued on page 5)

Pan West's mining method was to excavate the entire pegmatite and crush it into very fine grained, silt-sized pieces. With the assistance of water and gravity, the tantalite was separated from the lighter pegmatite minerals. The remaining silt was dumped. By 1993, the entire north end (North Pit of Sweetapple 2000, p. 41) of the pegmatite was removed and the barren quarry partially filled in. In 1994, a few small areas between the northern end and the South Pit (Sweetapple 2000, p. 41), just north of the mine office and mill were mined. For collectors, only the pre-1989 workings and pegmatite adjacent to the mine office remain accessible. With the depletion of the Main Tantalite pegmatite in 1995, mining switched to the Mt. Cassiterite mine (formerly known in 1905 as ML 84), about 2 kilometres south-southwest of the south end of the Main Tantalite vein.

The Main Tantalite vein during its resource life played important role as a major source of beryllium and tantalum during World War II. It will also probably be remembered as the third largest tantalite deposit in Western Australia after Greenbushes and Mt. Cassiterite. Mineralogically its life is not yet over. Sufficient material exists in collections and still in the pegmatite for numerous studies.

Mark Jacobson

MINERALOGICAL SOCIETY OF WESTERN AUSTRALIA (INC)

Office Bearers:

| President: | Peter Clark |
|-----------------------|---|
| | 34 McDonald Street, |
| | Como, W.A.6152 Tele. (08) 93681778 (h) |
| Vice President: | Jeffrey Manners |
| | 58 Berkley Road, |
| | Marangaroo, W.A. 6064 Tele. (08) 93428648 (h) |
| Secretary Treasurer: | John Reeve |
| | 13 Buchan Place, |
| | Hillarys, W.A., 6025 Tele. (08) 9401 1963 (h) |
| Field Trip Coordinate | or: Mark Jacobsen |
| | 11 Robin Street, |
| | Menora, W.A. 6050 Tele. (08)92728792 (h) |
| Committe Member: | Ted Fowler |
| | 112 Marine Terrace |
| | Marmion, W.A.6020 |

Membership Details:

| Joining Fee | \$5.00 |
|-----------------|---------|
| Adult Member | \$20.00 |
| Newsletter only | \$15.00 |

An application form for membership can be obtained by writing to: -The Secretary, J. Reeve Mineralogical Society of Western Australia (Inc) 13 Buchan Place, Hillarys, W.A. 6025

Ordinary meetings of the Society are held on the Ist Wednesday in February, April, June, August, October and December in the **W.A.Lapidary and Rock Hunting Club rooms 31 Gladstone Street Rivervale**, commencing at 7.30pm. The January meeting will involve social activities at a time and place to be notified.

Visitors are most welcome

Newsletter of the Mineralogical Society of Western Australia

13 Buchan Place, Hillarys, 6025 Western Australia, Australia

Material used in this Newsletter is subject to copyright, however unless specifically reserved, material may be used in Australian Mineralogical Society Newsletters with appropriate acknowledgement of the author and source.