



The Geochemical News

NUMBER 47

June 1968

THE GEOCHEMICAL SOCIETY COUNCIL MEETING

New Orleans, Louisiana

November 19, 1967

The Council met between 2:30 and 8:00 p.m., November 19, 1967, at the Red Oak Room of the Roosevelt Hotel, New Orleans.

Present: Patrick M. Hurley, presiding; R. G. Bader, Paul Barton, Jr., E. Chao, Paul L. Cloke, Paul E. Damon, G.W. Ernst, B. J. Giletti, Donald Graf, H. D. Holland, R. M. Honea, A. A. Levinson, K. E. Lowe, H. F. Lucas, Jr., K. J. Murata, E. F. Osborn, Edwin Roedder, J. B. Thompson, P. Toulmin, III, K. K. Turekian, and J. R. Vallentyne.

REPORT OF OFFICERS

Secretary's Report: From January to November 1967, 107 new members joined the Geochemical Society; 33 are from abroad. The total membership as of November 1967 is 2002. Of these, 1447 are from the U.S., 121 from Canada, 32 from Central and South America, and 402 from other countries. The membership of the Organic Geochemistry Division is 273.

The Society has continued to send the GSA Circulars I and II and the Annual Meeting program to members of our Society who are not members of GSA. This year 545 GSA Circular I's were mailed: 372 to domestic, 42 to Canadian members, and 131 to members abroad. A total of 593 GSA Circular II's were mailed: 390 domestic, 45 to Canada, and 158 abroad. A total of 589 GSA Annual Meeting programs were mailed: 393 to domestic members, 46 to Canada, and 150 abroad. The mailing of the programs was done by the Lane Press under instructions passed on to GSA. Last year the estimated cost of the program was about \$2.00 each.

The mailing of dues notices, The Geochemical News, and ballots was handled by AGI as in previous years, since the addressographs of the Society are kept at AGI. AGI is still seeking ways and means of converting to a central mailing system. The principal problem seems to lie in the cost and funding of converting the present system to a central mailing system. Linn Hoover of AGI indicated that an informal report on implementing this conversion to the central mailing system will be available within a month.

E. C. T. Chao, Secretary

Treasurer's Report: The dues increase initiated during the past year has resulted in a marked improvement in the financial position of the Society. For the first time in three years there has been an excess of income over expenses, and fund balances have increased by approximately \$1300 over the previous year.

Active membership has remained pretty much constant, with 107 new members, 96 resignations, and a total of 9 members lost by death. However, an additional 86 members have been dropped from the rolls for non-payment of dues (2 years or more in arrears). This latter action is in accord with the By-Laws of the Society, and will be followed each year at the time of dues mailings.

Russell M. Honea, Treasurer

STATEMENT OF INCOME, EXPENSES AND CHANGES IN FUND BALANCES

for the period

JANUARY 1, 1967 TO DECEMBER 31, 1967

Operating Fund

Income:

Dues	\$8,818.02	
Interest on savings account	80.40	
Reprint sales (Educational Series)	<u>72.45</u>	
Total income		\$8,970.87

Expenses:

American Geological Institute assessment	\$1,360.39	
Mailing services (AGI)	1,010.24	
Programs and circulars (GSA)	339.90	
Geochemical News	968.12	
Executive Editor	1,250.00	
Secretarial services:		
Treasurer	891.00	
Secretary	486.00	
Printing charges	617.24	
Miscellaneous	74.63	
Bank charges	44.99	
Postage and telephone charges	155.03	
Reprint costs (<u>Journal of Geological Education</u>)	<u>737.27</u>	
Total expenses		\$7,934.81

Excess income over expenses \$1,036.06

Publication Fund

Income:

Royalties	\$ 92.10	
Interest	<u>172.69</u>	
Total income		\$ 264.79

Expenses:

None		
Excess income over expenses		\$ 264.79

BALANCE SHEET

December 31, 1967

ASSETS

Operating Fund:

Cash on hand and in banks	\$6,191.70	
Accounts receivable	<u>000.00</u>	
		\$6,191.70

Publication Fund:

Savings account	<u>\$3,786.77</u>	
Total assets		<u>\$9,978.47</u>

LIABILITIES

Operating Fund:

Balance of 1966 American Geo- logical Institute assessment	\$ 956.80	
Members' equity	<u>5,234.90</u>	
		\$6,191.70

Publication Fund:

Account balance	<u>\$3,786.77</u>	
Total liabilities		<u>\$9,978.47</u>

FUND BALANCES

As of January 1, 1967:

Operating fund:

Savings account	\$1,662.61
Checking account	3,491.78
Petty cash	
Treasurer	1.25

Publication fund:

Savings account	<u>3,521.98</u>	
Total		\$8,677.62

As of December 31, 1967:

Operating fund:

Savings account	\$1,743.01
Checking account	4,447.94
Petty cash	
Treasurer	0.75

Publication fund:

Savings account	<u>3,786.77</u>	
Total		\$9,978.47

Net increase in fund balances		\$1,300.85
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COMMITTEE REPORTS

Auditing: The Auditing Committee has examined the accounts of the Treasurer for the period January 1, 1967, to December 31, 1967, and has verified the accuracy of the statements and amounts shown in his report.

W. Warren Longley
Harold W. Miller
Ernest E. Wahlstrom, Chairman

Nominating: The Nominating Committee proposes the following slate of officers for the periods indicated:

Vice-President (1969-70)	K. B. Krauskopf, Stanford.
Treasurer (1969-72)	B. B. Hanshaw, U.S.G.S., Washington D.C.
Councillors (1969-71)	D. R. Wones, M.I.T. G. Arrhenius, La Jolla.

The individuals nominated have agreed to let their names stand. The Committee wishes to recommend the following procedure in selecting the Nominating Committee in the future.

- a. The chairman should change each year, being drawn from the committee membership.
- b. One member should be appointed from outside North America to help preserve the international character.

R. E. Folinsbee
 D. R. Lewis
 J. F. Lovering
 H. Shaw
 D. M. Shaw, Chairman

(Editor's Note: Nominees may be added by submitting 15 signatures with a nominating petition.)

Program: There has been no great change in the number and kind of geochemistry sessions scheduled for this Annual Meeting of the Geological Society of America. This can be seen from the comparison of the 1966 and 1967 meetings given in the table below.

<u>Sub-classification</u>	<u>1966 Meeting</u>		<u>1967 Meeting</u>	
	<u>Sessions</u>	<u>Papers</u>	<u>Sessions</u>	<u>Papers</u>
General Geochemistry	3	34	2 1/2	20
Organic Geochemistry	1	6	3	27
Geochronology	1 1/2	15	1	12
Isotope Geology	1	9	1	12
Extra-Terrestrial Geology	<u>2</u>	<u>17</u>	<u>1</u>	<u>11</u>
Totals	8 1/2	81	8 1/2	82

The most apparent differences consist of a significant decrease in the number of General Geochemistry papers and Extra - Terrestrial Geology papers with a great increase in the number of Organic Geochemistry papers. The increase in the Organic Geochemistry sessions is primarily, but not exclusively, a result of the full day "Organic Geochemistry in the Oceans" symposium.

The Geochemical Society again took responsibility for the shepherding of Extra-Terrestrial Geology in accordance with the expressed consensus of the membership present at the 1966 Annual Business Meeting. In keeping with the consensus, no effort was made to stimulate organization of symposia.

During the recent Technical Program Committee Meeting a number of problems arose which the new Secretary of the Geochemical Society and I had to cope with as best we could. Dr. Roedder took the responsibility to write to our President, Konrad Krauskopf, listing these problems and suggesting solutions to them.

Paul E. Damon, Chairman

Tellers: The Teller's Committee has examined all of the ballots received to date and reports the following results.

Ballots received, total		742
Ballots invalidated		
Received after deadline	5	
Unsigned	<u>6</u>	
Total		<u>11</u>
Ballots included in tally		731

The results of the count are:

President	Elburt F. Osborn	677
Vice-President	James B. Thompson, Jr.	681
Secretary	Edwin Roedder	674
Councilors	Donald L. Graf	713
	Edward Anders	687

In addition to these votes, other names were proposed for the various offices. No other name received more than two votes. Totals were:

President	6
Vice-President	4
Secretary	4
Councilors	14

The total votes shown do not correspond to the total number of ballots counted because some members chose to vote for only some offices. In addition, there were 12 ballots on which no vote was recorded. Several of these contained complaints to the effect that this was not an election as only one slate of candidates was offered.

No amendments or other issues were voted upon in this election.

This Committee wishes to make two recommendations. First, a printed as well as a signed name on the outside of the ballot clearly facilitated the checking of the ballots. This should be a continuing practice. Second, 36 ballots were received with the boxes marked where an alternative to the President, Vice-President, and Secretary might be written in. No name was offered. We believe that some of these were meant as votes for the nominated candidates and that the format of the ballot resulted in confusion. The boxes marked also come directly after the names of the nominees. We recorded these as no votes for those three offices, but doubt this was the intent of the voters. A clearer format for the ballot is indicated.

F. Donald Eckelmann
Richard A. Yund
Bruno J. Giletti, Chairman

(Editor's Note: During discussion of this report it was noted that most members may not be aware of the procedure for adding names to the ballot. A nomination from the membership requires only 15 signatures.)

Standards: The field of geochemical standards became active again in 1967. Chemical, spectrochemical, and modal analyses of six rocks were published in the March 1967 issue of Geochimica et Cosmochimica Acta to introduce the samples prepared by the U.S. Geological Survey. The geographical distribution of requests for these samples is shown in Table I. It is hoped that a compilation of data on G-1, W-1, and the six new rocks can be published in Geochimica et Cosmochimica Acta in the Fall of 1968. The U.S. Geological Survey will continue to process samples on hand and will announce by publication the availability of their data.

The National Bureau of Standards has renewed activity for standards of interest to the earth scientist. The April 1, 1967, issue of quarterly insert sheets for U.S. National Bureau of Standards Misc. Publ. 260 lists the analyses of two feldspar (70a and 99a) and two limestone (1b and 88a) replacements. For those who may not receive the insert sheets, the analyses and other data are given in Table II.

In News for Users of NBS Standard Reference Material (No. 2, April 1967), the U.S. National Bureau of Standards announced the early stages of preparation of: (1) a series of glass standards with a number of trace elements added in a graded series at the 500, 50, 1, and 0.02 ppm levels plus the base glass; and (2) a plastic and a flint clay. At a meeting of the Baltimore-Washington Section of the Society for Applied Spectroscopy held at the National Bureau of Standards on October 24, 1967, J. P. Cali mentioned the possibility of an artificial seawater standard to be distributed as weighed amounts of salts which could be diluted to volume with distilled water to make the standard.

The Geological Survey of Japan is processing a granodiorite (JG-1) and a basalt (JB-1), and the CAAS, now the Spectroscopy Society of Canada, is processing a gabbro. It is assumed that the availability of these samples will be announced by publication of data by the issuing organizations.

A. A. Levinson, Executive Editor of Geochimica et Cosmochimica Acta, requested the chairman of this Committee to poll its members for their views on: (1) whether analytical data on standards should be published in Geochimica et Cosmochimica Acta, and if so, requested criteria for acceptance; and (2) the standards for which compilations should be published. A majority of the Committee voted to accept compilations on all well-known international standards, and the members voted unanimously that there must be some restrictions on the acceptance of papers containing data on standards. All members agreed in principle with the editorial policy for papers on standards that was published on page 1213 of the July 1967 issue of Geochimica et Cosmochimica Acta.

Bruce Doe of the Committee has suggested: (1) a reference sample of quartz, (2) an isotopic reference, with a sulfide being preferred to oxygen because of the possible re-equilibration of the latter with the oxygen in oxides or silicates, and (3) a reference for fluid inclusions. Edwin Roedder believes that fluid inclusions, even in the same specimen, are too variable in composition and that the preparation of such standards may be of questionable value. The U.S. Geological Survey has some stock of Brazilian quartz that it hopes to process in the future.

TABLE I: Distribution of Requests for U.S. Geological Survey Samples
(Geochimica et Cosmochimica Acta, 31, 289, 1967)

State	United States		Country	Foreign	
	Number	% of U.S.		Number	% of non-U.S.
Alabama	0	-	Australia	21	9.3
Alaska	0	-	Austria	2	0.8
Arizona	5	3.0	Belgium	3	1.3
Arkansas	0	-	Bolivia	1	0.4
California	34	20.1	Brazil	3	1.3
Colorado	2	1.2	Bulgaria	2	0.8
Connecticut	4	2.4	Canada (prov.) (30)		(13.1)
Delaware	0	-	Alberta	5	2.2
D. C.	4	2.4	Manitoba	2	0.8
Florida	1	0.6	New Brunswick	1	0.4
Georgia	4	2.4	Nova Scotia	2	0.8
Hawaii	1	0.6	Ontario	14	6.2
Idaho	1	0.6	Quebec	6	2.7
Illinois	4	2.4	China (Taiwan)	2	0.8
Indiana	3	1.8	Cyprus	1	0.4
Iowa	0	-	Czechoslovakia	1	0.4
Kansas	2	1.2	Denmark	1	0.4
Kentucky	1	0.6	Egypt	1	0.4
Louisiana	2	1.2	England-Wales	43	19.1
Maine	0	-	Ethiopia	2	0.8
Maryland	2	1.2	France	12	5.3
Massachusetts	7	4.1	Germany (E)	3	1.3
Michigan	1	0.6	Germany (W)	13	5.8
Minnesota	1	0.6	Iceland	1	0.4
Mississippi	1	0.6	India	8	3.6
Missouri	5	3.0	Iran	1	0.4
Montana	1	0.6	Ireland	1	0.4
Nebraska	0	-	N. Ireland	1	0.4
Nevada	5	3.0	Israel	3	1.3
New Hampshire	2	1.2	Italy	9	4.0
New Jersey	4	2.4	Japan	11	4.9
New Mexico	0	-	Mozambique	1	0.4
New York	11	6.5	Netherlands	5	2.2
North Carolina	1	0.6	New Zealand	6	2.7
North Dakota	0	-	Nicaragua	1	0.4
Ohio	7	4.1	Norway	4	1.8
Oklahoma	2	1.2	Pakistan	1	0.4
Oregon	4	2.4	Portugal	1	0.4
Pennsylvania	10	5.9	Rhodesia	1	0.4
Rhode Island	1	0.6	Russia	1	0.4
South Carolina	2	1.2	Saudi Arabia	1	0.4
South Dakota	0	-	Scotland	8	3.6
Tennessee	1	0.6	South Africa	9	4.0
Texas	20	11.8	Sweden	3	1.3
Utah	1	0.6	Switzerland	5	2.2
Vermont	0	-	Tanzania	1	0.4
Virginia	5	3.0	Venezuela	1	0.4
Washington	5	3.0			
West Virginia	1	0.6	U.S. sub-total	169	57.1*
Wisconsin	1	0.6	Foreign sub-total	225	
Wyoming	0	-	Grand total	394	
		42.9*			

*percentage of grand total

TABLE II:

	<u>Soda Feldspar</u>	<u>Potash Feldspar</u>	<u>Argillaceous Limestone</u>	<u>Dolomitic Limestone</u>
U.S. Natl. Bur. Standards No.	99a	70a	1b	88a
SiO ₂	65.2	67.1	4.92	1.20
Al ₂ O ₃	20.5	17.9	1.12	0.19
Fe ₂ O ₃	0.065	0.075	0.75	0.28
MgO	-	-	0.36	21.3
CaO	2.14	0.11	50.90*	30.15
Na ₂ O	6.2	2.55	0.04	0.01
K ₂ O	5.2	11.8	0.25	0.12
TiO ₂	0.007	0.01	0.046	0.02
P ₂ O ₅	-	-	0.08	0.01
MnO	-	-	0.20	0.03
CO ₂	-	-	40.4	46.6
BaO	0.26	0.02	-	-
SrO	-	-	0.14	0.01
Rb ₂ O	<u>0.02</u>	<u>0.06</u>	<u>-</u>	<u>-</u>
SUM	99.59	99.62	99.21	99.92
Loss on ignition	0.26	0.40	41.1	46.7
Approx. weight of sample, grams	40.	40.	40.	40.
Cost per sample	\$10.00	\$10.00	\$12.00	\$12.00

*Reported by NBS as 5.09, evidently in error.

Suggestions for possible geochemical standards are solicited from the members and may be directed to the Committee. These suggestions should include such details as the best location and who could, should, or would process the sample.

Francis J. Flanagan, Chairman

Education: It is with much regret that I present this final report after having served as chairman of the Education Committee since 1961. Unfortunately, my heart attack of last March not only made it advisable for me to relinquish the chairmanship but was also (in part) responsible for a year of little progress.

Even before my illness, however, the Committee had virtually ceased to function as an effective work group. As reported last year, one member had retired from active teaching, one (representing the Organic Geochemistry group) had completely failed to cooperate and two were on sabbatical leaves (one to December 1966 and the other to September 1967). Thus a single member, besides the chairman, was theoretically still "active." My urgent appeal before the Geochemical Society meeting at San Francisco (November 16, 1966) for qualified and interested geochemists to serve on the Education Committee fell on deaf ears.

On October 31, 1966, just prior to the San Francisco meeting, I sent a communication to the five individuals nominally comprising the Committee, in which I presented specific proposals submitted by four prospective authors for papers to be included in the Educational Series on Geochemistry. I asked for comments on each by return mail, because one of the principal Committee functions had been to act as Editorial Board for Series publications. To this day, I have not received a single reply or comment. Thus the Committee must share the blame for failing to approve and support the preparation of additional articles for publication in 1967.

RESUMÉ OF PUBLICATIONS OF THE EDUCATIONAL SERIES ON GEOCHEMISTRY

The Journal of Geological Education has published four papers of the Series:

- E.S.G. 1. "Geochemical Weathering of Rocks: Source of Raw Materials for Good Living" by W. D. Keller (February 1966), 6 pages.
- E.S.G. 2. "The Geochemical Application of Eh-pH Diagrams" by Paul L. Cloke (October 1966), 9 pages.
- E.S.G. 3. "Terrestrial Heat Flow, Radioactivity, and the Chemical Composition of the Earth's Interior" by John W. Winchester (December 1966), 5 pages.
- E.S.G. 4. "The Advantage of Using pE Rather Than Eh in Redox Equilibrium Calculations" by A. H. Truesdell (February 1968), 4 pages.

Each article in the form of a reprint (3000 per article) with attractive semi-hard cover is available for purchase from Dr. Paul L. Cloke, Editor, The Geochemical News, 2051 Natural Science Building, Ann Arbor, Michigan 48104.

COST of reprints (postpaid)

	<u>1-10 copies</u>	<u>11-50 copies</u>	<u>51 or more copies</u>
Category 1 : 8 pages or less	35¢ each	20¢ each	15¢ each
Category 2 : 9-12 pages	40¢ each	25¢ each	20¢ each
Category 3 : 13-16 pages	45¢ each	30¢ each	25¢ each

SALE of reprints, as per report from Dr. Cloke dated October 30, 1967

E.S.G. 1. (Category 1)	195 copies	\$ 44.05
E.S.G. 2. (Category 2)	217 copies	59.65
E.S.G. 3. (Category 1)	<u>55 copies</u>	<u>14.75</u>
Total	467 copies	\$118.45

This modest sales figure is not believed to be indicative of the potential value of the Series. It is rather the result of my inability to launch a planned publicity campaign (via GeoTimes, Science, etc.). Also Dr. Cloke's absence during the first year of operation was a contributing factor.

The fund made available to the Education Committee in November 1965 for publication of the Education Series still shows an appreciable balance as reported by Dr. Russell M. Honea, Treasurer.

Fund, November 1965		\$2,500.00
Expenses		
E.S.G. 1. printing and reprints	\$303.36	
E.S.G. 2. printing and reprints	422.62	
E.S.G. 3. printing and reprints	267.00	
Supplies and miscellaneous	<u>47.65</u>	
Total expenses		<u>\$1,040.63</u>
Fund balance, October 30, 1967		\$1,459.37

It is my firm belief that the publication of the four articles has served to prove the feasibility as well as the importance of the Educational Series as originally conceived (see "Guidelines for Prospective Authors," p. 21). Assuming that my successor will continue the development of the Series, I venture to make several suggestions for his consideration.

1. Retention of Dr. Paul L. Cloke and Dr. John W. Winchester as Committee members; they have been most active over the years and have now returned from their sabbatical leaves.
2. Addition of Dr. Carleton B. Moore, Associate Professor of Geochemistry, Arizona State University, Tempe, Arizona 85281 to the Committee; he offered his services by letter, dated August 17, 1967.
3. Consideration of Dr. P. Hurley's suggestion to include certain outstanding published articles deserving wider circulation (via reprints) in the Educational Series. Approval of author and original publisher would have to be obtained. I accepted the proposal in principle but was unable to follow through on it.
4. First priority to be given to the preparation of articles to continue Series publication at the earliest possible moment. A backlog of several articles should be on hand at all times in order to prevent another lapse of one year.
5. Start of an intensive campaign to publicize the Series and reprints. Income from sales must be greatly increased if the program is ever to become self-supporting. The balance of the publication funds (\$1,459.37) should carry the project through four or five additional articles over a period of perhaps two years.

Kurt E. Lowe, Chairman

Editorial Advisory Committee to the GSA-AGI Bibliography of Geology Exclusive of North America: The Committee met at AGI headquarters on August 28-29, 1967. The status of the project was reviewed in considerable detail, and the Committee's advice was solicited on a large variety of editorial matters. The Committee also discussed a wide range of topics, some of which are of particular interest to the Geochemical Society.

Need for abstractors. The project does need abstractors, both for full-time work at project headquarters and for part-time work elsewhere. The requirement is generally that the abstractor be professionally trained in geology or some specialty earth-science field and, in general, be competent in several languages. Under the present arrangement, it is not practical to send individual articles to separate abstractors, and abstractors must therefore be willing to undertake the abstracting of all relevant articles in a single journal. Field abstractors are paid about \$3-\$5 per abstract. Needs are especially great for abstractors to read the Central European, Scandinavian, and Russian languages.

Special services for societies. One of the ultimate strengths of the computerized system of data handling is its flexibility in the preparation of special bibliographies and/or indexing. The project management would therefore be particularly interested in knowing the requirements and desires of the individual societies for special compilations or services. Experiments will be carried out next year in automatic indexing of the abstracts, and in any event it is certainly possible that any journal that is entirely covered by the bibliography could be indexed directly from the tapes in the project files. Geochemistry International might be a particularly appropriate journal for this kind of service, and preliminary discussions have already been held with the project management. This kind of service, however, obviously will not have very general applicability until this project can be combined with the U.S. Geological Survey Bibliography of North American Geology, and until the abstracts and index notations can be supplied to the system prior to final publication of the last issue of each journal volume, in which the index must be printed. The present project management does not have cost estimates on hand for implementing a data bank or producing separate bibliographies; the Committee requested the project Director to develop such cost estimates.

Distribution of abstracts by subject area. Based on the contents of issue numbers 1-7 of Volume 31, Geochemistry (3%), Geochronology (2%), and Mineralogy and Crystallography (6%) constitute a rather small part of the material abstracted. Even when one adds Igneous Rocks (7%), Metamorphic Rocks (2%), and Sedimentary Rocks, Sediments, and Soils (7%), articles of direct and immediate relevance to most members of this Society are outweighed considerably by such fields as Paleontology (18%) and Stratigraphy and Historical Geology (17%).

Liaison grant. Foster Smith, Director of Science Information for AGI, has received a grant of \$44,000 from the National Science Foundation to collect, arrange, and analyze data on existing scientific information services in the earth sciences; to hold meetings with society officers of the National Academy, USGS, etc.; and to formulate an overall science information policy for the earth sciences.

Shortly after the meeting of the Committee, it was announced that Thomas Caless, Project Manager, had terminated his association with the project. Joel Lloyd is Acting Project Director at the present time.

The project management has not canvassed the geological profession directly to ascertain their needs, wants, and desires with regard to bibliographic services. As you are aware, the representatives on the Editorial Advisory Committee of the Geochemical Society and the Mineralogical Society of America prepared a questionnaire which was mailed to their memberships. The results of this survey were presented to the Committee, and a copy of our report to the Committee is appended to this report.

Priestley Toulmin, III
Geochemical Society Representative

REPORT ON MSA-GS FOREIGN-LITERATURE QUESTIONNAIRE, AUGUST 1967

After the first meeting of the Editorial Advisory Committee of the Bibliography project, the representatives of the Mineralogical Society of America and the Geochemical Society designed and sent a questionnaire to ascertain the feelings of our members regarding their bibliographic needs. The responses showed our deficiencies as questionnaire-designers, but the results are nonetheless of interest. A copy of the questionnaire, with the numbers of affirmative replies to each question, is on page 15. The replies were tabulated to show the number of affirmative responses to each pair of questions and the total number of affirmative responses to each question.

Distribution and response. The questionnaire was sent to the approximately 2500 members of MSA and 2300 members of GS. Of the 654 replies received, 449 were from MSA members, 438 from GS members, and 246 from members of both societies. A few people may have sent in duplicate responses.

Comparing answers to individual questions, from members of the two societies, showed no significant differences except that 1-1/2 times as many MSA members as GS members subscribe to Mineralogical Abstracts.

Results and discussion. The general results of the poll are obvious from the questionnaire on page 15. The following discussion summarizes significant points and brings out points shown by cross-checking answers to individual questions.

Need for current awareness and permanent reference was felt about equally; 225 respondents checked both blanks. Thus 416 people indicated a need for one or both features, but 243, about 35% of those responding, did not feel they needed either service. The force of this inference is weakened since each group of questions on specific aspects of publication, content, etc. drew 400 to 500 responses.

About one third of the respondents indicated a willingness to purchase the Bibliography at an annual price of about \$15.00 for current awareness and \$20.00 for permanent reference. There is little scatter in average prices indicated, and little correlation between price indicated and answers to other questions. Groups averaging more than \$2.50 different from the figures mentioned were usually those whose responses were unrealistic or suggested imperfect understanding of the questions. Those now subscribing to the Foreign Bibliography were willing to pay more than average (32 would pay an average of \$19.04 for current awareness; 36, \$25.41 for permanent reference). Subscribers to Mineralogical Abstracts were closer to the mean; 93 would pay \$16.00 for current awareness; 84, \$20.41 for permanent reference.

There is significant preference for selective coverage for current awareness, complete for permanent reference. Monthly publication is favored for current awareness, annual or quarterly suffices for reference purposes. Both groups prefer the title-annotation-index choice of contents, and currency is more important to those desiring current awareness than to those mainly interested in permanent reference.

Significance for the project. The most significant result showing the direction in which the project should move to meet needs of the profession is the demonstrated interest in a moderately-priced publication for individual subscription. Ways to accomplish this, such as separate subscriptions to the annual index volume, should be considered.

FOREIGN LITERATURE QUESTIONNAIRE

Realizing that you will pay more for increased coverage and more frequent publication, please indicate your preferences for each type of publication.

	<u>Current Awareness</u>	<u>Permanent Reference</u>
I need a publication for only/both	336	305
Coverage: Complete	199	264
Selective	240	145
Publication frequency: Weekly	32	5
Monthly	257	99
Quarterly	183	153
Annually	32	184
Content: Titles only (by subject group)	87	39
Titles only (with index)	100	101
Titles and annotations (with index)	272	295
Currency: Within six weeks	155	42
Within six months	209	158
Within one year	73	201
Cost: What would you pay annually for an individual subscription?	\$15.03 (220)	\$19.48 (177)
Do you purchase the annual <u>Bibliography of Geology Exclusive of North America</u> as now published by GSA?		86
Do you have access to or use a copy?		540
Do you subscribe to <u>Mineralogical Abstracts</u> ?		256
Do you have access to or use a copy?		433
Would you purchase an annual volume, containing citations and index, of the "Foreign Bib" if available <u>separately</u> from the monthly publication now advertised?		212
I am a member of:	MSA 449	GS 438

REPORTS OF THE EDITORSGeochemistry International:

Production. Under the terms of grant GN-580 from the National Science Foundation, Nos. 1-5 of Geokhimiya 1967 and nine selected articles from other sources have been translated and are in various stages of editing and processing for publication in Geochemistry International, Vol. 4. Under grant GN-536, Nos. 1-5 of Geochemistry International, Vol. 3 (containing Nos. 1-10 of Geokhimiya 1966, and five selected articles) have appeared; No. 6, delayed by the compilation of the annual index, will contain Geokhimiya 1966, Nos. 11-12, and seven selected articles, and was scheduled to appear in mid-December.

Subscriptions. Subscriptions increased slightly during the year, from 478 at the time of issue No. 5, Vol. 2, to 513 for the corresponding issue of Vol. 3. In order to ensure continued NSF support for the project, it will be necessary to raise the subscription rate for Vol. 4 to \$75 per year, as explained in last year's report. This is the last rate increase required for the foreseeable future. Individual members of the Society affiliated with institutions subscribing at the regular rate will continue to be able to subscribe at the \$25 rate.

Replacement of editor. Increasing commitments to other duties make it necessary for the present editor to relinquish the responsibilities of the post. Dr. Robert I. Tilling, who is eminently qualified in both the scientific and linguistic aspects of the job, has agreed to accept the position, and I recommend that the Council approve his appointment as Journal Translations Editor of the Society and Managing Scientific Editor of Geochemistry International, effective immediately.

General. The editorial management of the project has developed into a fairly routine operation whose efficiency is limited chiefly by the lack of editorial time and energy. These shortcomings will be alleviated soon. The need for suggestions of articles for translation remains. As the subscription schedule continues to approach the desired six-month Russian-to-English time lag, translation quality can be improved by insisting more firmly upon the high standards of which our translations contractor is capable.

In conclusion, I thank the officers of the Society, the Associate Scientific Editors, and the staffs of the AGI Translations Office and of Scripta Technica, Inc., for their assistance and support. Special mention should be made of Mrs. Carol S. Jones' capable secretarial help and Mrs. B. F. Jones' excellent indexing of the journal.

Priestley Toulmin, III
Journal Translations Editor

The Geochemical News: During the past year two issues of the News have been published. These consisted primarily of reports of the officers and the Council meeting, and of notices of changes of address, new members, etc. Several book reviews were included, and several more are at hand awaiting publication. It is expected that more reviews will be forthcoming in the next year than during any equivalent period since I have become Editor.

Questions continue to arise regarding who should be receiving the News. Several times a year I receive requests from libraries for issues not received. Under the present regulations I must refer these to the Treasurer, as I do not have a record of which libraries are members of the Society. In spite of the lack of scientific papers, editorials, and other items, there is a continuing demand for subscriptions by a few dozen libraries. Council action is requested to clarify procedures to be followed in such cases.

Paul L. Cloke, Editor

Book Translations:

Changes in Status of Translations and Manuscripts Since October 15, 1966

The following volumes have been turned over to the American Geological Institute for publication on behalf of the Society. The AGI Translations Office is currently negotiating with NSF for funds to publish these as individual volumes but if they are not successful, the shorter ones will be broken up for serial publication in International Geology Review and perhaps one or two of the longer ones can find an outlet through a commercial publisher.

The Geochemistry of Rare Earths in Granitoids by L. V. Tauson, 1961, 233 pages.

Gallium by O. Vershchikovskaya, et al., 1960, 146 pages.

Thallium by V. V. Ivanov, et al., 1960, 156 pages.

Primary Dispersion Haloes of Mercury by N. A. Ozerova, (MS) 1962, 227 pages.

Types of Dolomite Rocks and Their Genesis by N. M. Strakhov, (10 papers by 12 authors) 1959, 379 pages.

Page proof for the following volumes has been returned to the Pergamon Press, and both may appear in print soon.

Geochemistry of Organic Substances by Manskaya and Drozdova, 330 pages of English text.

Transformations of Petroleum in Nature edited by A.F. Dobryanski, 450 pages of English text.

Dr. Frank T. Marheim has not supplied the list of papers on the Geochemistry of Natural Waters for translation, so there is some uncommitted money left in the Translation Fund. The Committee would appreciate suggestions as to what might be translated with these funds, if Dr. Manheim does not supply the list of papers in hydrochemistry.

Earl Ingerson
Book Translations Editor

COUNCIL ACTIONS

Program Committee: The problems of organizing the GS and GSA annual program were discussed by E. Roedder and P. Damon. The Council asked the Secretary to compose a letter to Konrad Krauskopf regarding the GSA program and the review and disposal of abstracts, including the following:

1. We accept W. H. Bradley's ad hoc committee proposal that there be a standing Program Committee consisting of a chairman and two assistant chairmen with staggered three-year terms, plus one representative of each affiliated society. This will replace the local committee on programming.
2. All ground rules established by GSA for the disposal of GSA abstracts be ratified by the Council of the affiliated societies.
3. We request that the GSA abstract forms be revised to include a choice by the contributing author as to which society representative he prefers for review of his abstract.
4. Abstracts submitted in the category of geochemistry should be reviewed by the Program Committee of GS, which assists the GS representative on the standing Program Committee regarding acceptance or rejection of such abstracts.

Treasurer's Report: The Treasurer requested that approximately \$1000 be transferred from the Publication Fund to cover the same amount paid out of the Operating Fund (which draws no interest) and which was spent for publication of the Education Series. The request was approved by the Council.

The Treasurer inquired about libraries wishing to obtain The Geochemical News. Since only one category of membership is provided by the Constitution, libraries cannot obtain The Geochemical News as individual members. It was suggested at the Council meeting that complimentary copies be distributed by the office of the Editor of The Geochemical News to those libraries who want them.

Liaison's Committee on Public Health Problems: Henry Lucas, Jr. posed the question of the charge and function of this Committee and whether this Committee should exist. The question was discussed by K. Turekian, H. Holland, and P. Hurley. Lucas was asked and agreed to consider this question and to make a report and recommendation next year for the disposal of this Committee.

Education Committee: Paul Cloke has agreed to take over the chairmanship from K. Lowe for one year. Lowe has agreed to continue as a member of this Committee.

Carlton Moore volunteered to serve as an additional member of this Committee and should be appointed to the Committee by the President. Other members of this Committee will be Jack Winchester and a member from the Organic Geochemistry Division.

K. Lowe mentioned that an article by A. Truesdell is available for the Educational Series.

Geochimica et Cosmochimica Acta: A. A. Levinson requested Council approval of Dr. John A. Wood as Associate Editor for this journal. The request was granted.

A letter expressing appreciation of support to the University of Calgary, A. A. Levinson's employer, is to be sent by the incoming president.

The Council authorizes A.A. Levinson to ask the publisher of Geochimica et Cosmochimica Acta to provide salary for a secretary and an additional operational cost of \$2500 for office supplies and postage.

The publisher sought Council's opinion regarding publicity and advertising of the index volume for Geochimica et Cosmochimica Acta. The index is needed, and notice is to be included in The Geochemical News.

Journal Translations Editor: The Council accepts P. Toulmin's recommendation that Robert I. Tilling of U.S. Geological Survey, Washington, D.C. be his successor as Journal Translations Editor effective immediately and as Managing Scientific Editor of Geochemistry International effective after issue No. 3 of Volume 4.

P. Toulmin will continue to serve as Geochemical Society representative on the Editorial Advisory Committee to the GSA-AGI Bibliography of Geology Exclusive of North America.

Society Sponsorship of Symposia: For approval of Society sponsorship of a symposium, the Council indicated that a majority of all officers and councilors of the Society should agree that the symposium is in a field of intense current interest, activities, and contributions. The approved sponsorship by the Geochemical Society of the Symposium on the Early Earth's Atmosphere for March 17-20, 1968, was reviewed in this light. The request from Ernest E. Angino for Society co-sponsorship of the Symposium on Geochemistry of Brines for March 25-26, 1968, was approved by Council. The Executive Committee will review the use of the sponsorship as a condition for the approval. It was pointed out clearly in the discussion that full details on the symposium should be made available to Council prior to disposal of such requests.

Nomination of Candidate for Medal of Science: This was briefly discussed by the Council. A candidate should be nominated by a committee with supporting evidence and data for the selection to be reviewed by Council.

International Association of Geochemistry and Cosmochemistry (IAGC): A request by Earl Ingerson for Council approval to use book translation funds for supporting the 1968 Symposium on Meteorites in Vienna was refused. It was moved and passed by Council that the Council encourage Ingerson to obtain the necessary financial support for the Symposium on Meteorites from sources such as NSF or NASA. The Council feels that we have no jurisdiction over the use of the book translation funds.

Regarding Geochemical Society affiliation with IAGC, a letter is to be drafted to request more information regarding the charter and operation of IAGC, including membership and voting rights of individual and corporate members. The Council feels that because of the lack of such information, the decision regarding GS affiliation with IAGC should be held in abeyance.

ORGANIC GEOCHEMISTRY DIVISION

R. G. Bader reported the newly elected officers for the Organic Geochemistry Division for 1968.

Chairman	J. R. Vallentyne
Chairman-elect	Warren Meinschein
Secretary	P. Edgar Hare

Bader reported that a half-day OGD Symposium on the Organic Geochemistry of the Precambrian is planned for 1968 with Warren Meinschein and Elso E. Barghoorn as co-chairmen.

J.B. Smith is to act as chairman of membership for the Organic Geochemistry Division.

The Organic Geochemistry Division will recommend a member for the Education Committee, as well as a member to the Nominating Committee, and a member on the Council.

EDUCATIONAL SERIES ON GEOCHEMISTRY

The Committee invites members of the geochemical profession to collaborate in this ambitious and promising venture by submitting suitable manuscripts for inclusion in this Series. Present plans call for the publication of at least three papers per year.

Four papers of the Series have now been published and are available from Dr. Paul L. Cloke, Editor, The Geochemical News, 2051 Natural Science Building, Ann Arbor, Michigan 48104.

- E.S.G. 1. "Geochemical Weathering of Rocks: Source of Raw Materials for Good Living" by W. D. Keller; 1-10 copies, 35¢ each; 11-50 copies, 20¢ each; 51 or more copies, 15¢ each.
- E.S.G. 2. "The Geochemical Application of Eh-pH Diagrams" by Paul L. Cloke; 1-10 copies, 40¢ each; 11-50 copies, 25¢ each; 51 or more copies, 20¢ each.
- E.S.G. 3. "Terrestrial Heat Flow, Radioactivity, and the Chemical Composition of the Earth's Interior" by John W. Winchester; 1-10 copies, 35¢ each; 11-50 copies, 20¢ each; 51 or more copies, 15¢ each.
- E.S.G. 4. "The Advantage of Using pE Rather Than Eh in Redox Equilibrium Calculations" by A. H. Truesdell; 1-10 copies, 35¢ each; 11-50 copies, 20¢ each; 51 or more copies, 15¢ each.

GUIDELINES FOR PROSPECTIVE AUTHORS

Prospective authors are urged to observe the following guidelines carefully in order to facilitate and expedite the publishing process.

1. Purpose of Series

To "educate" the college geology teacher in the principles of geochemistry and to make available to him a series of specially prepared papers for his information and for potential use in his classroom. Some papers in the Series may also be of value to the secondary school earth science teacher.

2. Suitable Topics

- a. Each topic chosen should deal with one specific, well-circumscribed, geochemical subject or principle.
- b. Its treatment should be primarily directed toward the teacher but should also include material potentially useful for the student.
- c. Some suitable topics might be:
 - (1) Geochemical constitution of the earth's crust or of a specific geo-environment
 - (2) The distribution and significance of trace elements in a specific type (or group) of minerals, rocks, or soils. Possible application to agriculture, conservation, etc. might be included.
 - (3) Introduction to stereochemistry as a fundamental concept (based on a few specific examples)
 - (4) The meaning and use of equilibrium diagrams
 - (5) A selected topic of carbonate geochemistry (e.g., concretions, stylolites, oolites, etc.)
 - (6) The concept of solid solutions with application to a particular geological or geochemical problem
 - (7) Geochemistry of metasomatism with respect to a specific petrogenic occurrence

3. Basic Criteria for Treatment and Presentation

- a. Use of clear, concise language
- b. Development of topic in easy-to-follow, step-by-step fashion
- c. Avoidance of excessive technical (geological or geochemical) terminology coupled with concise definitions of essential terms
- d. Inclusion of pertinent, practical problems (where feasible). Several such problems should be worked out in detail; others should simply provide the answer but leave the solution to the reader.
- e. Optimum length of paper: six to eight printed journal pages (double column, about 1000 words per page excluding illustrations). Papers over 16 printed pages (illustrations included) cannot be accepted.

4. Submission of Proposals

Prospective authors are requested to submit the following preliminary information (one original and two carbon copies) to any one of the Committee members (Paul L. Cloke, Kurt E. Lowe, Carleton B. Moore, John W. Winchester).

- a. Title of paper
- b. Brief summary of proposed content
- c. Approximate number and size of illustrations (line drawings only)
- d. Probable length of paper
- e. Estimated date of submission of completed manuscript following official acceptance of the proposal by the Committee

The Committee constitutes the Editorial Board for the Series and is prepared to act upon each proposal with reasonable promptness.

5. Submission of Manuscript

- a. Following notification of acceptance of his proposal by the Committee, the author is advised to make a draft copy (complete with "sketch" illustrations) available for perusal and criticism by Committee members (or selected readers) prior to the preparation of the final manuscript.
- b. Manuscripts ready for publication must be submitted to Dr. Paul L. Cloke, Committee chairman, (not to the editor of the Journal of Geological Education) in acceptable form.
 - (1) One original and one copy, typewritten, double-spaced throughout (including quotations and reference citations), with at least one inch left and right margins
 - (2) Reference citations should follow the Journal style.
 - (3) Illustrations should be carefully drafted in waterproof black ink on white paper or tracing cloth. Lettering should be done carefully, preferably with the aid of a lettering guide. Titles of illustrations need not be drafted; they are set in type.
 - (4) Check final typed manuscript for typographical errors.
 - (5) The author may furnish a small photograph of himself to appear next to the heading of his paper.

Cooperation in adhering closely to the "Guidelines for Prospective Authors" will be greatly appreciated.

P.L. Cloke, Chairman
Education Committee

CALENDAR

July

- 1-5 Carribbean Geol. Conf., College of the Virgin Islands, St. Thomas (T. W. Donnelly, Geol. Dept., State Univ. of New York, Binghamton, New York 13901)
- 3-20 Structures and Origin of Volcanic Rocks Dr. Willard H. Parsons, Geol. Dept., Wayne State Univ., Detroit, Mich. 48202
- 8-26 Meteoritics Dr. Dieter Heymann, Geol. Dept., Rice Univ., Houston, Texas 77001
- 16-18 Trace Substances in Environmental Health, Univ. of Missouri (D. D. Hemphill, Conf. Chairman, Univ. of Missouri, Columbia 65201)

August

- 4-18 Neutron Activation Analysis of Earth Materials Dr. James A. Noel, Geol. Dept., Wright State Univ., Dayton, O. 45431
- 7-13 Intl. Symposium on Meteorite Research, Intl. Atomic Energy Agency; Vienna (J.H. Kane, Chief, Conferences Branch, Div. of Tech. Info., U.S. Atomic Energy Commission, Washington, D.C. 20545)
- 12-19 Intl. Congress on Limnology, Jerusalem (Dr. B. Hopher, Box 16271, Tel Aviv, Israel)
- 18-23 Intl. Conf. on Thermal Analysis, Holy Cross College, Worcester, Mass. (C. B. Murphy, Xerox Corp., Box 1540, Rochester, N. Y. 14603)
- 19-20 Rocky Mtn. Spectroscopy Conf., Denver (Russell Lewis, Marathon Oil Co., 7400 S. Broadway, Littleton, Colo. 80120)
- 19-28 Intl. Geological Congress, Prague (Intl. Geological Congress, Organizing Committee, Malostranske Namesti 19, Praha, Czechoslovakia)
- 30- Intl. Mineral Assn. mtg., Prague (Organizing Committee, Ustredni
Sept. 3 Ustav Geologicky, Malostranske Namesti 19, Praha, Czechoslovakia)

September

- 8-11 Deutsche Mineralogische Gesellschaft mtg. (Dr. K. Jasmund, Mineralogisch-Petrographisches Institut, University, Köln, Germany)
- 15- Intl. Symposium on Volcanology, Canary Is. (J. M. Fuster Casas,
Oct. 1 Simposio Internacional de Volcanologia, Museo Nacional de Ciencias Naturales, P. de la Castellana 84, Madrid 6, Espana)
- 16-18 European Branch, Organic Geochemistry Div., Geochemical Soc., mtg. Amsterdam (P. A. Schenck, Volmerlaan 6, Rijswijk [Z.H.], Holland)
- 18-20 Soc. Mining Engineers-AIME, fall mtg., Minneapolis (J. C. Fox, 345 E. 47th St., New York 10017)
- 29- Soc. Exploration Geophysicists mtg., Denver (Howard Breck, Box
Oct. 2 1067, Tulsa, Okla. 74101)

UPDATING OF THE GEOCHEMICAL SOCIETY MAILING LISTS

As a result of several difficulties with the society address files, the Secretary would like to have this card filled out and returned by *all* Geochemical Society members who fall in one or more of the following three categories. (*Please mark the appropriate squares*):

- Please change my address from that used on the enclosing copy of the Geochemical News to that given below.
- I am currently affiliated with, or would like to be affiliated with the Organic Geochemistry Division.
- I am *not* a member of the Geological Society of America, but I do want to receive circulars I and II, and the Program of the 1968 Annual GSA meeting.

Prof. Dr. Mr.
.....
.....

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Geochimica et Cosmochimica Acta

DR. A. A. LEVINSON

Executive Editor

JOURNAL OF THE GEOCHEMICAL SOCIETY

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Great Britain	Very Low	12	
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A.A. Levinson

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