

PROCEEDINGS  
OF THE  
MINERALOGICAL SOCIETY  
(1953)

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EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., January 22, 1953, at 3 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

THE following were provisionally elected Ordinary Members of the Society: William Joseph Cohen, Madeleine Jeanne Deudon, Wilfrid Raymond Foster, Gerald Manfred Friedman, Peter Gay, Brian Hitchon, George William Kunze, Hugo Strunz.

The following resignations were accepted: C. T. Barber, J. M. Hallinan, D. C. Henry, J. Paclt, and L. L. van Reijen.

The deaths of Prof. Paul Niggli (Honorary Member), A. F. Williams, J. A. Howe, and C. E. N. Bromehead were reported.

The name of L. H. P. Jones was removed from the list of Members for non-payment of subscriptions.

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

A letter from Dr. W. Campbell Smith suggesting the formation of an International Union of Mineralogy was discussed, and a committee of five members was appointed to report to the Council.

GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., January 22, 1953, at 5 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

Fifty-seven Members and eight Visitors were present.

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

The following exhibits were shown:

1. A new two-circle goniometer: by Mr. L. W. Codd and Mr. W. T. Moore.

2. Differentiated organic minerals from Derbyshire: by Dr. G. Mueller.  
The following papers were read and discussed:

1. Cheralite, a new mineral of the monazite group: by Mr. S. H. U. Bowie and Mr. J. E. T. Horne (vol. 30, p. 93).

2. Crichtonite, a distinct species: by Dr. F. A. Bannister, Dr. G. F. Claringbull, and Dr. M. H. Hey.

3. X-ray studies of bytownites and anorthites: by Dr. P. Gay (vol. 30, p. 169).

4. The role of water in amphiboles: by Dr. E. J. W. Whittaker.

5. Preliminary X-ray investigation of hillebrandite: by Dr. L. Heller (vol. 30, p. 150).

The following papers were taken as read:

1. The unit cell and space group of chlor-spodiosite ( $\text{Ca}_2\text{ClPO}_4$ ): by Dr. A. L. Mackay (vol. 30, p. 166).

2. The pumpellyite mineral series: by Dr. D. S. Coombs (vol. 30, p. 113).

3. A hydrous mica from Yorkshire fireclay: by Mr. K. Carr, Dr. R. W. Grimshaw, and Prof. A. L. Roberts (vol. 30, p. 139).

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#### EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., March 26, 1953, at 3 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Olof Anton Broch, Ronald John Firman, Magnus Sinclair Garson, Gordon Kenneth Jones, Robert Spencer Long, Amudachari Parthasarathy, Thomas Joseph Wiggins.

The resignation of F. E. Bowen was accepted.

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

Nominations for election to the Council were considered. The following were due to retire: as Vice-Presidents, Dr. A. F. Hallimond and Dr. S. J. Shand; as Ordinary Members of Council, Mr. G. E. Howling, Dr. P. A. Sabine, Dr. F. H. Stewart, and, in order to conform with the bye-laws, Mr. E. H. Beard was selected by lot.

The following were proposed for election at the Anniversary Meeting in November 1953: as Vice-Presidents, Dr. F. A. Bannister and Dr. F. Dixey; as Ordinary Members of Council, Mr. T. Deans, Prof. K. C. Dunham, Mr. L. A. A. Thomas, and Dr. M. K. Wells.

### GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., March 26, 1953, at 5 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

Fifty-eight Members and six Visitors were present.

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

The following papers were read and discussed:

1. The hydrated calcium silicates riversideite, tobermorite, and plombierite: by Mr. J. D. C. McConnell (vol. 30, p. 293).
2. Natural and synthetic jalpaite ( $\text{Ag}_3\text{CuS}_2$ ): by Dr. G. F. Claringbull.
3. A granophyre from Coire Uaigneich, Isle of Skye, containing quartz paramorphs after tridymite: by Prof. L. R. Wager, Mr. D. S. Weedon, and Dr. E. A. Vincent (vol. 30, p. 263).
4. Quantitative mineralogical analysis of clay and silt fractions by differential thermal analysis: by Mr. R. J. McLaughlin.

The following papers were taken as read:

1. High-order plates for the microscopic examination of mineral grains: by Dr. F. Smithson (vol. 30, p. 145).
2. The effect of grinding on micas. I. Muscovite: by Dr. R. C. Mackenzie and Dr. A. A. Milne (vol. 30, p. 178).
3. The relation between area and volume in micrometric analysis: by Dr. F. Chayes (vol. 30, p. 147).

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### EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., June 11, 1953, at 3 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Robert Alexander Chalmers, Thomas William Lambe, Michael

John Le Bas, Johannes Gottfried Drotsky Steyn, Edwin Wilson Tooker, Charles Edward Weaver, Jack Zussman.

The resignation of N. M. Shukri was accepted.

The deaths of Dr. G. F. Herbert Smith and Dr. H. V. Ellsworth were reported.

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

The following dates for meetings in 1954 were agreed, subject to approval by the Council of the Geological Society: Thursdays, January 28, March 25, June 10, and November 4.

### GENERAL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., June 11, 1953, at 5 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

Forty-six Members and eight Visitors were present.

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

The following papers were read and discussed:

1. A large mineralized cavity in a tholeiite dike in Northumberland: by Mr. B. A. O. Randall (vol. 30, p. 246).

2. An investigation of high-temperature optics in some naturally occurring plagioclases: by Dr. O. Bradley (vol. 30, p. 227).

3. A simple monochromator: by Mr. H. C. G. Vincent (vol. 30, p. 333).

4. A rapid method for the production of thin rock-sections: by Mr. E. O. Rowland (vol. 30, p. 254).

5. A note on the occurrence of beryl and löllingite at the New Consols mine, Stoke Climsland, Cornwall: by Mr. P. G. Embrey (vol. 30, p. 259).

6. Notes on the occurrence of cosalite and other lead sulfo-salts at Grainsgill, Caldbeck, Cumberland: by Mr. A. W. G. Kingsbury and Mr. J. Hartley.

The following papers were taken as read:

1. High-temperature phase changes in kaolinites: by Dr. W. D. Johns (vol. 30, p. 186).

2. A saponite from Krugersdorp district, Transvaal: by Mr. E. R. Schmidt and Mr. H. Heystek (vol. 30, p. 201).

3. On the occurrence of nacrite at Shap, Westmorland: by Mr. R. J. Firman (vol. 30, p. 199).

## EXCERPT MINUTES OF COUNCIL MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., November 5, 1953, at 3 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Styliands Savvas Augustithis, Alfred Henry Douglas Barratt, Derek Flinn, Herbert David Glass, Julia Mary Langley, Alvaro Jose Camilo Rodrigues, John Francis Truswell, Padmanabha Viswanathan, Richard John Wakelin, E. Joseph Weiss.

The resignations of A. Brammall, P. Mallinson, G. W. Tyrrell, and G. Wilson were accepted.

The deaths of B. M. Jones, A. B. Broughton-Edge, and F. E. Wright (Honorary Member) were reported.

The name of Pu Li was removed from the list of Members for non-payment of subscriptions.

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

The President reported that since the last meeting Miss E. D. P. Lambert, Clerk to the Society, had resigned, and that Mrs. R. A. Marcus had been appointed.

Dr. P. A. Sabine and Mr. L. A. A. Thomas were appointed auditors of the Society's accounts for the year ending December 31, 1953.

The Secretary read the draft Annual Report for the session 1952-53, and after minor alterations it was approved for presentation to the Society at the ensuing Anniversary Meeting.

Dr. W. Campbell Smith had reported at recent meetings of the Council that the large monument long ago erected at the place of fall of a meteorite in 1795 at Wold Cottage, Thwing, Yorkshire, was now in need of repair. It was agreed that the Mineralogical Society would be prepared to contribute the sum of £10 towards the cost of repair.

## GENERAL (ANNIVERSARY) MEETING

*Held in the Apartments of the Geological Society, Burlington House,  
London, W., November 5, 1953, at 5 p.m.*

Dr. JAMES PHEMISTER, President, in the Chair.

Seventy-eight Members and seven Visitors were present.

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

The General Secretary read the following:

#### ANNUAL REPORT OF THE COUNCIL FOR 1952-53

*Membership.*—The total membership on October 31, 1953, was 576, against 564 on October 31, 1952. Thirty-one new members have been elected during the year, ten members have resigned, and the name of one member has been removed on account of arrears of subscription. The Society has lost by death seven Ordinary Members and one Honorary Member, Professor P. Niggli. On October 31, 1953, the membership consisted of seven Honorary Members and 569 Ordinary Members, of whom 66 are Life Members.

*Meetings.*—The total attendance at the four general meetings held during the session 1952-53 was 212 members and 29 guests, giving an average of 60 per meeting. At these meetings 21 papers have been read; 13 have been taken as read, and 4 exhibits have been shown.

*Publications.*—Four numbers of the *Mineralogical Magazine* (nos. 219-222) have been issued during the year. Three of them (nos. 220-222) contained the proceedings in 44 pages, 24 papers in 210 pages with 12 plates and 52 text-figures, and 614 abstracts in 182 pages; no. 219 was the volume index in 114 pages.

Considerable progress has been made in reprinting back numbers of the Magazine and it is hoped to have the whole run in print during next year.

*Financial.*—The accounts for the calendar year 1952, published in the June (1953) number of the Magazine, show an excess of assets (exclusive of the value of the Society's library and stock of publications) over liabilities of £6699. 14s. 10d., against £5122. 1s. 7d. at the close of 1951.

The balances standing to the credit of the General Fund at the close of 1952 amounted to £1350. 10s. 11d., against £1998. 9s. 2d. for 1951, and that standing to the credit of the Miers Memorial Fund £41. 1s. 6d., against £27. 1s. 5d. The receipts from sales of the *Mineralogical Magazine* (by the Society's publisher and by the custodian of stock) during 1952 were £2298. 1s. 10d., against £1171. 16s. 10d. received during 1951. Sales from the monograph on clay minerals in 1952 amounted to £827. 2s. 10d., against £532. 12s. 6d. in 1951. The expenditure on the four numbers of the *Mineralogical Magazine* for 1952 (nos. 216-219) together with the number (215) for December 1951 amounted to £1818. 11s. 8d., against an expenditure in 1951 for four numbers of £1671. 17s. 2d. Three numbers have been issued since the beginning of the current year, two of which have cost a total of £1079. 2s. 7d., inclusive of authors' reprints. The estimated cost of the four numbers which are due to be issued in 1953 is £2000.

Expenditure during 1952 on the *Clay Minerals Bulletin* (nos. 7-8), including authors' reprints, totalled £136. 4s. 5d. Receipts from the sale of the Bulletin, including subscriptions and authors' reprints, amounted to £107. 12s. 7d.

The Society has received, through the Royal Society, from the Parliamentary Grant-in-aid for Scientific Publications, £300 in 1952 and £50 in the current year.

The balances at Bankers and in the Post Office Savings Bank on October 31 were: General Fund £3907. 5s. 8d., Miers Memorial Fund £58. 10s. 6d.

The recent increases in subscription, composition fees, and price of the Magazine have appreciably improved the Society's financial position. It must be borne in mind, however, that the stock of many numbers of the *Mineralogical Magazine* is now almost exhausted and that the Society will have to face heavy reprinting costs within the next few years.

*General.*—During October Miss E. D. P. Lambert, Clerk to the Society, resigned

and Mrs. R. A. Marcus was appointed to succeed her. The accommodation kindly made available to the Society by the Geological Society in its apartments has proved inadequate and steps have been taken, so far without success, to secure alternative office and publication storage space.

*Clay Minerals Group.*—On October 31, 1953, the Group had 217 members and 98 subscribers to the *Clay Minerals Bulletin* (205 and 56 in 1952). Two meetings were held during the year—one at Stoke-on-Trent, and one at Aberdeen, the number of papers read being 10 and 13 respectively; the average attendance at these meetings was 65.

Two numbers of the *Clay Minerals Bulletin* appeared during the year, no. 8 completing volume 1, and no. 9 being the first issue of volume 2. The stock of no. 3 (August, 1949) was exhausted and 200 copies were reprinted.

During the year the treasurership was separated from the secretaryship, and a treasurer was appointed in January.

On the proposal of Mr. P. G. Embrey, seconded by Dr. A. F. Seager, the adoption of the Annual Report of the Council was carried unanimously.

A vote of thanks to the Geological Society for the use of its apartments was proposed by Mr. E. H. Beard, seconded by Mr. J. E. T. Horne, and carried with acclamation.

The President read the following list of Officers and Council elected for the session 1953-54 in accordance with bye-law 20:

*President.* Dr. James Phemister, M.A., D.Sc., F.R.S.E., F.G.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.* Professor 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. C. F. Davidson, D.Sc., F.R.S.E., F.G.S.      Dr. A. G. MacGregor, M.C., D.Sc., F.R.S.E., F.G.S.

Dr. R. C. Mackenzie, B.Sc., Ph.D., A.R.I.C.      Dr. S. R. Nockolds, B.Sc., Ph.D., F.G.S.      Dr. F. C. Phillips, M.A., Ph.D., F.G.S.

Dr. G. R. Rigby, B.Sc., Ph.D., D.I.C., A.R.I.C.      Mr. T. Deans, M.A., F.G.S.      Prof. K. C. Dunham, D.Sc., Ph.D.,

Dr. W. H. Taylor, Ph.D., D.Sc., F.Inst.P.      S.D., M.I.M.M., F.G.S.      Mr. L. A. A. Thomas, B.Sc., F.Inst.P.

Mr. P. M. Game, B.Sc., F.R.G.S.

In accordance with bye-law 11, the following past-Presidents are also members of the Council:

Sir Arthur Russell, Bart., M.B.E.

Dr. W. Campbell Smith, C.B.E., M.C., T.D., M.A., Sc.D., F.G.S.

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

Professor C. E. Tilley, B.Sc., Ph.D., F.R.S.

The Managing Trustees, Dr. W. Campbell Smith and Professor C. E. Tilley, are *ex officio* members of the Council in accordance with bye-law 11.

[continued on p. lxvii]

# MINERALOGICAL INCOME AND EXPENDITURE ACCOUNT

## A. GENERAL

1952 £	INCOME	£ s. d.	£ s. d.
	Members' subscriptions—		
	Annual subscriptions . . . . .	966 13 5	
	Entrance fees . . . . .	25 19 0	
1007	<i>Mineralogical Magazine</i> —		
	Advertisement fees . . . . .	107 19 4	
	Sales by publisher . . . . .	1722 10 0	
	Sales by custodian of stock . . . . .	31 2 9	
2298	Investment revenue—		
	Interest on investments . . . . .	111 2 10	
	Post Office Savings Bank interest . . . . .	53 3 0	
131	Grant from Royal Society (Parliamentary Grant-in-aid		
300	for scientific publications) . . . . .		164 5 10
	Clay Minerals Group—		
	<i>Clay Minerals Bulletin</i> :—		
	Subscriptions . . . . .	35 19 6	
	Sales, including authors' reprints. . . . .	122 4 0	
108			158 3 6
827	Clay Minerals Monograph, sales . . . . .		532 5 9

	Balance, being excess of expenditure over income for the		
	year . . . . .		611 13 9
£4671			£4370 13 4

## B. MIERS

			£ s. d.
13	Investment revenue . . . . .		16 9 11
1	Contributions . . . . .		3 1 0
£14			£19 10 11

# SOCIETY

FOR THE YEAR ENDED DECEMBER 31, 1953

## FUND

1952	EXPENDITURE	£ s. d.	£ s. d.
£			
	<i>Mineralogical Magazine—</i>		
	Nos. 220-223:		
	Printing . . . . .	1506 14 6	
	Illustrations . . . . .	138 4 7	
	Authors' reprints . . . . .	108 13 5	
	Distribution . . . . .	42 14 0	
1819		1796 6 6	
	Back Numbers:		
475	Reprinting charges . . . . .		1641 6 7
50	Editor's honorarium . . . . .		50 0 0
	Meeting expenses—		
	Notices of meetings . . . . .	56 17 11	
	General expenses in connexion with meetings . . . . .	24 11 6	
60		81 9 5	
	General expenses—		
	Clerical assistance . . . . .	434 5 9	
	Printing and stationery . . . . .	21 9 8	
	Postage and telephone . . . . .	42 7 1	
	Sundry office expenses . . . . .	40 17 0	
536		538 19 6	
	Miscellaneous charges—		
19	Depreciation of office furniture and equipment . . . . .		16 16 8
	Clay Minerals Group—		
	<i>Clay Minerals Bulletin:</i>		
	Printing Bulletins 9 and 10 . . . . .	137 2 4	
	Reprinting charges . . . . .	19 8 6	
	Authors' reprints . . . . .	37 12 6	
136		194 3 4	
111	<i>Clay Minerals Monograph, binding</i> . . . . .		— — —
	General expenses:		
	Meeting expenses . . . . .	15 17 5	
	Office expenses . . . . .	35 13 11	
37		51 11 4	
1428	<i>Balance, being excess of income over expenditure for the year</i> . . . . .		4370 13 4
<u>£4671</u>			

## MEMORIAL FUND

	£ s. d.
Bank charges . . . . .	0 2 1
14	<i>Balance, being excess of income over expenditure for the year</i> . . . . .
	19 8 10
<u>£14</u>	<u>£19 10 11</u>

March 19, 1954.      P. A. SABINE      } Auditors.      JAMES H. TAYLOR, Hon. Treasurer.  
                                  L. A. A. THOMAS }

**MINERALOGICAL**  
**BALANCE SHEET AS AT**  
**A. GENERAL**

1952 £	LIABILITIES	£ s. d.	£ s. d.
	Fund Account—		
	Balance per Balance Sheet at December 31, 1952 . . . . .	6223 13 4	
	Less excess of expenditure over income for year ended December 31, 1953 . . . . .	611 13 9	
6224			5611 19 7
	Subscriptions, &c., received in advance—		
	Members' subscriptions and entrance fees . . . . .	66 14 0	
78	Subscriptions to <i>Clay Minerals Bulletin</i> . . . . .	3 10 0	
			70 4 0
	Sundry creditors—		
	Jarrold & Sons, Ltd. . . . .	672 0 0	
518	A. Walker & Son, Ltd. . . . .	49 18 0	
			721 18 0

£6820

£6404 1 7

**B. MIERS**

1952 £	LIABILITIES	£ s. d.	£ s. d.
	Fund Account—		
	Balance per Balance Sheet at December 31, 1952 . . . . .	476 1 6	
	Add Excess of income over expenditure for the year ended December 31, 1953 . . . . .	19 8 10	
476			495 10 4

£476

£495 10 4

# SOCIETY

DECEMBER 31, 1953

## FUND

1952	ASSETS	£ s. d.	£ s. d.
£			
	Office furniture and equipment—		
	Original cost . . . . .	168 6 4	
	Less depreciation . . . . .	33 13 4	
151			134 13 0
	Investments (at cost or as valued at December 31, 1951):		
	£1685 3½% War Stock 1952 . . . . .	1356 8 6	
	£216. 2s. 4d. 4% Consolidated Stock 1957 . . . . .	194 4 9	
	£100 4% Funding Stock 1960-90 . . . . .	98 5 0	
	£250 3% Savings Bonds 1960-70 . . . . .	216 17 6	
	£493. 15s. 3d. 3% Savings Bonds 1965-75 . . . . .	416 7 0	
	£100 3% British Transport Stock 1978-88 . . . . .	77 0 0	
	£275 2½% Consolidated Stock . . . . .	169 2 6	
	£261. 12s. 6d. 3% Treasury Stock 1977-80 . . . . .	244 8 3	
2595			2772 13 6
	Note:—The total market value of the above investments at December 31, 1953, was £2907. 9s. 2d.		
	Deposits—		
2127	Balance with Post Office Savings Bank . . . . .		2180 1 6
	Subscriptions, &c., in arrears—		
	Members' subscriptions and entrance fees . . . . .	75 1 0	
	Subscriptions to <i>Clay Minerals Bulletin</i> . . . . .	4 0 0	
	Less provision for bad debts . . . . .	79 1 0	
36			59 3 0
	Sundry debtors—		
	Oxford University Press . . . . .	692 17 6	
	Authors for reprints from <i>Clay Minerals Bulletin</i> . . . . .	5 2 0	
	Purchasers of <i>Clay Minerals Bulletin</i> . . . . .	9 1 6	
560			707 1 0
	Cash—		
	Coutts & Co., London . . . . .	407 8 6	
	Barclays Bank, Harpenden . . . . .	112 0 6	
	Cash in hand, London . . . . .	25 0 0	
	" " Harpenden . . . . .	3 12 3	
	" " Aberdeen . . . . .	2 8 4	
1351			550 9 7
<u>£6820</u>			<u>£6404 1 7</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)—		
	£230 3% Defence Bonds . . . . .	230 0 0	
	£240. 17s. 6d. 3½% War Stock 1952 . . . . .	207 1 0	
435			437 1 0
	Note:—The total market value of the above investments at December 31, 1953, was £434. 2s. 10d.		
41	Cash—Coutts & Co., London . . . . .		58 9 4
<u>£476</u>			<u>£495 10 4</u>

March 19, 1954. P. A. SABINE } Auditors JAMES H. TAYLOR, Hon. Treasurer.  
L. A. A. THOMAS }

A vote of thanks to the retiring members of Council was proposed by Dr. M. K. Wells and seconded by Dr. E. A. Vincent.

The following exhibits were shown:

1. Eucryptite-bearing pegmatite from near Bikita, Southern Rhodesia: by Mr. J. E. T. Horne and Mr. D. Ostle.

2. A polarizing microscope adapted for students' and general use; with slotted ocular and substage lamp for use without transformer: by Dr. A. F. Hallimond.

3. Superimposed graticules for modal analysis: by Dr. A. T. J. Dollar and Mr. F. J. Fitch.

4. Gold from Carrock, Cumberland: by Mr. A. W. G. Kingsbury.

The following papers were read and discussed:

1. A new review of the chlorites: by Dr. M. H. Hey (vol. 30, p. 277).

2. The identification and determination of plagioclase feldspars by X-ray powder methods: by Dr. J. Goodyear and Mr. W. J. Duffin (vol. 30, p. 306).

3. Iron-titanium oxide minerals in rocks of the layered series of the Skaergaard intrusion, east Greenland: by Dr. E. A. Vincent and Mr. R. Phillips.

4. An iron-rich facies of the Beaver Bay diabase, Minnesota: by Dr. I. D. Muir (vol. 30, p. 376).

5. The Rev. William Gregor, discoverer of titanium: by Sir Arthur Russell, Bart.

The following paper was taken as read:

Spectrographic and X-ray data on some fluorites from the Transvaal, South Africa: by Mr. J. G. D. Steyn (vol. 30, p. 327).

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