

PROCEEDINGS
OF THE
MINERALOGICAL SOCIETY
(1955)

EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 27 January 1955, at 3 p.m.*

Prof. L. HAWKES, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Peter Joseph Adams, Karl F. Chudoba, Richard Vincent Dietrich, Charles Fallows Tozer, Jiri Konta, Alice Elizabeth Moore, and William Asher Watters.

The deaths of Mr. Charles Lessner and Prof. Charles Palache were reported.

The resignation of Col. A. R. O. Williams was accepted.

The Council agreed to the reinstatement of Mr. K. E. Seal.

Reports were received from the Treasurer and the Editor, and from the Clay Minerals Group.

The Council approved the appointment of Dr. G. H. Francis as Custodian of Stock.

GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 27 January 1955, at 5 p.m.*

Prof. L. HAWKES, President, in the Chair.

Fifty-seven Members and eight Visitors were present.

The elections of seven Ordinary Members of the Society provisionally made by the Council were confirmed.

The following exhibit was shown:

A chuck to facilitate the cutting of oriented sections of rocks or minerals: by Dr. A. T. J. Dollar.

The following papers were read and discussed:

1. Space lattices of the crystalline elements in relation to the periodic table: by Dr. S. I. Tomkeieff (vol. 30, p. 625).

2. An accurate determination of the cell dimensions of bultfonteinite, $\text{Ca}_4\text{Si}_2\text{O}_{10}\text{H}_6\text{F}_2$: by Dr. H. D. Megaw and Miss C. H. Kelsey (vol. 30, p. 569).

3. The phase relations in sanidine- and orthoclase-perthites: by Dr. J. V. Smith and Mr. W. S. MacKenzie.

4. The structures of the plagioclase feldspars. VI. Natural intermediate plagioclases: by Dr. P. Gay (vol. 31, p. 21).

5. The structural formula of a hydrous amphibole: by Dr. G. D. Nicholls and Dr. J. Zussman (vol. 30, p. 717).

6. The varying role of water in silicates as illustrated by hydrous anthophyllite; and on the correlation of physical properties and composition in multivariate systems as illustrated by anthophyllite: Dr. G. H. Francis and Dr. M. H. Hey (vol. 30, p. 709 and vol. 31, p. 69).

The following papers were taken as read:

1. Dehydration of the montmorillonite minerals: by Dr. R. Greene-Kelly (vol. 30, p. 604).

2. The structure of wadeite: by Mr. D. E. Henshaw (vol. 30, p. 585).

3. Australites from Harrow, Victoria: by Mr. George Baker (vol. 30, p. 596).

4. The thermal reactions of nacrite and the formation of metakaolin, γ -alumina, and mullite: by Dr. G. W. Brindley and Mr. K. Hunter (vol. 30, p. 574).

EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 24 March 1955, at 3.15 p.m.*

Prof. L. HAWKES, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Michael George Bown, George Anthony Lobjoit Johnson, Charles John Edgar Kempster, Kurt Servos, Charles Winthrop Spencer, Stuart Ross Taylor, and Brian Raymond Young.

Reports were received from the Treasurer and the Editor, and from the Clay Minerals Group. The Treasurer presented the audited accounts for 1954, which were approved (vol. 30, pp. lxxii-lxxv).

Nominations for election to the Council were considered. The following Ordinary Members were due to retire: Mr. P. M. Game, Dr. A. G.

MacGregor, Dr. S. R. Nockolds, and Dr. F. C. Phillips. The following were proposed for election at the Anniversary Meeting in November 1955: Dr. L. H. Ahrens, Dr. M. H. Hey, Mr. J. E. T. Horne, and Dr. R. C. Mackenzie.

GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 24 March 1955, at 5 p.m.*

Prof. L. HAWKES, President, in the Chair.

Forty-seven Members and nine Visitors were present.

The elections of eight Ordinary Members of the Society provisionally made by the Council were confirmed.

The following papers were read and discussed:

1. Isokite, CaMgPO_4F , a new mineral from Northern Rhodesia: by Mr. T. Deans and Mr. J. D. C. McConnell, with a chemical analysis by Mr. R. Pickup (vol. 30, p. 681).

2. Grovesite, the manganese-rich analogue of berthierine: by Dr. F. A. Bannister, Dr. M. H. Hey, and Dr. W. Campbell Smith (vol. 30, p. 645).

3. Additional notes on rhodonite deposits in Devonshire: by Sir Arthur Russell.

4. The powder patterns and lattice parameters of soda-rich plagioclases: by Dr. J. V. Smith (vol. 31, p. 47).

5. A first attempt at a determination of feldspars by activation analysis: by Dr. J. E. S. Bradley and Dr. Olive Bradley (vol. 31, p. 164).

The following papers were taken as read:

1. Wairakite, the calcium analogue of analcime, a new zeolite mineral: by Mr. A. Steiner (communicated by Dr. D. S. Coombs) (vol. 30, p. 691).

2. X-ray observations on wairakite and non-cubic analcime: by Dr. D. S. Coombs (vol. 30, p. 699).

3. The effect of isomorphous substitutions on the intensities of (001) reflections of mica- and chlorite-type structures: by Mr. G. Brown (vol. 30, p. 657).

4. Projector for interference figures and for direct measurement of $2V$: by Mr. H. C. G. Vincent (communicated by the Editor) (vol. 30, p. 666).

5. The constitution of voltzite: by Dr. A. A. Moss.

EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 9 June 1955, at 3.15 p.m.*

Prof. L. HAWKES, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Geoffrey Prytherch Campbell Chambers, Robert Charles Devries, Hilary James Harrington, Kenneth Frederick Gordon Hosking, Zoran Maksimovic, Stephen Clive Robinson, George Ryback, Joseph Henry Simcock, Alfred Steiner, Herbert Cubitt Gostling Vincent, and William Stewart Wise.

The death of Dr. R. W. Pocock was reported.

The names of M. J. Barber, P. M. J. Canal, G. C. Clark, A. F. Rogers, and Liang-ho-Su were removed from the list of members for non-payment of subscriptions.

Reports were received from the Treasurer and the Editor, and from the Clay Minerals Group.

The Council authorized the preparation of a new, revised edition of the monograph 'X-ray identification and crystal structures of clay minerals'.

The Council decided that on the resignation of Dr. L. J. Spencer from the Editorship of the *Mineralogical Magazine*, as from 31 December 1955, there should be separate Editors for the Magazine and for *Mineralogical Abstracts*, with a panel of Referees to assist the Magazine Editor.

The gratitude of the Council was expressed to Sir Arthur Russell for his most generous offer to bequeath to the Society a valuable collection of early works on mineralogy and mining, with special reference to Cornwall.

The following dates for meetings in 1956 were agreed, subject to approval by the Council of the Geological Society: Thursdays, 26 January, 22 March, 7 June, and 1 November.

GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 9 June 1955, at 5 p.m.*

Prof. L. HAWKES, President, in the Chair.

Forty-one Members and nine Visitors were present.

The elections of eleven Ordinary Members of the Society provisionally made by the Council were confirmed.

The following papers were read and discussed:

1. Okenite and nekoite (a new mineral): by Mr. J. A. Gard and Dr. H. F. W. Taylor (vol. 31, p. 5).
2. X-ray study of raspite (monoclinic PbWO_4): by Dr. Rosemary Shaw and Dr. G. F. Claringbull.
3. Cerulite ($\text{CuAl}_4(\text{AsO}_4)_2(\text{OH})_8 \cdot 4\text{H}_2\text{O}$) from Wheal Gorland, Gwenep, Cornwall: by Sir Arthur Russell and Dr. G. F. Claringbull.
4. The convergent lead ages of the earth's oldest monazites and uranites (Rhodesia, Manitoba, Madagascar, and Klerksdorp, Transvaal): by Dr. L. H. Ahrens.
5. Trace element distribution in a garnet-chlorite rock from Foel Ddu, near Harlech, Merionethshire: by P. A. Mohr (communicated by Dr. G. D. Nicholls).

The following paper was taken as read:

1. Twentieth list of new mineral names: by Dr. L. J. Spencer (vol. 30, p. 727).

EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 3 November 1955, at 3 p.m.*

Prof. L. HAWKES, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Donald Clive Armsworth, Kenneth Cooper Branscombe, Andrew Sigmund de Endredy, Ronald Keith Harrison, Alan Algarth Hodgson, Duncan McKie, Carl Richard Robbins, and Elias Rudolph Schmidt.

The deaths of Mr. G. W. Grabham and Mr. G. E. Steel were reported.

The resignations of Mr. I. S. Double, Mr. T. H. H. V. Bevis-Smith, and Dr. R. A. Chalmers were accepted.

The name of F. H. S. Vermaas was removed from the list of members for arrears of subscription. The election of J. F. Truswell was declared void, in accordance with bye-law 7.

Report were received from the Treasurer and the Editor, and from the Clay Minerals Group.

Mr. J. E. T. Horne and Mr. C. S. Brown were appointed auditors of the Society's accounts for the year ending 31 December 1955.

In view of the pending resignation of Dr. L. J. Spencer from the

[continued on p. 1

MINERALOGICAL INCOME AND EXPENDITURE ACCOUNT

A. GENERAL

1954	INCOME	£	s.	d.	£	s.	d.
£							
	Members' subscriptions—						
	Annual subscriptions	1052	16	3			
	Entrance fees	36	0	0			
1100					1088	16	3
	<i>Mineralogical Magazine</i> —						
	Advertisement fees	135	10	9			
	Sales by publisher	2481	17	5			
	Sales by custodian of stock	22	17	8			
2218					2640	5	10
	Investment revenue—						
	Interest on investments	159	13	11			
	Post Office Savings Bank interest	55	17	0			
167					215	10	11
	<i>Grant from Royal Society (Parliamentary Grant-in-aid for scientific publications)</i>						
750							
	Clay Minerals Group—						
	<i>Clay Minerals Bulletin</i> :						
	Subscriptions	71	12	6			
	Sales, including authors' reprints	99	18	7			
198					171	11	1
334	Clay Minerals Monograph, sales				227	6	6
35	<i>Glossary of Clay Trade Names</i> , sales				12	7	6

72 <i>Balance, being excess of expenditure over income for the year</i>	— — —
<u>£4874</u>	<u>£4355 18 1</u>

B. MIERS

	£	s.	d.
19 Investment revenue	17	12	10
3 Sundry revenue	1	12	0
<u>£22</u>	<u>£19</u>	<u>4</u>	<u>10</u>

SOCIETY

FOR THE YEAR ENDED 31 DECEMBER 1955

FUND

1954	EXPENDITURE	£	s.	d.	£	s.	d.
	<i>Mineralogical Magazine-</i>						
	Nos. 228-231:						
	Printing	1537	6	2			
	Illustrations	50	18	7			
	Authors' reprints	90	8	10			
	Distribution	42	0	5			
1637					1720	14	0
	Editorial expenses:						
	Clerical assistance and office expenses	46	6	7			
	Travelling expenses	37	3	10			
	Editor's honorarium	50	0	0			
50					133	10	5
	Meeting expenses-						
	Notices of meetings	80	5	3			
	General expenses in connexion with meetings	26	8	0			
88					106	13	3
	General expenses-						
	Office rental and house expenses, October-December	83	0	5			
	Clerical assistance	452	3	8			
	Printing and stationery	11	14	0			
	Postage and telephone	43	14	8			
	Sundry office expenses	59	0	3			
522					649	13	0
	Miscellaneous charges-						
	Purchase of office furniture and equipment	291	4	4			
	Depreciation of office furniture and equipment	45	19	2			
17					337	3	6
2000	<i>Transfer to Publications Fund</i>						
	Purchase of stock (£537, 10s. 7d. 4% Consolidated Stock 1957, and						
	£506, 4s. 6d. 4% Funding Stock 1960-90)				1000	0	0
---	Clay Minerals Group-						
	<i>Clay Minerals Bulletin:</i>						
	Printing Bulletins 12 and 13 (excess over original estimate)	205	0	0			
	Reprinting charges (Bulletins 1-2 and 8)	84	5	11			
418					289	5	11
73	Printing <i>Glossary of Clay Trade Names</i>						
	General expenses:						
	Meeting expenses	7	2	0			
	Office expenses	49	18	4			
69					57	0	4
	<i>Balance, being excess of income over expenditure for the year</i>				61	17	8
<u>£4874</u>					<u>£4355</u>	<u>18</u>	<u>1</u>

MEMORIAL FUND

	£	s.	d.
Bank charges	0	2	6
22 <i>Balance, being excess of income over expenditure for the year</i>	19	2	4
<u>£22</u>	<u>£19</u>	<u>4</u>	<u>10</u>

J. E. T. HORNE }
C. S. BROWN } Auditors.

JAMES H. TAYLOR, Hon. Treasurer.

13 March 1956.

MINERALOGICAL
BALANCE SHEET AS AT
A. GENERAL

1954 £	LIABILITIES	£ s. d.	£ s. d.
	Fund Account—		
	Balance per Balance Sheet at 31 December 1954	5539 18 4	
	Add cost of stock and furniture purchased	1291 4 4	
	Excess of income over expenditure for year ended 31 December 1955	61 17 8	
5540	Publications Fund		6893 0 4
2000	Subscriptions, &c., received in advance—		2000 0 0
	Members' subscriptions and entrance fees	70 18 5	
	Subscriptions to <i>Clay Minerals Bulletin</i>	2 0 0	
72	Sundry creditors—		72 18 5
874	Jarrold & Sons, Ltd. (Reprinting 10 numbers of the Magazine)		672 0 0

£8436

£9637 18 9

B. MIERS

	Fund Account—	£ s. d.	£ s. d.
	Balance per Balance Sheet at 31 December 1954	517 7 1	
	Add Excess of income over expenditure for the year ended 31 December 1955	19 2 4	
517			536 9 5
<u>£517</u>			<u>£536 9 5</u>

SOCIETY

31 DECEMBER 1955

FUND

1954	ASSETS	£ s. d.	£ s. d.
£	Office furniture and equipment—		
	Original cost	459 10 8	
	Less depreciation	96 9 2	
118		-----	363 1 6
	Investments (at cost or as valued at 31 December 1951):		
	£2232. 9s. 3½% War Stock 1952	1856 8 6	
	£753. 12s. 11d. 4% Consolidated Stock 1957	694 4 9	
	£606. 4s. 6d. 4% Funding Stock 1960-90	598 5 0	
	£250 3% Savings Bonds 1960-70	216 17 6	
	£1013. 9s. 6d. 3% Savings Bonds 1965-75	916 7 0	
	£100 3% British Transport Stock 1978-88	77 0 0	
	£275 2½% Consolidated Stock	169 2 6	
	£261. 12s. 6d. 3½% Treasury Stock 1977-80	244 8 3	
3773		-----	4772 13 6
	Note:—The total market value of the above investments at 31 December 1955 was £4362. 4s. 1d.		
	Deposits—		
2234	Balance with Post Office Savings Bank		2290 8 6
	Subscriptions, &c., in arrears	£ s. d.	
	Members' subscriptions and entrance fees	119 10 5	
	Less bad debts	11 18 0	
		-----	107 12 5
	Subscriptions to <i>Clay Minerals Bulletin</i>	11 10 0	
110		-----	119 2 5
	Sundry debtors		
	Oxford University Press	1476 4 11	
	Authors for reprints from <i>Clay Minerals Bulletin</i>	2 0 0	
	Purchasers of <i>Clay Minerals Bulletin</i>	45 14 10	
758		-----	1523 19 9
	Cash—		
	Coutts & Co., London	325 4 8	
	Barclays Bank, Harpenden	152 6 7	
	British Linen Bank, Aberdeen	47 10 10	
	Cash in hand, London	25 0 0	
	" Cambridge	10 0 0	
	" Harpenden	4 8 5	
	" Aberdeen	4 2 7	
1493		-----	568 13 1
<u>£8486</u>			<u>£9637 18 9</u>

Note:—The value of the Society's library and stock of publications is not included in the above assets.

MEMORIAL FUND

	£ s. d.
Investments (at cost)—	
439	£504. 17s. 4d. 3½% War Stock 1952
	Note:—The total market value of the above investment at 31 December 1955 was £386. 4s. 5d.
78	Cash—Coutts & Co., London

<u>£517</u>	<u>568 13 1</u>
	<u>£536 9 5</u>

13 March 1956. J. E. T. HORNE } Auditors.
C. S. BROWN }

JAMES H. TAYLOR, Hon. Treasurer.

Editorship of the *Mineralogical Magazine*, the Council, acting under Rule 28, decided to appoint Dr. M. H. Hey Editor of the Journal, Dr. N. F. M. Henry Editor of Abstracts, and Dr. I. D. Muir Assistant Editor of Abstracts, as from 1 January 1956.

The Secretary read the draft of the Annual Report of the Council for the past year, and, with minor alterations, this was approved for presentation to the Society at the ensuing Anniversary Meeting.

GENERAL (ANNIVERSARY) MEETING

*Held in the Apartments of the Geological Society, Burlington House,
London W., 3 November 1955, at 5 p.m.*

Prof. L. HAWKES, President, in the Chair.

Fifty-nine Members and seven Visitors were present.

The elections of eight Ordinary Members of the Society provisionally made by the Council were confirmed.

The General Secretary read the following:

ANNUAL REPORT OF THE COUNCIL FOR 1954-5

Membership.—The total membership on 31 October 1955 was 625 against 600 on 31 October 1954. Thirty-seven new members have been elected during the year, three members have resigned, and the names of four members have been removed on account of arrears of subscription. The Society has lost by death four Ordinary Members and one Honorary Member, Prof. C. Palache. On 31 October 1955 the membership consisted of seven Honorary Members and 618 Ordinary Members, of whom 63 are Life Members: 261 members are also members of the Clay Minerals Group.

Meetings.—The total attendance at the four general meetings held during the session 1954-55 was 214 members and 37 guests, giving an average of 63 per meeting. At these meetings 21 papers have been read; 15 have been taken as read, and 2 exhibits have been shown.

At two meetings of the Clay Minerals Group, in London and in Exeter, 21 papers were read and the average attendance was 50.

Publications.—Four numbers of the *Mineralogical Magazine* (nos. 227-230) have been issued during the year, containing the Proceedings in 14 pages (no. 229), 29 papers in 266 pages with 3 plates and 73 text figures, and 724 abstracts in 214 pages. One number of the *Clay Minerals Bulletin* (no. 12) appeared during the year.

The monograph on X-ray identification and crystal structures of clay minerals is now out of print, and a second revised edition has been authorized. A second monograph on the differential thermal investigation of clays, edited by Dr. R. C. Mackenzie, is in preparation.

Financial.—The accounts for the calendar year 1954 are published in the June (1955) number of the Magazine. The excess of assets (exclusive of the Society's library and stock of publications) over liabilities at 31 December 1954 was £6057. 5s. 11d., against £6107. 9s. 11d. at the close of 1953.

During 1954 the Society's expenditure from the General Fund exceeded income by £72. 1s. 3d. A sum of £2000 was transferred to a publications fund to meet rising costs of production of the Society's publications and in particular the cost of the monograph dealing with the differential thermal investigation of clays, together with reprinting charges of back numbers of the *Mineralogical Magazine* and *Clay Minerals Bulletin*.

Three numbers of the *Mineralogical Magazine* have been issued since the beginning of the current year, two of which have cost a total of £849. 18s. 6d. (inclusive of authors' reprints).

The balances at Bankers and in the Post Office Savings Bank on 31 October 1955 were: General Fund £4063. 17s. 5d., Miers Memorial Fund £88. 7s. 2d.

General.—After a search of several years, during which time the Society's office has been accommodated, rent free, by the Geological Society of London, the Council has now succeeded in obtaining a seven years' lease of the third floor of 41 Queen's Gate, London, S.W. 7, the house of the Royal Entomological Society of London. These premises will accommodate, besides the office, the Society's small library and the stock of the *Mineralogical Magazine* at present at the British Museum (Natural History). The Society is greatly indebted to the Geological Society of London for the use of an office from 1952.

On the proposal of Dr. A. T. J. Dollar, seconded by Mr. E. A. Jobbins the adoption of the Annual Report was carried unanimously.

A vote of thanks to the Geological Society for the use of the apartments during the past session was proposed by Prof. C. E. Tilley, seconded by Dr. E. A. Vincent, and carried with acclamation.

The President read the following list of Officers and Council elected for the session 1955-6 in accordance with bye-law 20:

President: Prof. L. Hawkes, D.Sc., F.R.S.

Vice-Presidents: Dr. F. A. Bannister, M.A., Sc.D., F.Inst.P.; Dr. F. Dixey, C.M.G., O.B.E., D.Sc., M.I.M.M., F.G.S.

Treasurer: Prof. J. H. Taylor, M.A., B.Sc., Ph.D., F.G.S.

General Secretary: Dr. G. F. Claringbull, B.Sc., Ph.D., F.G.S.

Foreign Secretary: Dr. L. J. Spencer, C.B.E., M.A., Sc.D., F.R.S.

Editor of the Journal: Dr. L. J. Spencer, C.B.E., M.A., Sc.D., F.R.S.

Ordinary Members of Council:

Dr. L. H. Ahrens, M.A., D.Sc., F.R.I.C.	Mr. B. W. Anderson, B.Sc., F.C.S.
Mr. S. U. Bowie, B.Sc.	Mr. T. Deans, M.A., F.G.S.
Prof. W. A. Deer, M.Sc., Ph.D., F.G.S.	Prof. K. C. Dunham, D.Sc., Ph.D., S.D., M.I.M.M., F.G.S.
Dr. M. H. Hey, M.A., D.Sc.	Mr. J. E. T. Horne, M.A., F.G.S.
Dr. R. C. Mackenzie, B.Sc., Ph.D., A.R.I.C.	Mr. L. A. A. Thomas, B.Sc., F.Inst.P.
Dr. E. A. Vincent, M.A., B.Sc., Ph.D., A.R.I.C., F.G.S.	Dr. M. K. Wells, M.Sc., Ph.D., F.G.S.

A vote of thanks to the retiring Members of Council was proposed by Dr. A. F. Hallimond, and seconded by Dr. P. Gay.

The following exhibits were shown:

1. An attachment for high-temperature single-crystal X-ray work: by Dr. H. F. W. Taylor and Miss L. S. Dent.

2. Rocks collected on Rockall, 1955: by H. M. Geological Survey.

The following papers were read and discussed:

1. The characterisation of serpentine minerals by X-ray diffraction: by Mr. E. J. W. Whittaker and Dr. J. Zussman (vol. 31, p. 107)

2. Stannite and isostannite: by Dr. G. F. Claringbull and Dr. M. H. Hey.

3. Some new occurrences of gonnardite: by Dr. M. H. Hey, Dr. H. Meixner, and Dr. A. A. Moss.

4. The orientation of the pericline twin lamellae in triclinic alkali feldspars: by Dr. W. S. MacKenzie (vol. 31, p. 41).

The following paper was taken as read:

1. Re-examination of the mineral tuhualite: by Prof. C. Osborne Hutton (vol. 31, p. 96).