The Geochemical News

NUMBER 37 June 1963

THE GEOCHEMICAL SOCIETY COUNCIL MEETING

Houston, Texas, November 12, 1962

The Council met at 8:30 a.m. at the Shamrock Hilton Hotel.

Present: J.A.S. Adams, T.F. Bates, F.R. Boyd, C.W. Burnham, R.S. Cannon, Jr., R.M. Denning, E.Wm. Heinrich, J.M. Hunt, E. Ingerson, W.C. Kelly, K. Lowe, D.M. Shaw, D.B. Stewart, G. Tunell (presiding), A. van Valkenburg, and P.A. Witherspoon.

REPORTS OF OFFICERS

Secretary's Report. The Society's growth rate seems to have settled down in recent years and figures for 1962 are not notably different from those of the previous two years. One hundred and sixty-five new members with 27 resignations and 8 deaths bring the total membership to 2,198. The number of new members is up from last year's total of 128 and this increase seems largely due to the interest created by Earl Ingerson's article on the Society, which was published in the April GeoTimes. The unusually large number of resignations reflects the treasurer's efforts to collect unpaid dues.

Forty per cent of the new members are from countries other than the United States. New members from Monaco, Republic of the Sudan, Madagascar, Ghana, British Guiana, Greece, Poland, and Tanganyika bring the total number of countries represented by the membership to 65.

The new directory, dated September 1962, is now in page proof and it is anticipated that it will be mailed to members by the end of November.

Treasurer's Report. See pages 6-10. In addition to his formal report, Treasurer C. Wayne Burnham made the following recommendations:

(1) That the fiscal year, currently August 1 to July 31, be changed to the calendar year in order to coincide with the membership year.

(2) That the treasurer-elect assume office on the first day of the fiscal (calendar) year following election.

(3) That all persons authorized to incur debts against the treasury of the Society be instructed by the Council to provide the treasurer, within 15 days following the close of the fiscal year, with an accounting of all accounts payable, accounts receivable, and cash on hand.

These recommendations were put to a vote and approved.

Burnham pointed out that 169 members were two or more years in arrears on their dues. The expense of maintaining Society mailings to these members is substantial and Burnham suggested that the Council might wish to take some action. There is no provision in the Constitution or By-laws for dropping members for non-payment of dues, but as an interim action it was agreed that the addressograph cards of these members should be removed from the file. The secretary was instructed to ask the Constitution and By-laws Committee to draft a change in the By-laws to permit dropping such members.

The increasingly high cost of sending programs of the Annual Meeting to all members was discussed. This year these programs cost the Society $800. It was pointed out that if a Geochemical Society member is also a member of the Mineralogical Society of America, he gets an additional copy of the program from that organization. The duplication of programs is concerning the MSA as well as the Geochemical Society and Burnham agreed to meet with officials of the MSA and GSA to work out a method of avoiding duplication in the future.

REPORTS OF COMMITTEES

Auditing. See page 11.

Constitution and By-laws. No report.

Membership. See page 11.

Tellers. The officers elected for 1963 are: president, George Tunell and vice-president, Michael Fleischer.

Councilors elected to start three-year terms in 1963 are: Herbert E. Hawkes and James B. Thompson, Jr.

Voting on proposed changes in the Constitution and By-laws was as follows:

	For	No	No Vote
Membership	819	99	16
Executive Editor	894	28	12
Dues	836	89	9
Executive Committee	882	40	12
Simplifications	910	13	11

The chairman of the Tellers Committee, W.S. Fyfe, reported that a great number of people complained about the voting regarding the four officers and councilors. He suggested that perhaps once in about four years we ask all members to submit their first two choices for leading positions. This list could be used as a guide.

W.S. Fyfe's proposal, that space be provided on the ballot for suggestions to the Nominating Committee, was approved. This will be done annually.

The question was raised as to whether members outside of North America had time to mail their ballots in before the meeting. The secretary agreed to get out the ballot earlier next year and to request that the Tellers Committee make a numerical breakdown of ballots by postmark into "North America" and "Other."

Nominating (1962). Nominations for vice-president and councilors were received from Robert M. Grogan, chairman of the 1962 Nominating Committee. The following slate was approved: president, Michael Fleischer; vice-president, Brian H. Mason; councilors, W.S. Fyfe and Sol R. Silverman.

Nominating (1963). Walter R. Eckelmann, chairman of the 1963 Nominating Committee, submitted the name of Frederik F. Koczy for executive editor of Geochimica et Cosmochimica Acta for 1964-66. The nomination was approved. Koczy, who is with the Marine Laboratory at the University of Miami, is nominated to succeed Harold Urey, who is serving a one-year term as interim executive editor.

Standards. See page 12. The need for a meteorite reference standard, and also for organic standards, was discussed. The Council agreed that a member of the Organic Group should be on the committee. The chairman, Alvin van Valkenburg, was authorized to seek funds from the National Science Foundation, or other sources, to expand the work of his committee.

Program. See page 12. The program went smoothly this year due to the well-coordinated efforts of Reynolds M. Denning, chairman; David B. Stewart, who substituted for the secretary; and John M. Hunt, who represented the Organic Group. Reynolds M. Denning is retiring as chairman after three years, and a motion that he be commended for his hard work and generous donation of time was passed unanimously.

The Organic Group indicated that it wished to hold a symposium on organic-inorganic relationships in sediments at the 1963 meeting. The Council approved the idea and authorized the Organic Group to approach the GSA for permission to hold such a symposium.

Education. See page 13. The proposals made by Kurt Lowe, chairman of the Education Committee, were discussed and the Council agreed that the three papers now ready should be published as the start of a Geochemical Society Educational Series. Funds could be made available from the Society's royalties from the sale of RESEARCHES IN GEOCHEMISTRY. However, the Council suggested that the chairman approach the American Geological Institute to see if they might not be interested in sponsoring such a series. Subsequent to the Council meeting, Kurt Lowe met with officials of AGI and obtained their agreement to publish the papers. It is anticipated that they will be printed in the summer of 1963.

Publications Committee. No report.

Russian Translations Committee. See following.

REPORTS OF EDITORS

Geochimica et Cosmochimica Acta. A report from American Executive Editor John A.S. Adams was printed in the December issue of the News. The Council discussed the recommendations made by Adams with great interest. Adams was authorized to publish a statement about the availability of preprints of papers sent in to Acta in advance of their review. This should help the rapid dissemination of information in the faster-moving fields in geochemistry.

Book Translations. The report of Book Translations Editor Earl Ingerson was printed in the December issue of the News. This has been a most successful program in which 14 geochemical texts from the USSR have now been translated. English editions of five of these are in print. Funds for this program are now exhausted, but Ingerson was urged by the Council to obtain a new grant from the National Science Foundation to continue the program.

Geochemistry (Geokhimiya). See page 17.

The Geochemical News. Professor Heinrich has recently accepted the position of editor of the American Mineralogist and will have insufficient time to continue to edit the News. The Council expressed much thanks to Heinrich for his six years of service to the Society. His colleague, William C. Kelly, was appointed to the position.

OTHER BUSINESS

Geochimica et Cosmochimica Acta. The members of the Society approved the amendments to the Constitution and By-laws creating the position of Executive Editor by an overwhelming majority. The first nominee for this post will appear on the ballot in 1963. In the meantime, the Council wished to put the new plan for Acta into effect at once. Harold C. Urey has agreed to take over as interim editor for 1963. John A.S. Adams, Carl W. Correns, and L.R. Wager, who jointly acted as executive editor under the old system, have been urged to

continue their work for the journal as associate editors. Adams and Correns have agreed to assist Urey under this arrangement. Wager has expressed the desire to be relieved of the bulk of his editorial chores, but has agreed to remain on the editorial advisory board.

Pergamon Press has agreed to supply the executive editor with $1,250 per year for expenses and expressed the hope that the Society would contribute a like sum. Treasurer C. Wayne Burnham affirmed that increased dues and increased overhead from NSF grants would make it possible for the Society to afford this commitment. A motion to set up an annual $2,500 expense fund jointly with Pergamon Press for the executive editor was passed unanimously.

Amendment of the Certificate of Incorporation. The documents necessary to file an amendment to the Society's Certificate of Incorporation have been signed by the Council and turned over to the Society's attorney. It is anticipated that the Internal Revenue Service will approve the amended certificate and that the Society can be declared a tax exempt organization.

Appointments. The Council appointed Paul A. Witherspoon of the University of California to be the Society's representative in the reorganized American Geological Institute. Duncan McConnell of Ohio State University was appointed to a two-year term as one of the Society's representatives on the Council of the American Association for the Advancement of Science.

Awards. The Council voted unanimously to award life-subscriptions of GEOCHEMISTRY to Earl Ingerson and to E.Wm. Heinrich. Ingerson initiated the translation of GEOKHIMIYA and supervised its publication until last summer. Heinrich is retiring as editor of the Geochemical News after six years of work on this newsletter. The Council is deeply appreciative of the service these men have given the Society. Happily, Professor Ingerson will continue his work for the Society as Book Translations Editor.

Formation of Groups. It became apparent during the Business Meeting (see Minutes) that the Society's By-laws should contain a formal procedure for the formation of groups. The Organic Geochemistry Group has been most successful in stimulating research and organizing meetings in its field. Its relations with the Society's Council are excellent. With this precedent, it is natural that moves should be made to form other groups. However, there should be a well-demonstrated need and sufficient interest on the part of a number of members to justify the organization of a specialized group. The Constitution and By-laws Committee has been requested to frame a change in the By-laws which will insure that there is adequate interest on the part of the members to justify the formation of any new group.

F.R. Boyd, Secretary

THE GEOCHEMICAL SOCIETY ANNUAL BUSINESS MEETING

Houston, Texas, November 12, 1962

The meeting was called to order at 4:00 p.m. by the vice-president, George Tunell, who acted as chairman in the absence of the president, Robert M. Garrels. Approximately 75 members were present. The secretary read his report and summarized the report of the Tellers Committee. The treasurer, C. Wayne Burnham, reviewed the Society's financial status and described the changes in fiscal procedures which the Council had approved that morning. Kurt Lowe, chairman of the Education Committee, outlined his committee's project to publish a Geochemical Society Educational Series. Papers in this series are aimed at introducing geochemical subject matter to chemistry teachers on a high-school and college level. Three papers, by Walter D. Keller, Paul L. Cloke, and John W. Winchester, are ready for publication. David B. Steward reviewed plans for GEOCHEMISTRY, the

Society's translation of GEOKHIMIYA, and stated that he believed that the time interval between the publication of an issue in the USSR and publication of an English translation could be reduced to three months.

The chairman opened the meeting to general discussion and Martin J. Davidson made the presentation which follows these Minutes. He moved for the establishment of an Applied Geochemistry Group and his motion was seconded by Charles H. Behre.

J.R. Vallentyne questioned the desirability of making a distinction between applied and theoretical geochemistry, and Davidson replied that there was a need to gather and document empirical knowledge in geochemical prospecting and other applied fields.

John M. Hunt opposed the motion on the grounds that too many groups would lead to a fragmentation of the Society's efforts. Denis M. Shaw pointed out that media were already available for the dissemination of information on applied geochemistry. Davidson stressed that the purpose of the proposal was not intended to be fragmentation of the Society's program and requested immediate action by the members present.

Earl Ingerson pointed out that creation of an Organic Geochemistry Group had stimulated research in organic geochemistry, and he felt that creation of an Applied Geochemistry Group would bring soil scientists and people in the medical sciences into the Society.

Paul Witherspoon stated that at the time of formation of the Organic Geochemistry Group there was much evidence of interest in the field. He questioned whether the same evidence existed in this case and suggested that symposia be held to establish an interest before an Applied Geochemistry Group was formed.

C. Wayne Burnham questioned the legality of the motion and argued that the proposal should be submitted to the Council. The Society currently has no by-law relating to the formation of groups.

Bruno J. Giletti commented on the diversity of disciplines mentioned in Davidson's presentation and argued that there would not be much common interest. H.M. Smith stated that there were not enough members present at the meeting to make a decision on behalf of the membership as a whole.

An amendment to Davidson's motion was proposed to the effect that an Applied Geochemistry Group should be formed provided a majority of the entire membership voted in favor of it by mail ballot.

The chairman put the amendment to a vote and it was passed. The amended motion was then put to a vote, and it failed by a large majority.

Denis Shaw moved that the Society send its congratulations to the Academy of Sciences of the USSR on the occasion of the symposium "Chemistry of the Earth's Crust" to be held on the 100th anniversary of the birth of V.I. Vernadskii. The symposium is scheduled for March 13, 1963. Shaw's motion was approved.

F.R. Boyd, Secretary

PRESENTATION TO THE BUSINESS MEETING OF THE GEOCHEMICAL SOCIETY

It is proposed that within The Geochemical Society additional emphasis be focused upon the application of geochemistry to the general welfare.

Toward the attainment of this end, it is further proposed that an Applied Geochemistry Group be established strictly within The Geochemical Society, whose

purpose shall be to clarify and to develop those aspects of geochemistry that apply to mineral exploration, petroleum exploration, agriculture, medicine, and dentistry.

It is anticipated that there will be many members of The Geochemical Society who will take an active interest in the new group by coordinating the various phases of geochemistry that have actual or potential practical significance.

An informal organizational meeting was held this morning, November 12th, attended by the following members of The Geochemical Society: Prof. Charles H. Behre, Jr., Dr. Irving A. Breger, Dr. H. Trueheart Brown, Mrs. Helen L. Cannon, Mr. Martin J. Davidson, Mr. B.M. Gottlieb, Dr. Herbert E. Hawkes, Jr., Dr. Leo Horvitz, Dr. Earl Ingerson, and Dr. S.J. Pirson. At this meeting it was unanimously voted to present, in substance, the following motion:

Mr. Chairman, I move the establishment of an Applied Geochemistry Group by the creation of an Interim Executive Committee consisting of the following members of The Geochemical Society: Prof. Charles H. Behre, Jr., Columbia University; Mrs. Helen L. Cannon, U.S. Geological Survey; Mr. Martin J. Davidson, Davidson Geochemical Oil Company; Mr. B.M. Gottlieb, Sun Oil Company; Dr. Duncan McConnell, Ohio State University; and that this Interim Executive Committee be empowered to act as a Committee of The Geochemical Society, and in the exercise of its powers: (a) to enlarge itself as required; and (b) to organize the Applied Geochemistry Group as necessary.

REPORT OF THE TREASURER OF THE GEOCHEMICAL SOCIETY FOR 1962

To the Council of The Geochemical Society:

The treasurer's report covers the fiscal year beginning August 1, 1961, and terminating July 31, 1962, and is presented here in three parts. Part I is a copy of the report of the former treasurer, Dr. George T. Faust, for the interim period August 1, 1961, to November 15, 1961, and Part II is the report of the present treasurer for the period November 16, 1961, to July 31, 1962. Part III is a summary statement of income, expenses, and fund balances for the year ended July 31, 1962.

The report, in order to be complete, should include a year-end balance sheet. It was not prepared, however, because accurate information on all accounts payable on July 31, 1962, was not available, nor was a means devised for accurately determining the accounts receivable, as the fiscal year does not coincide with the membership year.

Upon recommendation of the Executive Committee, the full amount of all royalties, plus interest thereon, accrued to the Society from the sale of ADVANCES IN GEOCHEMISTRY was withdrawn from the Operating Fund on July 27, 1962, and placed in a newly established Publication Fund. This action was taken to better meet the stipulation of the donors that the funds be used in the support of publications.

The total cost of operating the Society in fiscal year 1962 increased almost 30 per cent over the previous year, owing largely to increased costs of publishing the Geochemical News and the programs of the Annual Meeting. Fortunately, however, the actual income to the Society this year was up nearly 27 per cent over last year, largely through receipt of indirect costs on National Science Foundation grants for the translation of GEOKHIMIYA.

The financial condition of the Society at the end of the current fiscal year will depend a great deal on the outcome of the current balloting. Approval by the membership of all the proposed amendments will result in the expenditure of approximately $2500.00 over and above normal operating expenses, and an increase in income of about $2000.00. In addition, approximately $1500.00 already has been committed for the publication of an up-to-date membership list of the Society. This apparent deficit of about $2000.00 should be more than compensated, however, by an estimated additional income of $3000.00 from indirect cost on National Science Foundation grants.

PART I

REPORT OF THE TREASURER OF THE GEOCHEMICAL SOCIETY

To the Council of The Geochemical Society:

The treasurer's report covers the period beginning August 1, 1961, and terminating on November 15, 1961.

Receipts

	Amount
Dues	$ 416.00
Interest on Savings Account	243.00
Royalties from Abelson-Advances in Geochemistry	141.93
	$ 800.93

Day Book Receipts

Page	
241	$ 54.00
242	78.00
243	84.00
244	94.00
245	90.00
246	16.00
	$ 416.00

Detailed Account of Disbursements

Printing and Stationery	$ 196.52
Supplies and Stationery	6.25
Postage and Stamps	358.19
Secretarial Service:	
Secretary	71.00
Treasurer	130.00
Editor	95.00
Telephone (Editor)	10.15
Returned Checks	6.00
Addressograph Charges	52.50
The Geochemical News	783.31
Railway Express Agency	9.50
	$ 1,718.42

Assets

Balance Savings Account, August 1, 1961	$16,270.50
Balance Checking Account #33-1146-SS, August 1, 1961	2,856.04
Income from Dues	416.00
Royalties from Abelson-Advances in Geochemistry	141.93
Interest on Savings Account	243.00
	$19,927.47

Liabilities

Expenses Incurred in Conducting the Business of The Geochemical Society	$ 1,718.42
Transfer of Funds to the Translation Editor	3,150.00
Funds held for the Translation Editor	8,000.00
	$12,868.42
Balance as of November 15, 1961	7,059.05
	$19,927.47

Funds of the Society

Funds Held for the Translation Editor	$ 8,000.00
Balance as of November 15, 1961	7,059.05
	$15,059.05

Distribution of the Funds

Balance Savings Account, November 15, 1961	$13,513.50
Balance Checking Account, November 15, 1961	1,545.55
	$15,059.05

Funds for the Translation Editor

Balance as of August 1, 1961	$11,150.00

Disbursements

Funds to the Translation Editor	$ 3,150.00
Balance as of November 15, 1961 (in G 10,050)	8,000.00
	$11,150.00

PART II

STATEMENT OF INCOME, EXPENSES, AND CHANGES IN FUND BALANCES NOVEMBER 16, 1961 TO JULY 31, 1962

Operating Fund

Income

Dues	$ 3,350.99	
Royalties (Advances in Geochemistry	102.25	
Indirect Costs (NSF Grant G-19808)	1,000.00	
Interest on Savings Account	58.68	
Subscription to GCA. Included with Dues	10.00	
Total Income		$ 4,521.92

Expenses

Operational		$ 1,482.88	
Publications:			
The Geochemical News	640.31		
Programs for Annual Meeting	802.20		
		1,442.51	
Contribution to AGI		100.00	
Subscription to GCA. Included with Dues		10.00	
Total Expenses			3,035.39
Excess of Income over Expenses			$ 1,486.53
Transfer to Publication Fund (Note 1)			2,283.05
			$ (796.52)

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Fund Balance, November 16, 1961:		
Savings Account	$ 3,506.73	
Checking Account	1,545.55	
		5,052.28
Fund Balance, July 31, 1962:		
Savings Account	$ 1,384.61	
Checking Account	2,863.25	
Petty Cash	7.90	
		$ 4,255.76

Translation Fund

Fund Balance, November 16, 1961		$10,006.77
Transfer to Translation Editor:		
Balance of NSF Grant G-10050	$ 8,000.00	
Accrued Interest on All NSF Grants	2,006.77	
		10,006.77
Fund Balance, July 31, 1962		Nil

Publication Fund

(Note 1)

Fund Balance, November 16, 1961	Nil
Transfer from Operating Fund, July 27, 1962	$ 2,283.05
Fund Balance, July 31, 1962	2,283.05

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Total Fund Balance, July 31, 1962	$ 6,538.81

STATEMENT OF EXPENSES NOVEMBER 16, 1961 TO JULY 31, 1962

Operational:		
Addressograph Charges	$ 105.00	
Bank Charges	15.00	
Express and Shipping	20.00	
Miscellaneous	62.19	
Postage and Stamps	489.16	
Printing and Lithographing	208.09	
Secretarial Services:		
Secretary	38.00	
Treasurer	129.00	
Stationery and Supplies	416.44	
Total Operational Expenses		$ 1,482.88
Publications:		
The Geochemical News	$ 640.31	
Programs of the Annual Meeting	802.20	
		1,442.51
Contribution to AGI		100.00
Subscription to GCA included with dues		10.00
Total Expenses		$ 3,034.39

Note 1: Upon recommendation of the Executive Committee, the full amount of royalties, plus accrued interest, from the sale of ADVANCES IN GEOCHEMISTRY was transferred to the newly established Publication Fund on July 27, 1962.

PART III

SUMMARY STATEMENT OF INCOME, EXPENSES, AND CHANGES IN FUND BALANCES FOR THE YEAR ENDED JULY 31, 1962

Operating Fund

Income

Dues	$ 3,766.99	
Royalties (Advances in Geochemistry)	244.18	
Indirect Cost (NSF Grant G-19808)	1,000.00	
Interest on Savings Account	301.68	
Subscription to GCA Included with Dues	10.00	
Total Income		$ 5,322.85

Expenses

Operational		$ 2,417.99	
Publications:			
The Geochemical News	1,423.62		
Programs for Annual Meeting	802.20		
		2,225.82	
Contribution to AGI		100.00	
Subscription to GCA Included with Dues		10.00	
Total Expenses			4,753.81
Excess of Income over Expenses			$ 569.04
Transfer to Publication Fund (Note 1)			2,283.05
			$(1,714.01)

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Fund Balance, August 1, 1961:		
Savings Account	$ 3,113.73	
Checking Account	2,856.04	
		5,969.77
Fund Balance, July 31, 1962:		
Savings Account	$ 1,384.61	
Checking Account	2,863.25	
Petty Cash	7.90	
		$ 4,255.76

Translation Fund

Fund Balance, August 1, 1961		$13,156.77
Transfer to Translation Editor:		
Balance of NSF Grant G-10050	$11,150.00	
Accrued Interest on All NSF Grants	2,006.77	
		13,156.77
Fund Balance, July 31, 1962		Nil

Publication Fund

(Note 1)

Fund Balance, August 1, 1961	Nil
Transfer from Operating Fund, July 27, 1962	$ 2,283.05
Fund Balance, July 31, 1962	$ 2,283.05

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Total Fund Balance, July 31, 1962	$ 6,538.81

C. Wayne Burnham, Treasurer

REPORT OF THE AUDITING COMMITTEE

The Auditing Committee has examined the accounts of the treasurer of The Geochemical Society for the period of November 16, 1961 to July 31, 1962 and has verified the accuracy of the amounts as shown in his report.

The Auditing Committee, after conferring with the treasurer, concurs in his suggestion that the fiscal year of the Society be changed to coincide with membership year, January 1 to December 31.

John D. Ridge
Robert F. Schmaltz
Thomas F. Bates, Chairman

November 1, 1962

REPORT OF THE MEMBERSHIP COMMITTEE

We have attempted, entirely through correspondence, to consider the desirability of a membership campaign and the possible means for effecting such a program.

We are in agreement with the opinion of the Council, as expressed in November 1961, that the Society would be unwise to embark on any high-pressure effort to increase membership, especially if such an effort were motivated by the wish merely to expand the roster and to increase total income from dues. We also feel, however, that the Society has a continuing three-fold responsibility toward properly qualified persons (particularly newly graduated geologists, geochemists, chemists, etc.) who might be interested in membership:

(1) To make known to them the existence, aims, and activities of the Society.

(2) To outline the principal benefits of membership (e.g., reduced subscription rates for journals).

(3) To indicate the qualifications for membership and the procedure for joining the Society.

Much already has been accomplished through the publication in GeoTimes of Earl Ingerson's article on the history of the Society, but it also seems desirable to publish, from time to time, dignified announcements or advertisements similar to the one drafted last year for Acta Geochimica. These might well appear in one or more of the chemical journals as well as in those with a geo orientation. We also feel that an explanatory note appearing in each issue of The Geochemical News would be worthwhile.

We are divided on the suggestion of printing a poster to be displayed on bulletin boards at universities, research laboratories, and other organizations. Some of us are strongly in favor of this, but the opposing view, as expressed by one member of the Committee, is that "the best way to increase the membership is for individual members of the Society to interest other individuals in the Society and not through any formal announcements posted on bulletin boards...." This member, incidentally, urges that dues be increased significantly by the Society.

No membership applications involving special problems were referred to this Committee for consideration during the past year.

Wallace A. Broecker
Harvey C. Diehl
Chester B. Slawson
James E. Slosson
Richard H. Jahns, Chairman

REPORT OF THE STANDARDS COMMITTEE

The Standards Committee of The Geochemical Society, consisting of Michael Fleischer, Felix Chayes, George Tilton, John Maxwell, Gunar Kullerud, Frank Schairer, Roy Clark, and A. van Valkenburg, held four meetings during the past year. Dr. Henderson of the National Museum briefed the committee on the possibility of obtaining a meteorite that could be used as a reference standard. Problems concerning preparation, distribution, and financing a project of this type were explored. Dr. John Hague, Chief of the Standards Section of the National Bureau of Standards, also briefed the committee on the progress of the dolomite and limestone standards. At the present time the dolomite standard should be ready for distribution late this summer.

The G-1 standard is now exhausted and a new granite sample has been prepared and will be ready for distribution about the first of June. There will be more details concerning this sample in a later issue of the News.

The standard mica samples of K/A and Rb/Sr as prepared by Jäggar and all of the University of Bern, Switzerland, are now available for those doing work in age determinations. During the past year, approximately 25 samples were distributed.

The Standards Committee has received a letter from the chairman of the Organic Geochemical Group, asking about the possibility of organic standards. As there was no definite plan as to what is needed, the committee took no action other than to express a willingness to help out where it could.

A. van Valkenburg, Chairman

REPORT OF THE 1962 PROGRAM COMMITTEE

Forty-two papers on geochemistry were accepted for oral presentation at the November, 1962, meeting of The Geological Society of America in Houston, Texas. Twenty-three were included in the inorganic geochemistry sessions and five, because of their relation to ore genesis, were placed in the Economic Geology III session. The symposium on the Biogeochemistry of Organic Matter contained five invited papers. Nine other papers were included in the organic program. Approval for the symposium was obtained from the Council of The Geochemical Society in 1961 and the approval of The Geological Society of America was also secured at that time.

Six additional papers in inorganic geochemistry were listed by title, some by the author's choice, others at the discretion of the committee.

Requests were received after the preliminary printing of the program for the inclusion of three additional papers, one in late October. In spite of the urgency of the requests, these papers were refused, one with the understanding that should a last minute cancellation of a scheduled paper occur, it might be substituted in a related program. Such a substituted paper could not be included in the published abstracts in the GSA Bulletin.

At the request of Professor Garrels, no presidential address was included in the program.

Dr. David B. Stewart, who represented Dr. F.R. Boyd at the meeting of the Program Committee in New York, very kindly discussed with Dr. George Switzer, of the Program Committee of the Mineralogical Society of America, certain of the papers submitted in an effort to arrange an improved division of the experimental petrology papers between geochemistry and petrology sessions. The cooperation of these people is acknowledged. It served to make the task of the committee meeting in New York easier.

Dr. Paul A. Witherspoon, chairman of the Organic Group, very kindly arranged the program for the symposium and for the organic sessions and read many of the organic papers submitted for consideration. Dr. John M. Hunt, chairman-elect of the Organic Group, represented Dr. Witherspoon at the meeting of the Program Committee in New York.

I should like to thank all of the members of the various groups of our Society for their cooperation in arranging the program for this year's meeting.

Reynolds M. Denning, Chairman

REPORT OF THE EDUCATION COMMITTEE

Introduction

The undersigned accepted the appointment as chairman of the Education Committee early in 1961 with considerable trepidation (having been a member of this committee during a preceding period characterized by considerable "inactivity"). Only one stipulation was made and accepted; i.e., that the committee would not be expected to engage in time-consuming and sterile "statistical" compilations and evaluations.

After some delay caused by difficulties of proper communication, appointments of committee members were completed by the end of April 1961 as follows: Paul L. Cloke, The University of Michigan; Donald M. Henderson, University of Illinois; J. Lawrence Kulp, Columbia University; and John G. Woodruff, Colgate University. In November, 1961, J. Lawrence Kulp was replaced by John W. Winchester, M.I.T.

No formal committee meetings have been held to date, owing to the difficulty of getting all the widely separated members together in one place at one time. Informal discussions were held between the chairman and some committee members at the Cincinnati meeting in November, 1961, and are likely to be repeated at Houston next month.

The work has been carried on by fairly lengthy and detailed (ditto'ed) communications from the chairman, followed by individual written responses from the committee members.

Communications:	No. 1-61	Aug. 28, 1961
	No. 2-61	Oct. 17, 1961
	No. 1-62	Jan. 27, 1962
	No. 2-62	Mar. 14, 1962
	No. 3-62	Apr. 9, 1962
	No. 4-62	June 30, 1962
	No. 5-62	Oct. 15, 1962

This method has worked rather well on the whole and has resulted in some concrete achievements which have exceeded the chairman's fondest expectations.

Committee Project

Inception. From the very beginning, the committee was agreed on one basic point; i.e., . . . to concentrate its efforts on a single, significant project dealing with geochemical education, preferably with long-term implications.

Dr. F.R. Boyd indicated that "The purpose of the Committee is to advise the Council on ways in which the Society might promote the teaching of geochemistry on the high-school and college level". Taking our cue from this statement, it was decided to launch the preparation of an "Educational Series" of papers on as many aspects of geochemistry as possible, to be used in a concerted effort to

introduce this subject to teachers of geology, earth science, and chemistry on both the high-school and college levels.

Specifications for the preparation of suitable papers were prepared (see Appendix A following this report) and sent to committee members for distribution to prospective authors.

Progress to Date. The project was started quite accidentally when the chairman attended an excellent and stimulating symposium, "Geochemistry as Taught at the Undergraduate Level," presented by the National Association of Geology Teachers, Eastern Section, at its annual meeting at Colgate University on April 29, 1961. John W. Winchester, a panel member, not only agreed to prepare a paper entitled "The Ocean as a Chemical Buffer System" but delivered the completed manuscript in the remarkably short time of three and one-half weeks. It was mimeographed at The City College and included (through magnificent last-minute cooperation of the Department of Chemistry) in the program of the 1961 NSF Summer Institute for High-School Chemistry Teachers at The College.

The chairman undertook this experimental venture prior to his initial communication to the committee (August 18, 1961) and assumed full responsibility for it. Fortunately, the experiment was quite successful, considering the handicaps of hurried preparation and last-minute inclusion in a program organized and prepared months in advance. Written (voluntary) evaluations by 15 participants and 2 instructors, though critical of certain aspects, showed the kindling of considerable interest in the subject of geochemistry, although only a small aspect of it was presented.

By the fall of 1961 the entire committee began working on the project with remarkable vigor and enthusiasm, which has shown no sign of slackening.

At present three papers are completed and ready for distribution (in mimeographed form -- approximately 200 copies of each in stock at The City College):

1. "The Ocean as a Chemical Buffer System" by John W. Winchester, M.I.T. -- revised 20 May 1962.

2. "Geochemical Weathering of Rocks: Source of Raw Materials for Good Living" by W.D. Keller, University of Missouri. This paper was successfully used in the 1962 NSF Summer Institute for High-School Science Teachers (Chemistry and Earth Science) at The City College. This time, the geochemical topic was included in the early planning of the Institute program. Thirty-nine students and one instructor participated.

3. "The Geochemical Application of Eh-pH Diagrams" by Paul L. Cloke, The University of Michigan. Three copies of the manuscript are at hand and mimeographing will be undertaken shortly, pending some minor changes and corrections.

Publicity and Publication. The originally planned advertisement in GeoTimes, etc. has not been undertaken pending a decision on ways and means of making these papers available to teachers and other interested readers on the widest possible scale. It is the chairman's opinion that The Geochemical Society, under whose auspices the committee has been operating, should be consulted first in this matter. Specific proposals are submitted herewith.

Proposals

1. Proposed that The Geochemical Society underwrite the printing of the papers at hand and those to follow as part of a new "Educational Series of The Geochemical Society".

Initial edition of perhaps 3000 copies each, paper-covered, would be feasible (similar to "Contributions" published by many universities and research organizations).

Details concerning possible distinction between elementary and intermediate levels of treatment to be worked out.

Formal publication of these papers is considered essential by the authors (and the committee), who want to be able to list the fruits of their labor as part of their publication "output".

2. Proposed that the office of the editor of The Geochemical Society assume the responsibility of maintaining a stock of such printed papers and of distributing same (at a reasonable charge, if necessary).

It is realized that this is a thorny problem because effective distribution of these papers (whether printed by the Society or by professional magazines or commercial publishers) is an essential corollary to the success of our venture.

3. Proposed that the Education Committee be enlarged from five to six members (including the chairman) and that the present five members be reappointed effective November 1962 to November 1963.

The reason for this proposal is that the chairman wishes to retain Dr. Winchester on the committee (although "inactive" in 1962-63 while serving as a Fulbright professor in Taiwan) without decreasing the committee's full, working strength during this interval.

Proposals 1 and 2 are presented in the briefest outline form to permit The Geochemical Society to decide two basic issues:

1. Should the Society expand its publishing activities to include an "Educational Series"?

2. Should the Society undertake distribution of this Series regardless of the manner of publication?

Appendix A follows.

Kurt E. Lowe, Chairman

APPENDIX A TO REPORT OF EDUCATION COMMITTEE

Specifications for Educational Geochemical Series of Papers

1. Each topic chosen for this special series of geochemical papers
   a. Should deal with one specific, well-circumscribed, geochemical subject or principle.
   b. May be prepared on the high-school or college teacher's level. In each case, the intended level should be indicated in the sub-title together with the degree of difficulty (e.g., "introductory" or "intermediate"). The category "difficult" should not be used.
   c. Should be primarily directed toward the teacher but should also include material which is potentially suitable for use in the classroom.
2. Treatment of each topic should be based on the following criteria:
   a. Use of clear, concise language.
   b. Development of topic in easy-to-follow, step-by-step fashion.
   c. Avoidance of a large number of technical geological or geochemical terms together with concise definition of essential terminology employed.

d. Inclusion of pertinent, practical problems. Several should be worked out in detail; others should simply give the answer, leaving the solution to the student. The use of problems is considered to be an essential feature of the paper.

e. Limitation as to the length of papers is advisable. A maximum length of 10 double-spaced, typewritten pages is suggested.

3. Prospective authors are requested to submit the following information to any one of the five members of the committee:

a. Title of paper.

b. Intended level (high-school or college teacher) and degree of difficulty (introductory or intermediate).

c. Probable length of paper.

d. Date of completion (ultimate estimate).

4. The manuscript (together with four carbon copies, if possible) may be submitted to any one of the five committee members. The recipient will then distribute copies of the paper to all other committee members for review (the committee as a whole acting as editorial board).

Annotated copies will be sent to the chairman, who will act as coordinator. Minor corrections of English, etc. will be made without further consultation with the author.

If a majority of the committee deems substantive changes desirable, manuscript will be returned to the author for revision and preparation of final draft (to be returned directly to the chairman).

Chairman will arrange for duplication and will supply committee members with an adequate number of copies for distribution.

5. A partial list of suggested fields of geochemistry as well as specific topics which might be suitable for treatment in this series of papers follows:

a. Geochemical aspects of weathering.

b. Eh-pH in sedimentary environments.

c. Geochemical constitution of the earth's crust or of a specific geo-environment.

d. Distribution of minor trace elements in minerals.

e. Importance of minor trace elements in the development of fauna and/or flora with possible application to agriculture, conservation, etc.

f. Introduction to stereochemistry as a fundamental concept (particularly for high-school teachers). This vast subject would have to be treated with respect to a few specific examples.

g. Meaning and use of equilibrium diagrams.

h. Concept of solid solutions; their importance to particular problems of petrology or chemistry or technology.

i. Aspects of magmatic differentiation.

j. Concept of metamorphic facies or granitization.

REPORT ON THE GEOKHIMIYA TRANSLATION PROJECT

Current Status of the Translation. Issue 11 of the 12 that make up the 1961 volume is in the hands of subscribers. Issue 9 for 1962 has been received in this country, so the time lag is now 10 issues. This will be reduced considerably in the next few months because issues 12 for 1961 and 1 through 5 for 1962 are currently in various stages of translation, editing, and production.

Circulation. As of November 5th, the paid subscription list for the 1961 volume totaled 265. By comparison, 261 subscriptions to the 1960 volume, and 337 to the 1959 volume, have been sold. At least 26 individual volumes from the years 1956-1958 were also sold during the past year.

Financial Condition. A grant of $27,078 from the National Science Foundation has made it possible to continue this translation project for the 1962 volume year. It is estimated that $4,500 will be received from subscriptions and sales of back volumes. When combined, these funds will be adequate to produce the 1962 volume, and generate approximately $2,800 overhead for the Society.

Significant Changes during the Past Year. On April 24th, the Council appointed D.B. Stewart editor of the Geochemistry translation for a three-year term. New abstracts are now being prepared for many articles, an attempt is being made to improve the quality of literature citations in the references, and the original pagination is noted in each article.

The subscription price for the 1962 volume has been raised to $15 for individuals who are members and to educational institutions, and to $25 for others. Single copy prices remain the same at $2 and $4, respectively. The number of issues per volume and pages per volume was increased by 50 per cent in the 1961 volume; the subscription price increase was necessary to generate an amount of revenue approximately equal to the cost of printing and distributing the volume, and thus to maintain a more satisfactory balance between subsidy and revenue. Printing costs were reduced by reducing the press run from 1000 to 600 copies.

An enlarged, subsidized, promotional effort has been undertaken to increase the circulation of the translation and to make these geochemical papers more widely available. The handling of subscriptions and renewal notices has been placed in the hands of the sub-contractor, and the handling of financial matters has been assigned to the Society's treasurer to free the editor for further efforts to improve the speed and quality of the translation, and to enable him to direct the more vigorous promotional effort. Special thanks are tendered to Pergamon Press and to the editor of the Geochemical News for their cooperation in publicizing Geochemistry, and to the AGI for assistance with promotional materials and mailing lists.

Other Items. The editor represented The Geochemical Society at a NSF conference of professional society representatives engaged in translation programs held at Syracuse University's Conference Center November 7-9, 1962.

The editor wishes to thank Professor Earl Ingerson for his assistance in many phases of the operations of the Geokhimiya project during the past year.

D.B. Stewart,
Editor of Geochemistry

BOOK REVIEWS

STATISTICAL ANALYSIS IN THE GEOLOGICAL SCIENCES, by R.L. Miller and J.S. Kahn. xi + 483 pages. John Wiley and Sons, Inc., New York 16, N.Y. $12.75.

This book is noteworthy in being the first in statistics illustrated entirely by geological examples. The coverage includes the standard topics of probability, moments and expectations, statistical testing of hypotheses, univariant and multivariant analysis. Emphasis is given multivariant regression analysis in application to regression surfaces and analysis of correlation matrices.

Geochemists will find the book useful as a handy reference to statistical testing of interrelationships among chemical variables in multivariant systems, the usual realm of the geochemical data. There are numerous references to geological examples that include geochemical data.

I hope that future editions include a composite publication reference list (rather than disseminated footnotes), and that the index is made more exhaustive.

Louis I. Briggs

THE SYSTEM OF MINERALOGY OF JAMES DWIGHT DANA AND EDWARD SALISBURY DANA, Vol. III, "Silica Minerals," 7th Ed., revised and enlarged by Clifford Frondel. xii + 334 pages. John Wiley and Sons, Inc., New York and London, 1962. $7.95.

Volume III of this Seventh Edition of THE SYSTEM OF MINERALOGY was originally planned to include all silicates but has been devoted entirely to the silica minerals. All other silicates will be described in two additional volumes. Some two hundred and fifty pages are devoted to low-quartz alone, the remainder covering high-quartz, tridymite, cristobalite, opal, keatite, coesite, stishovite, and siliceous glasses.

The format of mineral descriptions is similar to that of past editions, with the following major changes: 1) Brief descriptions and presentation of data have been replaced by detailed descriptions with a much more readable style. 2) A separate reference list is presented for each subdivision of the description of quartz. 3) Results of x-ray diffraction are emphasized, including descriptions of powder patterns, a particularly detailed account of the accuracy and significance of the unit-cell parameters of quartz, reproduction of a diffractometer pattern of quartz, and descriptions of the crystal structures of each phase. Unfortunately the structure diagrams are not drawn so that their full significance may be appreciated, particularly with respect to polytypism.

Of particular interest is the trend toward a crystal chemical treatment of mineral relations. Morphological crystallography (particularly with respect to twinning), historical information, descriptions of varieties of quartz, and general descriptions of physical properties are still stressed, however.

Whether or not the silica minerals deserve so lengthy a description relative to other important mineral groups is questionable. There is no doubt, however, that this volume will be well received by those mineralogists who use the SYSTEM as their standard reference text.

Donald R. Peacor

SPECTRAL WELL LOGGING: GEOCHEMICAL STUDIES OF SEDIMENTARY ROCKS, by B.Ye. Kudymov. Russian text edited by V.A. Sokolov, translated by Paul T. Broneer. 77 pages, 17 figures, 9 appendices. Elsevier Publishing Co., Amsterdam and New York, 1962.

This book is a critique of emission spectrochemical examination of sedimentary rocks. While the first chapter lays the theoretical foundation for quantitative analysis, the actual studies undertaken use the more rapid (hence less expensive) expedient of controlling arcing and developing conditions, then plotting uncalibrated spectral line densities and line density differences, roughly proportional to log concentrations and log concentration ratios, respectively.

Spectral line density logs from nine wells are figured. Much of the book is a commentary on the vertical stratigraphic variation of major and trace element contents shown by these logs. No well-to-well correlations based solely on these curves are explicitly stated, nor are any lithologic or geophysical logs of these wells included for comparative purposes, both disappointing omissions. Kudymov finds that spectral analysis is a good method for revealing the degree of dolomitization of limestones. The spectral curves reflect strongly the mineralogy of the strata, but reveal geochemical heterogeneity in some otherwise indivisible strata. The text in its present condition is no model of clarity: in the absence of an original, one is not sure whether to chide the author or translator or both for certain apparent contradictions of text with charts or logs.

A short routine chapter on the observed geochemical behavior of elements in these logs is included. Its brevity reflects our lack of understanding of the details of principles governing element distributions. Spectrochemical logging will not be fully utilized until we learn more about the relationship of chemical composition to depositional and diagenetic environment.

The nine appendices report on quantitative spectrographic analyses of related sediments. Of the elements considered, only V and Ni show a significant correlation.

David G. Nussmann

GEOCHEMISTRY IN MINERAL EXPLORATION, by H.E. Hawkes and J.S. Webb. xiv + 415 pages. Harper's Geoscience Series, Harper & Row, Publishers, New York and Evanston, 1962.

This book is by no means a mere enlargement of Hawkes' 1957 work on the same subject, but the two are basically similar in that they employ the "principles" approach. Many examples are cited to demonstrate observed relationships, but no attempt is made to make this volume an exhaustive compilation of detailed facts about each element. A considerable amount of information is summarized in tabular and schematic diagrams. An appendix and accompanying bibliography are a convenient reference to the literature through 1960.

A third of the book consists of an introduction to the basic problem of geochemical surveys and a review of the background of sedimentation, weathering, soil formation, and primary and secondary geochemical processes necessary for an understanding of the material to follow. The treatment of background material is, of necessity, brief. The chapter on soils is a particularly useful précis of the field.

Another third of the chapters describes geochemical anomalies and their relationships to mineralization. After a general consideration of secondary

dispersion patterns, the authors treat in turn anomalies in residual overburden, transported overburden, natural waters, and drainage sediments.

The remainder of the chapters deal with the detection of anomalies. The techniques and problems particular to rock, soil, geobotanical, and drainage surveys are given separate treatment. A short chapter evaluates various procedures for trace element analysis in the laboratory and in the field. A discussion of the incorporation of geochemical prospecting into comprehensive mineral exploration programs is followed by three detailed examples.

The book's adherence to the "principles" approach and its emphasis on examples from the literature of the Western countries make it a useful complement to Ginsburg's PRINCIPLES OF GEOCHEMICAL PROSPECTING.

David G. Nussmann

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WOLFENDALE, A.W. Cosmic rays. ix + 222 pages. Philosophical Library Inc., New York 16, N.Y. $10.00.

CALENDAR

June

19-26 Geochemical Soc., Organic Geochemistry, European Sec., Frankfurt am Main, Germany.

24-28 Symposium on Computers in the Mineral Industries, Stanford Univ. in cooperation with the Univ. of Arizona.

July

2-5 6th Internatl. Symposium on Free Radicals, Cambridge, Eng. Write: Maj. C.J. Donovan, AFOSR, SREP, Washington 25, D.C.

July

8-9 Symposium on Degradation of Lignin in Geological Environments, London, Eng., sponsored by Com. on Geochemistry of IUPAC. Write: I.A. Breger, U.S. Dept. of the Interior, Geological Survey, Washington 25, D.C.

8-13 6th Internatl. Symposium on Ionization Phenomena in Gases, Paris, France. Write: ARL, Attn. R.M. Ammann, ARH, Wright-Patterson AFB, Dayton, Ohio.

22-27 Internatl. Molecular Spectroscopy Cong., Hungarian Acad. Sci., Budapest, Hungary. Write: Hungarian Travel Information, 595 Madison Ave., New York 22, N.Y.

Aug

7-9 12th Ann. Conf., Applications of X-ray Analysis, Albany Hotel, Denver, Colo. Write: W.M. Mueller, Head, Metallurgy Div., Research Div., Univ. of Denver, Denver 10, Colo.

12-16 Internatl. Clay Conf., sponsored by Internatl. Com. for Study of Clays and the Swedish Soc. for Clay Research, Stockholm, Sweden. Write: Dr. Poul Graff-Petersen, Mineralogisk-Geologisk Institut, Ostervoldgade 7, Copenhagen, Denmark.

12-13 6th Ann. Spectroscopy Conf., Albany Hotel, Denver, Colo. Write: Fred Ward, U.S. Geological Survey, Bldg. 25, Federal Center, Denver 25, Colo.

19-31 13th Gen. Assembly, Internatl. Union Geodesy and Geophysics, Berkeley, Calif. Write: Georges Laclavere, Sec. Gen., 53, av. de Breteuil, Paris 7e, France.

Sept.

8-9 Internatl. Symposium on High-Temperature Technology, sponsored by Stanford Research Inst. Write: Dept. 493, Stanford Research Inst., Menlo Park, Calif.

ION EXCHANGE COLUMN

A Symposium on the Degradation of Lignin in Geological Environments will be held in London, England, July 8 and 9, in conjunction with the XXII Conference of the International Union of Pure and Applied Chemistry. The symposium, sponsored by the Commission on Geochemistry of that Conference, will include papers on the biosynthesis and constitution of lignin, its chemical and microbial degradation, and interrelationships between lignin and humic substances, soils, coals, and shale constituents (kerogen). It is also hoped that there will be contributions on organo-metallic and organo-clay associations, and trace element accumulations, where the role of lignin can be clearly defined.

A number of contributions to the symposium have already been received, and additional papers will be considered for presentation. Abstracts should be sent to the undersigned at the earliest possible date. Those who wish to attend without presenting papers will be most welcome. It is requested that they send notice of their intention to the undersigned.

Please call this symposium to the attention of all those who might possibly be interested. Further information will be sent to those who indicate that they plan to be present.

The following papers are now scheduled for delivery:

BURGES, N.A., H.M. HURST, and B. WALKDEN, Hartley Botanical Labs., The University, Liverpool, Eng.: The phenolic constituents of humic acid and their relation to the lignin of the plant cover.

DUBACH, P., J.R. Geigy Co., Switz.: Title not yet received; paper on extraction, isolation, fractionation, degradation, and functional group analysis of soil humic substances; also organic-inorganic interactions.

FARMER, V.C. and R.I. MORRISON, Macaulay Inst. for Soil Research, Aberdeen, Scot.: Lignin in peats and peat-forming plants.

NORD, F.F., Fordham Univ., New York, U.S.A.: Formation of lignin and its biochemical degradation.

STEELINK, D., Univ. of Arizona, Tucson, U.S.A.: Free radical studies of lignin degradation products and soil humic acids.

SZALAY, A., Inst. for Nuclear Research, Debrecen, Hungary: Cation exchange properties of humic acids and their importance in the geochemical enrichment of UO_2++ and other cations.

TOURTELOT, H., U.S. Geological Survey, Denver, Colo.: Minor element content of marine and non-marine shales of the same age.

ZIECHMANN, W., Agrikulturchemisches Institut, Universitat, Gottingen, Germany: Spectroscopic studies of lignin, humic substances, and peat.

Several additional papers are still in the negotiating stage. All papers will be oriented to the "degradation of lignin" theme. Additional information can be obtained by contacting the undersigned.

Irving A. Breger
U.S. Geological Survey
Washington 25, D.C.

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After two years as Professeur Associé of the Centre National de la Recherche Scientifique at Nancy, France, Dr. Friedrich Leutwin will remain as Directeur de Recherches in the fields of geochemistryand geochronology.

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Sand-in-the-Gears-of-Learning Department

What could be cuter
Than to feed a computor
With wrong information
But naive expectation
To obtain with precision
A Napoleonic decision?

--Maj. Alexander P. de Seversky

- - - - - - - - - - - - -

From that inexhaustible source of Selected Daffynitions, the Final Exam

"isotope" -- similar to a lithotope but containing mainly glacial sediments

"mass-wasting" -- the gravity movement of the side-slops

"facies" -- Student A: planes on a mineral or element
Student B: a concept of mass-wasting which crosses time lines

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PLEASE NOTE!!

Those members who have recently moved, or are about to move, and wish to have the Geochemical News sent to their new addresses should send the change of address directly to the secretary of the Society, Dr. Frances R. Boyd, Jr., Geophysical Laboratory, Washington 8, D.C. Please do not send the new address to the editor, as this will only delay receiving the Geochemical News at the new address.

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Inquiries concerning dues should be sent directly to the treasurer, Dr. C. Wayne Burnham, Department of Geology, Pennsylvania State University, University Park, Pa.

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As always, your communications of news and clastic contributions to the Sand-in-the-Gears-of-Learning Department (however angular and sordid) are heartily encouraged and most welcome in the editor's office.

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!!BEST WISHES FOR A SUCCESSFUL FIELD SEASON!!

William C. Kelly
Editor

Department of Geology and Mineralogy
The University of Michigan
Ann Arbor, Michigan

GEOCHEMISTRY

A Translation of

ГЕОХИМИЯ

CONTENTS OF FORTHCOMING ISSUE

No. 7, 1962

Published by

The Geochemical Society

TRANSLATED AND PRODUCED BY *scripta technica, inc.*

1200 PAGES IN 1962 VOLUME

VOLUMES FOR 1956–1961 ARE AVAILABLE

FOR INFORMATION REGARDING SUBSCRIPTION TO GEOCHEMISTRY (ENGLISH TRANSLATION OF GEOKHIMIYA) AND FOR FREE SAMPLE COPY WRITE TO SCRIPTA TECHNICA, INC., 1000 VERMONT AVE., N.W., WASHINGTON 5, D.C.

SOME OF THE PAPERS SOON TO BE PUBLISHED IN

GEOCHIMICA ET COSMOCHIMICA ACTA

JOURNAL OF THE GEOCHEMICAL SOCIETY

March 1963

Claude Huffman, Jr., H.H. Lipp and L.F. Rader: Spectrophotometric determination of micro quantities of zinc in rocks

J.R. Richards: Isotopic composition of Australian leads - III Northwestern Queensland and the Northern Territory - A reconnaissance

Kurt Fredriksson and Robert Gowdy: Meteoritic debris from the Southern California desert

Kurt Fredriksson and L. Robbin Martin: The origin of black spherules found in Pacific islands, deep-sea sediments, and Antarctic ice

L. Greenland and J.F. Lovering: The evolution of tektites: elemental volatilization in tektites

Reed Knox, Jr.: The microstructure of several stony meteorites

L. Greenland: Zinc in the standard rocks G-1 and W-1

R.F. Mueller: A comparison of oxidative equilibria in meteorites and terrestrial rocks

P.M. Hurley, J.M. Hunt, W.H. Pinson and H.W. Fairbairn: K-Ar age values on the clay fractions in dated shales

Geochemical Note:

D.F.C. Morris and D.N. Slater: Hafnium in the rock G-1 determined by neutron-activation analysis

Letter to the Editors:

Stefan Loewengart: Some geochemical aspects of the Dead Sea and the question of its age

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April 1963

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