

# PROCEEDINGS OF THE MINERALOGICAL SOCIETY (1964)

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## EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London W. 1, 30 January 1964, at 3 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Michael Patrick Atherton, Russell Black, Hugh Victor Eales, Ian Lethbridge Gibson, Odd Gjems, Dmitry Pavlovich Grigoriev, Paul Henderson, Heinrich Dieter Holland, Neil Taylor Livesey, Alec Livingstone, William David McRitchie, Kevin John O'Reilly, Michael John Pink, Alexander Sergeievich Povarennykh, Frederick John Sawkins, Syed Fuzail Ahmed Siddiqui, Ruth Caroline Taylor.

The resignations of Mr. A. C. Hills, Mr. C. G. Nicholson, and Lt.-Col. E. D. Taylor were accepted.

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

## GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London W. 1, 30 January 1964, at 5 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

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

The following exhibits were shown:

1. Light drilling rigs: by H. I. Drever.
2. Kyanite pseudomorphs after andalusite from Galicia, Spain: by P. Wilkinson.
3. Jarosite from Turf Pits, Grassington Moor, Skipton, Yorkshire: by A. W. G. Kingsbury.

The following papers were read and discussed:

1. Olivine composition determination with small-diameter X-ray powder cameras: by J. L. Jambor and C. H. Smith (vol. 33, p. 730).

2. A study of the hydrothermal growth of ruby: by J. Butcher and E. A. D. White (vol. 33, p. 974).

3. The thermal decomposition of crocidolite: by A. A. Hodgson, A. G. Freeman, H. F. W. Taylor, V. C. Farmer, and B. D. Mitchell (vol. 35, p. 5).

The following papers were taken as read:

1. Formation of X-ray amorphous and crystalline aluminium hydroxides: by Pa Ho Hsu and T. F. Bates (vol. 33, p. 749).

2. Direct stereographic determination of optic axes from a few extinction measurements: a progressive elimination technique: by F. E. Tocher (vol. 33, p. 780).

3. A zinc phosphate analogue of analcime: kehoeite: by Duncan McConnell (vol. 33, p. 799).

4. Statistical analysis of X-ray data for olivine: by F. P. Agterberg (vol. 33, p. 742).

5. Rhombohedral molybdenite from the Minas de Panasqueira, Beira Baixa, Portugal: by A. H. Clark (vol. 35, p. 69).

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#### EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London W. 1, 12 March 1964, at 3 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Fred Barker, David Stuart Buist, Fedor Chukhrov, Ursula Moser Cowgill, John Edward Guest, Eduard Gottlieb Haldemann, Henry Oostenwald Albertijn Meyer, Michael Stanley Money, Ian Parsons, and David Robert Wones.

The deaths of Mr. Robert S. Green, Dr. John Raymund Foggan Joyce, Dr. Charles Taylor Trechmann, and Sir Arthur Edward Ian Montagu Russell were reported.

The resignations of Dr. G. Kullerud and Prof. I. Oftedal were accepted, and the reinstatement of Mr. P. H. Ribbe agreed to.

Mr. P. G. Embrey and Dr. R. A. Howie were appointed auditors of the Society's accounts for the period 1 January 1963 to 30 June 1964.

Reports were received from the Treasurer, the Editors, the Publications Committee, and the Clay Minerals Group.

The President was nominated as the Society's voting delegate to the forthcoming I.G.C. meeting in Delhi.

### GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London W. 1, 12 March 1964, at 5 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

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

The following exhibits were shown:

1. Jarosite from the Dent fault at Hartley Birkett, Kirkby Stephen, Westmorland, Plumbojarosite from Turf Pits, Grassington Moor, Skipton, Yorkshire, and Argentojarosite from West Turf Pits, Grassington Moor: by A. W. G. Kingsbury.

2. A hydraulic stage: an aid to counting mineral grains: by D. W. Humphries (vol. 33, p. 918).

The following papers were read and discussed:

1. Spurrite from northern Coahuila, Mexico: by A. K. Temple and E. Wm. Heinrich (vol. 33, p. 841).

2. The thermal disintegration of crocidolite in air and in vacuum by J. H. Patterson (vol. 35, p. 31).

3. Arthurite, a new copper-iron arsenate from Cornwall: by R. J. Davis and M. H. Hey (vol. 33, p. 937).

4. The oriented transformation of manganite during heat treatment: by D. R. Dasgupta (vol. 35, p. 131).

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### JOINT MEETING WITH THE INSTITUTION OF MINING AND METALLURGY

*Held in the Apartments of the Geological Society, Burlington House,  
London W. 1, 23 April 1964, at 4 p.m.*

Prof. J. H. TAYLOR, President of the Mineralogical Society and Vice-President of the Institution of Mining and Metallurgy, in the Chair

The following exhibits were shown:

1. Applications of electron-probe microanalysis in the mineral industry: by T. K. Kelly and A. P. Millman.

2. Illustrations of X-ray microanalysis applied to ore mineralogy: by E. F. Stumpfl and A. M. Clark.

The following papers were read and discussed:

1. Geochemistry and ore mineral parageneses of some Caledonian basic igneous rocks from Sørøy, Northern Norway: by E. F. Stumpfl and B. A. Sturt.

2. Quantitative measurements with the reflecting polarizing microscope: by S. H. U. Bowie and N. F. M. Henry.

3. Optics of pyrrhotine: by K. von Gehlen and H. Piller.

4. Reflectance techniques in coal petrology and their possible application in ore mineralogy: by D. H. Murchison.

5. Microhardness and deformation characteristics of ore minerals: by A. P. Millman and B. B. Young.

6. Measurement of the spectral reflectivities of manganese oxides: by I. Nichol and R. Phillips (vol. 35, p. 200)

7. The effect of polishing on the reflectivity of pyrite: by A. F. Halli-  
mond and S. H. U. Bowie.

Reflectivity was measured differentially against a Vickers 'Inconel' standard surface in white light for various stages of polishing. With  $3\ \mu$  diamond, pyrite was several units lower,  $R$  for various faces being in the order  $(111) < (110) < (100)$ . With  $0\text{--}1\ \mu$  diamond followed by  $\gamma$ -alumina, the values converged to a constant and equal value, within about  $\frac{1}{2}$  unit, but only after several 10-minute periods on cloth. Silicone lubricant gave the same value as water.  $R$  for pyrite from 12 localities agreed within about 1 unit.

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## GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London W. 1, 7 May 1964, at 4 p.m.*

The following papers were read and discussed:

1. Mineral assemblages, fluid inclusions, and the composition of hydrothermal ore-forming fluids: by H. D. Holland.

2. Strontium isotope abundance studies and rubidium-strontium age determinations on Tertiary igneous rocks from the Isle of Skye: by S. Moorbath and J. D. Bell.

3. The isotopic constitution of strontium in some Hawaiian rocks: by E. I. Hamilton.

4. Strontium isotopes in the Garabal Hill complex: by C. P. Summerhayes.

5. Common strontium in plagioclase feldspars from some basic igneous rocks: by J. R. Butler and W. Skiba.

6. Preliminary investigations into the sorption of boron by clay minerals: by M. E. L. Fleet.

### EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House, London W. 1, 28 May 1964, at 3 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Lilabati Bhattacharjee, Siva Brata Bhattacharjee, Francis De Buda, Essam El-din El-Hinnawi, Royston William Dunlop Elwell, Michael Edward Lewis Fleet, Richard Alexander Lovatt, Zaccheus Akinola Makanjuola, George Robert McCormick, Mohamed Abdel Hamid Naga, Theodor Sorgenfrei, Roger Guillaume Jean Strens, and Asal Jaffar Ogli Sultanov.

The death of Dr. M. C. Bandy, Honorary Member, was reported.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, the Geochemical Group, the Ore Mineralogy Group, and the sub-committee to consider amendments to the Bye-Laws.

### GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House, London W. 1, 28 May 1964, at 5 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

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

The following exhibit was shown:

Strontianite and strontianite-rich rocks from Kangankunde Hill, Nyasaland: by T. Deans.

The following papers were read and discussed:

1. Deerite, Howieite, and Zussmanite, three new minerals from the Franciscan of the Laytonville district, Mendocino Co., California: by S. O. Agrell, M. G. Bown, and D. McKie.
2. Conical extinction curves: a new universal stage technique: by N. Joel and F. E. Tocher (vol. 33, p. 853).
3. An electron-microscope investigation of peristerite plagioclases: by S. G. Fleet and P. H. Ribbe (vol. 35, p. 165).
4. Feldspars and pyroxenes from the charnockite series of Visakhapatnam area, Andhra Pradesh, India: by M. S. Murty.

The following papers were taken as read:

1. A new universal stage technique: the determination of  $2V$  when neither optic axis is directly observable: by F. E. Tocher (vol. 33, p. 1038).
2. Amphiboles in alkaline rocks of Koraput, Orissa: by M. K. Bose (vol. 33, p. 912).
3. Epidotes of the Borrowdale Volcanic rocks of central Borrowdale: by R. G. J. Strens (vol. 33, p. 868).
4. Wairauite, a new cobalt-iron mineral: by G. K. Challis and J. V. P. Long (vol. 33, p. 942).
5. Mboziite, a new sodic amphibole end-member: by P. W. G. Brock, D. C. Gellatly, and O. von Knorring (vol. 33, p. 1057).

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## GENERAL MEETING

*Held in the Geology Department of Bristol University, 17 September 1964,  
at 2.30 p.m.*

The following papers were read and discussed:

1. Pumpellyite in Snowdonian soils and rocks: by D. A. Jenkins and D. F. Ball (vol. 33, p. 1093).
2. A chondrodite-humite-spinel marble from Sørfinnset, near Glomfjord, northern Norway: by R. Bradshaw and B. E. Leake (vol. 33, p. 1066).
3. X-ray studies of some growth fabrics: by R. Bradshaw and F. C. Phillips.
4. Topotaxy in the system groutite-ramsdellite-pyrolusite: by I. B. Smith and L. D. Glasser.

5. The geochemistry of Upper Cambrian Dolgelly beds near Criccieth, Caernarvonshire: by T. W. Bloxam and N. B. Price.

6. The petrochemistry of some Lewisian granitic rocks: by D. R. Bowes.

7. The thermal decomposition of amosite: by A. A. Hodgson, A. G. Freeman, and H. F. W. Taylor.

The following papers were taken as read:

1. Theory of immiscibility in mineral systems: by Robert F. Mueller (vol. 33, p. 1015).

2. The transformation of groutite ( $\alpha$ - $\text{MnOOH}$ ) into pyrolusite ( $\text{MnO}_2$ ): by J. Lima-de-Faria and A. Lopes-Vieira (vol. 33, p. 1024).

3. Archimedean polyhedra as the basis of tetrahedrally-coordinated frameworks: by Paul B. Moore and Joseph V. Smith (vol. 33, p. 1008).

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## EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House, London W. 1, 5 November 1964, at 2.30 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Shigenori Aomine, Michael Stuart Barratt, Philippa Margaret Black, Jose Bosch-Figueroa, Victor Colin Farmer, Ian Haugh, Godfrey Hinga, Jean Toshimichi Iiyama, Robert Louis Ledoux, Donald Ivor John Mallick, Peter Folson McFarlin McFarlin, Joaquin Montoriol, William Charles Morgan, and Stirling Edward Shaw.

The following resignations were accepted: I. M. Gray, E. J. Wayland, and R. J. Wakelin, and the election of K. O'Reilly was declared null and void.

The death of Mr. W. T. Harry was reported.

Reports were received from the British Committee of Management of Mineralogical Abstracts, the Publications Committee, the Geochemistry Committee, the Treasurer, the Editors, and the Clay Minerals Group. The recommendations of the British Committee of Management of Mineralogical Abstracts were approved subject to the agreement of the American Committee.

## ANNIVERSARY MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W. 1, 5 November 1964, at 5 p.m.*

Prof. J. H. TAYLOR, President, in the Chair

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

The General Secretary read the following:

## ANNUAL REPORT OF THE COUNCIL FOR 1963-64

*Membership.* The total membership on 31 October 1964 was 861 against 816 on 31 October 1963. Fifty-five new members have been elected during this year, four members have resigned, and the Society has lost by death five Ordinary Members and one Honorary Member. On 31 October 1964 the membership consisted of 8 Honorary Members and 853 Ordinary Members, of whom 71 are Life Members. 381 members are also members of the Clay Minerals Group.

*Meetings.* During the session 1963-64 there have been four general meetings in London, one general meeting in Bristol (with a field excursion), one special meeting on geochemical topics in London (sponsored by the Committee on Geochemistry), and one joint meeting with the Institution of Mining and Metallurgy in London (sponsored by the Committee on Ore Mineralogy). Attendance for the joint meeting was 80 members and guests, and averaged 48 members and guests at the other meetings. Thirty-six papers were read, 18 papers taken as read, and 13 exhibits shown.

At two meetings of the Clay Minerals Group held in London and Nottingham, 16 papers were read and the average attendance was 35.

*Publications.* Three numbers of the *Mineralogical Magazine* have been issued during 1964, and the fourth (December 1964) is expected in late December 1964. The four numbers (264-267) will contain 46 papers, 7 book reviews, and 122 text figures in 434 pages, also the topographical and alphabetical indexes.

The volume of the Magazine dedicated to Professor C. E. Tilley (vol. 34) will be published in February 1965.

Four numbers of *Mineralogical Abstracts* (including the December 1963 number) were published during the year 1964; they comprise 2867 items (abstracts, references by title only, and book notices) in 348 pages. The complete text of volume 16, 1963-64, contains 5696 items in 670 pages; the General Index, which forms the December number of volume 16, is in preparation. It is proposed that volume 17, 1965-66, should consist of eight quarterly numbers plus a General Index.

Two numbers (30 and 31) of the *Clay Minerals Bulletin* have been issued during the year.

*Financial.* The Society has changed its financial year, which now ends on 30 June instead of 31 December. The accounts for the eighteen months to 30 June 1964 are published together with this report. The excess of assets (exclusive of the Society's library and stock of publications) over liabilities at 30 June 1964 was £8860. 17s. 5d. compared with £6791. 18s. 4d. at the close of 1962.

Three numbers of the *Mineralogical Magazine* for 1964 have appeared, two of which cost £1453. 7s. 6d.; also three numbers of *Mineralogical Abstracts*, two of which have cost £1860. 11s. 6d.

Sales of publications so far during 1964 are as follows: *Mineralogical Magazine*



£2708. 7s. 8d.; *Mineralogical Abstracts* £2322. 5s. 4d.; X-ray Monograph £1134. 4s. 6d.; and D.T.A. Monograph (reprinting) £5. 8s. 3d.

The balances of the Society's Bankers and in the Post Office Savings Bank on 31 October 1964 were: General Fund £5178. 18s. 1d., Miers-Spencer Memorial Fund £90. 16s. 11d., *Mineralogical Abstracts* Fund £100.

After the adoption of the Annual Report, a vote of thanks to the Geological Society for the use of their rooms was carried with acclamation.

A number of alterations to the Bye-laws, proposed by Council, were put to the meeting and adopted *nem. con.*; the amended Bye-laws are printed on pp. ix to xiv of this issue.

The President read the list of Officers and Council elected for the session 1964-5:

*President:* Prof. J. H. Taylor  
*Vice-Presidents:* Prof. W. A. Deer; M. H. Hey  
*Treasurer:* A. F. Seager  
*General Secretary:* J. R. Butler  
*Foreign Secretary:* W. Campbell Smith  
*Editor of the Mineralogical Magazine:* M. H. Hey  
*Editor of the Mineralogical Abstracts:* J. Phemister

*Ordinary Members of Council*

M. H. Battey	T. W. Bloxam
S. H. U. Bowie	T. Deans
P. Gay	R. A. Howie
D. G. Murchison	R. W. B. Nurse
R. Phillips	Prof. F. H. Stewart
E. F. Stumpfl	Prof. E. A. Vincent

A vote of thanks to the retiring Vice-President and Ordinary Members of Council was proposed and carried with acclamation.

The following exhibit was shown:

Beryllium minerals new to Britain: chrysoberyl, rhodizite, beryllonite, milarite, and eudidymite, all from the Meldon aplite quarries, near Okehampton, Devon: by A. W. G. Kingsbury.

The following papers were read and discussed:

1. Mineralogy of the British evaporites: by Prof. F. H. Stewart (vol. 34, p. 460).
2. Polythermal metamorphism of limestones at Kilchoan, Ardnamurchan: by S. O. Agrell (vol. 34, p. 1).
3. The calciferous and alkali amphiboles: by R. Phillips (vol. 33, p. 1097).

[continued on p. lxiv]

# MINERALOGICAL INCOME AND EXPENDITURE ACCOUNT

## A. GENERAL

1962 £	INCOME	£ s. d.	£ s. d.
	Members' subscriptions—		
	Annual subscriptions . . . . .	2003 4 6	
	Entrance fees . . . . .	71 18 0	
1152	<i>Mineralogical Magazine</i> —		
	Advertisement fees . . . . .	278 4 11	
	Sales . . . . .	6553 18 8	
2781	Investment revenue—		6832 3 7
	Interest on investments . . . . .	367 0 3	
	Post Office Savings Bank interest . . . . .	32 7 3	
262	Sundry income . . . . .		399 7 6
1	Clay Minerals Group—		
	<i>Clay Minerals Bulletin</i> : Subscriptions . . . . .	891 6 11	
	Sales, including authors' reprints . . . . .	652 5 0	
309	Clay Minerals Monographs: Sales—2nd ed. <i>X-ray Identification and Crystal Structures of Clay Minerals</i> . . . . .	2170 18 0	
	<i>The Differential Thermal Investigation of Clays</i> . . . . .	193 13 0	
4550	<i>Glossary of Clay Trade Names</i> , sales . . . . .		2364 11 11
0	Interest on Bank Accounts (Harpenden and Cambridge) . . . . .		1 17 6
5	Advertisements . . . . .		1 8 1
	Other income . . . . .		41 6 0
			1 18 1
£9060			£13337 18 9

## B. MIERS-SPENCER

£	Investment revenue . . . . .	£ s. d. 39 8 6
£125		£39 8 6

## C. CLAY MINERALS GROUP

	Interest . . . . .	£ s. d. 3 10 5
	Balance, being excess of expenditure over income . . . . .	19 5 7
£113		£22 16 0

# SOCIETY

FOR THE EIGHTEEN MONTHS ENDED 30 JUNE 1964

## FUND

1962 £	EXPENDITURE	£ s. d.	£ s. d.
	<i>Mineralogical Magazine</i>		
	Nos. 260-265 inclusive:		
	Printing . . . . .	3038 8 2	
	Illustrations . . . . .	226 1 6	
	Author's reprints . . . . .	293 15 8	
	Distribution to members . . . . .	157 7 3	
	Distribution to subscribers . . . . .	166 2 0	
		-----	3881 14 7
2486			
55	Editorial Expenses . . . . .		36 14 3
82	Contribution to <i>Mineralogical Abstracts</i> for Life and Honorary Members . . . . .		184 10 0
0	Subscriptions to <i>International Mineralogical Association</i> 1963 . . . . .		64 15 3
	Meeting expenses—		
	Notices of meetings . . . . .	385 0 9	
	General expenses in connexion with meetings . . . . .	102 9 0	
197		-----	487 9 9
	General expenses—		
	Office rental and house expenses . . . . .	512 6 10	
	Clerical assistance . . . . .	2638 10 0	
	Printing and stationery . . . . .	158 7 6	
	Postage and telephone . . . . .	286 6 7	
	Sundry office expenses . . . . .	70 16 4	
2185		-----	3666 7 3
	Clay Minerals Group—		
	<i>Clay Minerals Bulletin</i> :		
	Printing Bulletins Nos. 28, 29, and 30 and authors' reprints . . . . .	1205 0 3	
	Editorial expenses . . . . .	10 0 0	
482		-----	1215 0 3
2874	Monograph expenses . . . . .		512 1 9
	General expenses:		
	Notices of meetings . . . . .	102 11 0	
	Sundry expenses . . . . .	31 12 2	
	Office and clerical expenses . . . . .	294 11 0	
	Secretary's expenses . . . . .	16 12 0	
	Treasurer's expenses . . . . .	10 0 0	
299		-----	445 16 2
400	Balance, being excess of income over expenditure for eighteen months . . . . .		2843 9 6
<u>£9060</u>			<u>£13337 18 9</u>

## MEMORIAL FUND

£		£ s. d.
	Bank charges . . . . .	2 11 10
125	Balance, being excess of income over expenditure for the year . . . . .	36 16 8
<u>£125</u>		<u>£39 8 6</u>

## FOREIGN DELEGATES EXPENSES FUND

£		£ s. d.
0	Expenses . . . . .	22 16 0
0		-----
=		<u>£22 16 0</u>

2 November 1964 P. G. EMBREY } Auditors  
R. A. HOWIE }

A. F. SEAGER, Hon. Treasurer

# MINERALOGICAL BALANCE SHEET AS AT

## A. GENERAL

1962 £	LIABILITIES	£ s. d.	£ s. d.	£ s. d.
	Fund Account—			
	Balance per Balance Sheet at 31 December 1962	5807 8 3		
	Add Excess of income over expenditure for eighteen months ended 30 June 1964	2843 9 6		
	Composition fee received	60 0 0		
		8285 17 8		
	Less Depreciation on office furniture and equipment	132 6 8		
	Transfer to <i>Mineralogical Abstracts</i> Fund	250 0 0		
	Loss on sale of investments	352 13 5		
		735 0 1		
5808			7975 17 8	
1178	Publications Fund		1177 13 9	
171	Subscriptions, &c., received in advance		0 0 0	
	Sundry creditors			
	Oxford University Press for Magazine No. 264	674 9 0		
	Oxford University Press for Magazine No. 265 (estimated)	680 0 0		
	Royal Entomological Society for house expenses	38 17 2		
	Editorial travelling and other expenses	81 11 7		
	Royal Society for loan (Parliamentary Grant-in-aid for scientific publications)	750 0 0		
	Printing <i>Clay Minerals Bulletin</i> No. 30 and offprints	370 1 0		
	Miscellaneous creditors	122 18 9		
2060			2717 17 6	
			£11871 8 11	
			£9217	

## B. MIERS-SPENCER

£		£ s. d.	£ s. d.
	Fund Account—		
	Balance per Balance Sheet at 31 December 1962	984 10 1	
	Add Excess of income over expenditure for the eighteen months ended 30 June 1964	36 16 8	
		1021 6 9	
985	Less Loss on sale of investments	136 7 0	
		884 19 9	
			£884 19 9
			£985

## C. CLAY MINERALS GROUP

	£ s. d.	£ s. d.
Fund Account—		
Balance per Balance Sheet at 31 December 1962	113 5 2	
Less Excess of expenditure over income	19 5 7	
	93 19 7	
		£93 19 7
		£93 19 7

# SOCIETY

30 JUNE 1964

## FUND

1962 £	ASSETS	£ s. d.	£ s. d.
	Office furniture and equipment—		
	Original cost . . . . .	1050 10 4	
	<i>Less</i> depreciation . . . . .	838 4 9	
329			212 5 7
	Investments (at cost or as valued on 31 December 1951)—		
	£1700. 0s. 0d. 3½% War Stock 1952 . . . . .	1370 2 6	
	£606. 4s. 6d. 4% Funding Stock 1960-90 . . . . .	598 5 0	
	£250. 0s. 0d. 3% Savings Bonds 1960-70 . . . . .	216 17 6	
	£1013. 9s. 6d. 3% Savings Bonds 1965-75 . . . . .	916 7 0	
	£173. 6s. 6d. 3% British Transport Stock 1978-88 . . . . .	127 1 3	
	£261. 12s. 6d. 3½% Treasury Stock 1977-80 . . . . .	244 8 3	
	£1120. 16s. 7d. 4½% British Electricity Stock 1967-69 . . . . .	1065 17 3	
	954 units Equities Investment Fund for Charities . . . . .	1116 5 3	
5889			5655 4 0
	Note:—The total market value of the above investments at 30 June, 1964 was £5175. 8s. 10d.		
	Deposits—		
856	Balance with Post Office Savings Bank . . . . .		888 8 7
173	Subscriptions, &c., in arrears— . . . . .		0 0 0
	Sundry debtors—		
500	<i>Mineralogical Abstracts</i> , for loan from Mineralogical Society of Great Britain . . . . .		1100 0 0
	Cash—		
	Coutts & Co., London . . . . .	3055 4 3	
	Barclays Bank, Harpenden . . . . .	258 15 0	
	Cambridge & District Trustee Savings Bank . . . . .	658 0 8	
	Cash in hand, London . . . . .	20 0 0	
	Cash in hand, Harpenden . . . . .	0 0 0	
	Cash in hand, Cambridge . . . . .	23 10 10	
1469			4015 10 9
<u>£9217</u>			<u>£11871 8 11</u>

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

## MEMORIAL FUND

£		£ s. d.	£ s. d.
	Investments (at cost)—		
	£9. 18s. 4d. 3½% War Stock 1952 . . . . .	8 12 0	
	£208. 11s. 0d. 4½% British Electricity Stock 1967-69 . . . . .	200 0 0	
	£200. 0s. 0d. 5½% Esso Petroleum 1st Debenture Stock 1979-83 . . . . .	198 0 9	
740	309 units Equities Investment Fund for Charities . . . . .	392 0 11	
	Note:—The total market value of the above investments at 30 June 1964 was £779. 2s. 11d.		
245	Cash—Coutts & Co., London . . . . .		86 6 1
<u>£985</u>			<u>£884 19 9</u>

## FOREIGN DELEGATES EXPENSES FUND

£		£ s. d.
	Cash—Cambridge . . . . .	93 19 7
		<u>£93 19 7</u>

2 November 1964 P. G. EMBREY } Auditors  
R. A. HOWIE }  
A. F. SEAGER, Hon. Treasurer

MINERALOGICAL SOCIETIES OF  
MINERALOGICAL  
INCOME AND EXPENDITURE ACCOUNT

1962 £	INCOME	£ s. d.	£ s. d.
	Subscriptions—		
	Mineralogical Society of America . . . . .	792 2 7	
	Mineralogical Society of Great Britain . . . . .	1645 10 0	
1187		2437 12 7	
1983	Sales . . . . .		4995 6 8
0	Sundry income . . . . .		73 18 1
963	Balance, being excess of expenditure over income . . . . .		1084 17 1

£4133

£8591 14 5

BALANCE SHEET AS AT

£	LIABILITIES	£ s. d.	£ s. d.	£ s. d.
	Fund Account—			
	Balance per Balance Sheet at 31 December 1962 . . . . .	47 14 9		
	Add Capital contribution from Mineralogical Society of America . . . . .	250 0 0		
	Capital contribution from Mineralogical Society of Great Britain . . . . .	250 0 0		
	Loan from Mineralogical Society of Great Britain . . . . .	1100 0 0		
		1647 14 9		
	Less Depreciation on office furniture and equipment . . . . .	21 3 3		
	Repayment of loan from Mineralogical Society of Great Britain . . . . .	500 0 0		
	Excess of expenditure over income for eighteen months ended 30 June 1964 . . . . .	1084 17 1		
48		1606 0 4	41 14 5	
80	Subscriptions received in advance . . . . .		0 0 0	
	Sundry creditors—			
	Royal Entomological Society for house expenses . . . . .	19 8 6		
72	Overdraft on bank account at Coutts & Co., London . . . . .	9 10 3		
		28 18 9		
£200			£70 13 2	

# AMERICA AND GREAT BRITAIN

## ABSTRACTS

FOR THE EIGHTEEN MONTHS ENDED 30 JUNE 1964

1962	EXPENDITURE	£ s. d.	£ s. d.
£	<i>Mineralogical Abstracts</i> —		
	Vol. 15, Nos. 7 and 8, Vol. 16, Nos. 1 to 5 inclusive:		
	Printing . . . . .	5871 1 10	
	Distribution . . . . .	587 9 4	
3005	Editorial expenses—		6458 11 2
	Editor's honorarium . . . . .	600 0 0	
	Assistant Editor's stipend and clerical assistance	1002 6 6	
	General editorial expenses . . . . .	93 12 10	
949	Office expenses—		1695 19 4
	Office rental and house expenses . . . . .	249 1 11	
	Printing and stationery . . . . .	131 5 6	
	Postage . . . . .	49 9 7	
	Sundry office expenses . . . . .	7 6 11	
179			437 3 11
<u>£4133</u>			<u>£8591 14 5</u>

30 JUNE 1964

£	ASSETS	£ s. d.	£ s. d.
	Office furniture and equipment—		
	Original cost . . . . .	141 1 4	
	Less depreciation . . . . .	70 8 2	
92			70 13 2
108	Subscriptions in arrears . . . . .		0 0 0

£200

£70 13 2

2 November 1964

P. G. EMBREY }  
R. A. HOWIE } Auditors

A. F. SEAGER, Hon. Treasurer

4. Twenty-third list of new mineral names: by M. H. Hey (vol. 33, p. 1125).

The following papers were taken as read:

1. The thermal decomposition of miscellaneous crocidolites: by A. A. Hodgson.

2. A numerical system of classification for chlorites and septechnorites: by W. R. Phillips (vol. 33, p. 1114).