The Geochemical News

Number 49 June, 1969

THE GEOCHEMICAL SOCIETY COUNCIL MEETING

Mexico City, D. F., Mexico

November 10, 1968

The Council met between 2:00 and 6:30 p.m., November 10, 1968, at the Maria Isabel Hotel.

Present: E. F. Osborn, Presiding; H. L. Barnes, P. B. Barton, Jr., P.E. Damon, Francis J. Flanagan, Robert O. Fournier (for GSA), Donald L. Graf, Bruce B. Hanshaw, Russell M. Honea, K. B. Krauskopf, A. A. Levinson, W. Meinschein, Edwin Roedder, James B. Thompson, Jr., Robert I. Tilling, Karl K. Turekian, Jack Vallentyne

REPORT OF OFFICERS

Secretary's Report: From November 1967 to November 1968, 124 new members joined the Geochemical Society, 31 from abroad. This represents a net gain, when corrected for resignations and deaths, of 24. The total membership as of November 1968 is 2026, of which 1455 are from the United States and 571 from other countries. The membership of the Organic Geochemistry Division is 260, of which 195 are United States and 65 foreign.

This year the Society sent GSA Circulars I and II to all members not already receiving them through membership in the GSA (approximately 1270). In addition, all members received, in number 47 of The Geochemical News, dated and mailed June 1968, a post card to be returned to the Secretary by those who were not members of GSA and who wanted to receive the Abstracts volume for 1968. Only 159 such requests were received, to which were added the 40 new members who requested the Abstracts on joining, making a total mailing of 199, nearly 400 less than last year. This decrease results in a savings of approximately $800.00 of Society funds, as the Abstracts cost us about $2.00 each. The reason for the gross decline this year is obscure, but in any case, there is need for the Council to consider whether the practice of sending the Abstracts volume, at a cost of about $1000.00 per year, should be continued. At present the membership as a whole, including many who are also paying their GSA dues, are paying the cost of the abstracts for those who are not GSA members. Since GSA Circulars I and II are relatively inexpensive to mail, they should continue to be mailed to all members.

As before, the mailings of the dues notices, The Geochemical News, and ballots were handled by AGI. In addition, the AGI provided printouts of the mailing list for sale to certain commercial organizations at our request, bringing several hundred dollars into the Society treasury. These address lists were sold for single use only, and only after examination of the specific book announcement indicated it to be of interest to an appreciable part of the membership. Most commercial requests for the mailing list were rejected, to avoid proliferation of junk mail.

Edwin Roedder, Secretary

Treasurer's Report: It is a pleasure to report that the financial status of the Society continued to improve during the 1968 fiscal year. Excess of income over expenses for the period amounts to $2898.40.

Active membership has remained fairly constant with 124 new members as opposed to 58 resignations, 67 members dropped for non-payment of dues, and ten members lost by death. Total membership of the Society is 2067.

Considerable progress has been made in handling Society address files by AGI, and plans have been initiated for publication of a new membership list to replace the one issued three years ago.

Russell M. Honea, Treasurer

BALANCE SHEET

December 31, 1968

ASSETS			
Operating Fund:			
Cash on hand and in banks	$8,681.35		
Accounts receivable	0.00		
		$8,681.35	
Publication Fund:			
Savings account		$4,195.52	
Total assets			$12,876.87
LIABILITIES			
Operating Fund			
Balance of 1968 American Geological Institute Assessment	$ 973.71		
Members' equity	7,707.64		
		$8,681.35	
Publications Fund:			
Account balance		$4,195.52	
Total liabilities			$12,876.87

STATEMENT OF INCOME, EXPENSES, AND CHANGES IN FUND BALANCES

for the period

JANUARY 1, 1968 to DECEMBER 31, 1968

Operating Fund

Income:		
Dues	$9,518.57	
Interest on savings account	84.27	
Reprint sales (educational series)	143.25	
Sale of mailing list	205.40	
Total income		$9,951.49
Expenses:		
American Geological Institute assessment	$1,806.80	
Mailing Services (AGI)	860.84	
Geochemical News	927.46	
Executive Editor	1,250.00	
Secretarial services:		
Treasurer	729.00	
Secretary	540.00	
Printing charges	520.70	
Bank charges	46.59	
Postage and telephone charges	276.04	
Miscellaneous	60.00	
Reprint costs (Journal of Geological Education)	444.41	
Total expenses		$7,461.84
Excess income over expenses		$2,489.65

Publications Fund

Income:		
Royalties	$ 220.12	
Interest	188.63	
Total income		$ 408.75
Expenses:		
None		0.00
Excess income over expenses		$ 408.75

FUND BALANCES

January 1, 1968:		
Operating fund:		
Savings account	$1,743.01	
Checking account	4,447.94	
Petty cash	0.75	
Publications Fund:		
Savings account	3,786.77	
Total		$ 9,978.47
December 31, 1968		
Operating fund:		
Savings account	$1,827.28	
Checking account	6,853.32	
Petty cash	0.75	
Publications Fund:		
Savings account	4,195.52	
Total		$12,876.87
Net increase in fund balances for 1968		$ 2,898.40

COMMITTEE REPORTS

Auditing: The Auditing Committee has examined the accounts of the Treasurer for the period January 1, 1968 to December 31, 1968, and has verified the accuracy of the statements and amounts shown in his report.

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

Organic Geochemistry Division: J. R. Vallentyne reported the following newly elected officers for the Organic Geochemistry Division for 1969:

Chairman	Warren Meinschein
Chairman-elect	Derek Spencer
Secretary	Ellis Bray

J. R. Vallentyne and Warren Meinschein discussed in particular the desirability of founding a new journal in organic geochemistry, and of financial support of a 1971 meeting under the European Branch office of OGD. They report that a symposium on Extraterrestrial Organic Geochemistry has been planned for GSA 1969, with Richard S. Young and Gerald Soffen as Co-Chairmen.

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

President (1969-70)	K.B. Krauskopf, Stanford University
Vice-President (1969-70)	H.D. Holland, Princeton University
Executive Editor (1969-72)	A.A. Levinson, University of Calgary
Councilors (1969-72)	J.G. Erdman, Phillips Petroleum Co.
	B.J. Skinner, Yale University
	R.E. Folinsbee
	Edgar Hare
	D.R. Lewis
	J.F. Lovering
	Herbert R. Shaw, Chairman

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

Program: Although Edwin Roedder wrote last year to Konrad Krauskopf, past-President of GSA, listing the problems related to the procedure of the GSA Technical Program Meeting, no changes were made this year by the GSA in the manner of handling abstracts and organizing the program. Furthermore, rooms were assigned on a first come, first served basis, which had the effect of giving precedence to societies with few sessions to arrange Because the Geochemical Society has a number of sessions and because we take great care to arrange compatible sequences of contributions with a great deal of trading of papers back and forth between other societies, we found that the choice rooms were already assigned before our sessions were arranged. Our protestations were not met at the time with a great deal of sympathy although, through a sort of "musical chairs" procedure, we finally attained what we hope will be adequate space.

Another source of frustration arose from the rating of papers. One member of a fellow society listed, with few exceptions, all geochemistry abstracts as being doubtful or unacceptable.

This year it was not necessary for us to shepherd Extraterrestrial Geology. This task was accomplished by Paul Lowman, Jr., who was invited by the GSA Program Chairman for this purpose.

There has been no great change in the number of geochemistry sessions or papers scheduled for the 1968 meeting in Mexico City. This can be seen from the comparison of the 1967 and 1968 sessions as given below:

	1967 Meeting		1968 Meeting	
Subclassification	Sessions	Papers	Sessions	Papers
General Geochemistry	2-1/2	20	3	34
Organic Geochemistry	3	27	2	16
Geochronology	1	12	1	8
Isotope Geology	1	12	1	10
Total	7-1/2	71	7*	68

*Plus 1/2 session as joint session on ore deposits.

However, because a record number of papers were submitted, approximately one-third had to be rejected.

Your retiring program chairman gladly turns over the job to the new chairman, Hubert Barnes, with the confidence that the Geochemical Society will be served well.

Paul E. Damon, Chairman

Tellers: The election results are below. We, the Tellers Committee, certify that the following have been elected as officers and councilors of the Geochemical Society:

President	James B. Thompson, Jr.
Vice-President	Konrad B. Krauskopf
Treasurer	Bruce B. Hanshaw
Councilors	David R. Wones
	G. Arrhenius
	E.H. Roseboom
	G. Sellers
	E.C.T. Chao, Chairman

Standards Committee:

New Geochemical Standards

1. The Geological Survey of Japan announced the availability of Granodiorite JG-1 in the Geochemical Journal (Japan), vol. 1, p. 155 (1967). The article contains brief descriptions of the processing and of the location, geology and age of the sample.

2. Descriptions and chemical analyses of Albite (Ab-1), Adularia (Or-1) and Pyroxene (Px-1) have been published by Goldich et al in Canadian Journal of Earth Sciences, vol. 4, pp. 747-55, (1967).

3. The Standards Committee of the Spectroscopy Society of Canada announced in Canadian Spectroscopy, vol. 13, no. 1, p. 22 (January, 1968) that its Non-Metallic Subcommittee will shortly have certified and distributed the standard of Mount Royal Gabbro (MRG-1). Inquiries concerning SSC standards should be addressed to Dr. A.H.Gillison, Mineral Sciences Division, Department of Energy, Mines and Resources, 555 Booth Street, Ottawa, 4, Ontario, Canada.

4. The University of California, Berkeley, announced the preparation of another sample of Columbia River Basalt, designated BCR-12. The sample, collected from the same quarry as BCR-1, was prepared chiefly as a standard for rare gas analysis by mass spectrometers and has rare gas concentrations roughly similar to those of stony meteorites. The grain size of the sample was purposely kept coarse so that it could be handled safely after neutron irradiation in a reactor. Further details may be obtained from Professor John H.Reynolds, Department of Physics, University of California, Berkeley, California, 94720.

5. Marcel Roubault of the Centre de Recherches Petrographiques et Geochim-

iques has announced the availability of a biotite - MICA - Fe (Biotite Ferrifere). Further details are available from Dr. Roubault at the C.R.P. G., B.P. 682, 54 NANCY, France.

6. The National Institute for Metallurgy, Private Bag 6, Cotteslow, Johannesburg, S.A. has prepared six igneous rocks for use as analytical standards and the South African Bureau of Standards, Private Bag 191, Pretoria is assisting in the analytical program. Laboratories that could give chemical and instrumental analysis are asked to write H.P. Beyers, SABS, Pretoria. The samples include a gabbro, a granite, a chrysolite dunite and a pyroxenite from the Bushveld Igneous Complex, a synetite from the Palabora Igneous Complex, and a lujavrite from the green foyaite group of the Pilanesberg Alkaline Complex. Descriptions, modes, localities and preparation are described in NIM Research Report 332.

7. S^{32}/S^{34} Samples. The Geophysical Laboratory (2801 Upton Street, N.W., Washington, D. C., 20008) has accumulated several sulfide (or sulfur) specimens that cover a large range of S^{32}/S^{34} ratios and the ratio in a number of specimens has been accurately determined. Detailed requests for portions should be addressed to Dr. Gunnar Kullerud at the Geophysical Laboratory.

The NBS series of glass standards with a number of trace elements added in a graded series, and the replacements for the plastic and flint clays, are being analyzed by NBS and others. The availability of these samples will be announced in some future issue of News for Users of NBS Standard Reference Materials or in Quarterly Insert Sheets for NBS Misc. Publ. 260.

D.M. Moore of Knox College, Galesburg, Illinois, 61801, is processing a sample of the Purington Shale (Shp-1), a member of the Carbondale Formation. The sample will be available after analytical work has been completed. Details may be obtained from Dr. Moore.

The supply of Muscovite, p-207, listed in Sources of Geochemical Standards (Geochimica et Cosmochimica Acta, 31, 1211-13, 1967) has been exhausted.

Calorimetry Standards:

Seven laboratories reported heats of solution for Tris (hydroxymethyl) aminoethane, NBS SRM 724, at the 1968 Calorimetry Conference. When the remaining 20 laboratories report their results, the Standards Committee of the Conference together with NBS will evaluate the data and certify the heat of solution to permit chemical calibration of aqueous reaction calorimeters.

At the request of the Conference Standards Committee, NBS is preparing a large sample of Al_2O_3 (synthetic sapphire) for the standardization of temperature specific heat calorimeters. Through the efforts of Stuart R. Gunn, Lawrence Radiation Laboratory (Chairman, Standards Committee of the Calorimetry Conference) and Edward Prosen, Argonne National Laboratory had previously prepared about 30 samples of pure copper for similar use. An alkali aluminum silicate glass has also been suggested as a possible standard material for the chemical calibration of HF solution calorimeters.

Suggestions for possible action by the Standards Committee:

(1) The standardization of identification symbols for standard rock and mineral samples. The possibility of confusion of identification symbols increases with the growing number of samples. G-1 and W-1 are often incorrectly listed as NBS samples. Steuber and Goles (Table 3, Geochim. Cosmochim. Acta, 31, 75) list PCC-1-1 and PCC-1-2 (serpentinite and pyroxenite respectively from Muskox, N.W.T.) and Flanagan (ibid, p. 289) lists PCC-1 (peridotite, Cazadero County, California).

G-1 and W-1 have been referred to in the literature as USGS G-1 (or W-1) and the samples announced above could be listed as GSJ JG-1, PSU Or-1, SSC MRG-1, UCB BCR-2, and CRPG MICA - Fe. The SSC sulfide and syenite present a special case as they have no short designations.

It may be necessary to establish some method of registering these short designations to avoid duplication.

(2) A criterion to determine when a rock or mineral sample should be properly designated as a standard. As one example, there should be a detailed description of the processing from the sample in situ to the bottled product and complete data in the form of an adequate experimental design so that critical reviewers may check claims of homogeneity. (From considerations of particle size, mineral composition, and elemental distribution, it would be surprising if all elements were distributed homogeneously). Another criterion could be the requirement that there must be a specified number of rock (or trace element) analyses for which the standard deviation of all (or some) individual consitutents does not exceed a specified value.

(3) An acceptable manner of reporting determinations of trace, now indicated by N.F., N.D., / , or some combination thereof. There would be an advantage in reporting data uniformly provided terms have been defined. It should also be noted that N.F. or N.D. have occasionally been misinterpreted as "not present".

(4) Samples for internal standards for X-ray powder diffraction. The Mineralogical Society held a special session on X-ray powder diffraction at the New Orleans GSA meeting. Many people are making highly precise measurements of unit cell parameters using internal standards, but there has been no attempt to standardize either the materials used or the adopted cell edges for these internal standards. Should the Committee consider obtaining five or six of the most commonly used internal standards (e.g., silicon, quartz, CaF_2, etc.)?

Comments on or solutions for the above suggestions are solicited from the Society members and others.

Francis J. Flanagan, Chairman

Liason Committee on Public Health Problems:

Last year Henry Lucas, Jr., Chairman, brought up the question of the charge, function, and need for this Committee, and the Council asked them to consider the matter and make recommendations this year. As a result of correspondence with Lucas, it was decided by Council to dissolve the Committee, with thanks to Lucas for his efforts.

One additional matter that was brought up by Lucas concerned the need for a place to publish papers on environmental toxicology, and a mechanism for obtaining adequate reviews of these papers. A new journal now being published by Pergamon seems to take care of both of these problems.

Education Committee:

It appears that each year the Education Committee is unable to report great progress in its endeavor to continue publication of the Educational Series on Geochemistry. The chairman feels obliged to assume some of the responsibility for this lack of achievement. The past year was abnormally difficult and crowded due in considerable part to the untimely death of my colleague, Dr. Reynolds M. Denning. Some progress was made, however, and affairs are sufficiently eased that real strides seem possible during the remainder of this academic year. In this connection I am agreeable to continuing as chairman of this committee, if the Council so wishes.

In the June issue of the Geochemical News a general solicitation to the membership was included, requesting contributions to the Series. This elicited two responses, which have not yet been followed up to a definite commitment but will probably provide two papers. In addition, the chairman feels that at least one and probably two other papers dating back to before he assumed the chairmanship, will be completed. Thus, there appears currently to be a somewhat greater rate of contributions than previously. If a solicitation in each issue of the News will produce two or three contributions, the Series should be in good shape. The chairman recently received a letter from the new editor-designate of the Journal of Geological Education, Thomas E. Hendrix, requesting that the Series be continued in accordance with the original agreement.

During the past year I have corresponded with Dr. John L. Snyder of AGI in respect to their handling orders and mailings of the reprints of the Educational Series on Geochemistry. In a letter from Dr. Snyder dated September 13th he states their costs are about 40¢ per unbilled order -- 6¢ in postage, 8¢ for the label and envelope, and 26¢ in labor and overhead -- and about 56¢ per billed order. At the current prices charged for reprints this means that the average order would need to be for 3 reprints if payment is enclosed, and 4 or 5 reprints, if payment is deferred, in order to recover our costs. This is reasonably well in accord with the size of orders received to date. Accordingly, if there is no objection from Council it is planned to ask AGI to assume this function.

An advertisement has been prepared for GeoTimes, and costs have also been obtained. It is intended to run this ad as soon as possible.

Paul L. Cloke, Chairman

Editorial Advisory Committee, GSA-AGI Bibliography Project:

Inasmuch as the Committee has held no meetings during the past year, I have little to report at this time.

It has come to my attention (informally) that the managing group of the project have recently made several major decisions that essentially

alter the nature and scope of the product. Abstracts will not be published after December 1968, and the coverage will be expanded to include citations from the U.S. Geological Survey Bibliography of North American Geology. The Editorial Advisory Committee has not been informed of these decisions. In the past, the Committee has been restricted to the consideration of matters that the management regarded as "editorial" in nature; since our opinion was not invited on the above questions, I gather that the management regards them as matters of no editorial import. So regarded, the field of legitimate subjects for the attention of the Committee is such that the question must be raised whether the Committee's existence is justified at all. In the three years of its existence, the Committee has met twice and has had no obvious effect on the project, which has continued to function with virtually no input from the profession as to its needs and desires. The results of the GS-MSA poll, and the recommendations based on them, sank without a trace, though this was the only attempt made by anyone connected with the project to find out what working scientists wanted from a bibliography-abstract service.

Although I seriously considered recommending that the Society withdraw from further participation in what seems an empty and ineffective activity, perhaps it would be more in our interest to maintain representation on the Committee so that our viewpoints can at least be called to the management's attention. I do think it would be worthwhile for the Council to consider whether the Society should contact GSA to suggest that they either make more effective use of this Committee or dissolve it.

Priestley Toulmin, III,
Geochemical Society Representative

REPORTS OF THE EDITORS

Journal Translations:

All of us are acutely aware of the rather severe cut-back of National Science Foundation funds which, of course, has resulted in reduced NSF support of the AGI translations program. However, as the AGI translations program is approximately 50% supported by Subscription income, the effect of the cut in NSF support is not as devastating as that in programs totally dependent on NSF funding. Nonetheless, some belt-tightening will be necessary, and for Geochemistry International this will be accomplished mainly by decreasing the number of pages of Selected Articles. The cover-to-cover translation and selective publication of Geokhimiya will be continued as before, even though translation, composition and printing costs have all increased.

Not all the news is bad. Despite the increased subscription rate beginning with Vol. 4 ($75.00), the number of subscribers to Geochemistry International has increased considerably and now stands at 591, the highest since the inception of the program. It is significant to note from the breakdown below that non-U.S. subscribers outnumber U.S. subscribers:

Subscribers to Geochemistry International
(as of September 12, 1968)

U.S	276
Foreign (Canada, 49; Postal Union of the Americas and Spain, 13; all other foreign, 253)	315
	591

The printing for Volume 4 is 750 copies, as opposed to 500 for Volume 3.

The current production rate is about that for previous issues, i.e., approximately a 12-14 months lag between receipt of the Russian original and publication of the edited translation. However, the production schedule of Geochemistry International is in the process of being stepped up. Our goal is to decrease the publication time to only six months after the receipt of the two Russian issues making up a single issue of Geochemistry International. To speed up production, Scripta Technica has contracted two additional translators to translate Geokhimiya. Obviously, this temporarily will entail a tremendous increase in the editing load. It is my sincere hope that the members of the society will come to my aid by evaluating and editing papers in their fields, as they have kindly done in the past.

Along with Earl Ingerson, I represented the society at the meeting of the AGI Translations Committee in March of this year. Various aspects of the Translations Program were discussed, particularly those dealing with evaluation of the program and with means of better serving the geologic scientific community. Perhaps one of the most important actions taken at the meeting was the passage of a resolution to expand the Translations Program to include cover-to-cover translation of the following journals; Izvestiya (Ser. Geol.); Geologiya rudnyk mestorozhdeniya; Geologiya i geofizika; and Sovetskaya Geologiya. AGI will draft the proposal to the NSF to implement this resolution. In view of the NSF budgetary difficulties, it was conceded by those at the meeting that the request may not be granted fully. Nonetheless, everyone agreed that the attempt to have all four journals translated should be made. A complete report on the Translations Committee meeting may be obtained from Mr. Thomas F. Rafter, Jr., Manager, AGI Translations Program.

In closing, I wish to thank my predecessor, Priestley Toulmin, III, and the Scripta Technica and AGI staffs for easing me into the editorship duties as painlessly as possible. I am also grateful to the many members of the society who have helped to lighten the editorial tasks.

Robert I. Tilling, Editor

Book Translations:

Changes in status of translations and manuscripts since the report of October 15, 1967, are as follows:

1. Geochemistry of Organic Substances, by Manskaya and Drozdova has appeared as Monograph No. 28 in Pergamon's Earth Science Series, 347 pages, 1968.

2. Page proof of Transformations of Petroleum in Nature (Dobryanski, ed.) has been corrected and returned to Pergamon. It

should appear in the Earth Science Series (Monograph 29) with 449 pages plus index in 1968.

3. Publication of the five volumes turned over to AGI is still being delayed by shortage of funds in NSF. In the meantime Xerox copies of these books, or parts of any of them can be obtained from the AGI at 15¢ per page.* The books are:

   Rare Earths in Granitoids (Tauson); Gallium (Vershchovskaya, et al); Thallium (Ivanov, et al); Mercury Haloes (Ozerova); and Types of Dolomite Rocks and their Genesis (Strakhov, ed.).

   * This is the currently quoted price. AGI warns that an increase may be necessary in the near future.

4. A special application has been made to NSF for a grant to prepare an edited translation of Vernadsky's Chemical Structure of the Biosphere of the Earth, which he considered to be a synthesis of his geochemical work and ideas. Irving Breger and Leonard Shapiro have agreed to translate the book and to prepare an edited manuscript ready for the printer and the MIT Press has agreed to publish the English version at their expense if they can obtain the edited manuscript at no cost to the Press.

   NSF cannot make a commitment in advance, of course, but everyone concerned with the project expects the grant to be made if the Foreign Science Information Program obtains an allotment that will allow them to support the translation.

5. Frank Manhein has prepared an excellent list of Russian papers on the geochemistry of natural waters, and has subsequently revised the list and brought it up to date. The Translation Committee has placed this project as number one among the translations the members would like to see accomplished in the near future.

   NSF Grant G-10050 (Book Translations) has expired so it will be necessary to seek new funds if an attempt is to be made to translate the papers in hydrogeochemistry. If the Council wishes book translations continued as a part of the activity of the Geochemical Society this project might be the first one in the new program.

   If it is decided not to continue the program, but is thought to be desirable to translate the hydrogeochemical works, a special application could be made in the manner of the Vernadsky volume. Manheim has agreed to edit the translations; they could be published together as a monograph, or serially in International Geology Review.

Earl Ingerson, Editor

The Geochemical News:

During the past year two issues of the Geochemical News have been published. It is expected that a third issue will be published during November. These issues contained many book reviews and changes of address. The procedures for reporting addresses, whether for new members or changes for current members, have been revised and improved. Except for a few old changes of address requiring checking with the master file, changes of address received this past summer, and some new members joining this year, it is believed that the combination of the last published list of members of the Society and the latest published address in the News provides an accurate and complete list of the membership. It should be noted that the editor, in the interests of saving space and cost, does not publish changes consisting only of the addition of the zip code or other minor changes, which in his opinion will not greatly affect the proper delivery of mail.

During the year the Department of Geology and Mineralogy at The University of Michigan has suffered from lack of secretarial help. Until this year sufficient help has been available to enable the Department to provide the typing of the News at no charge, although other items have always received higher priority in scheduling work for the secretaries. This year because the Department has been unable to find enough secretaries to fill existing vacancies, publication of the issues has been appreciably delayed, the last issue for several months. The editor finally decided it was necessary to hire a secretary for part-time work, averaging about one hour per week, in order to overcome this impasse. It is accordingly requested that the Council approve the continuation of this practice until such time as the Department can reassume this function.

Paul L. Cloke, Editor

REPORT ON MEETING OF THE ADVISORY BOARD OF THE OFFICE OF CRITICAL TABLES, NATIONAL ACADEMY OF SCIENCES, WASHINGTON, D. C., 18 NOVEMBER 1968

The undersigned attended this all-day meeting as the appointed representative of the Geochemical Society and the Society of Economic Geologists and as acting representative for the American Geological Institute and the Geological Society of America, in lieu of Brian J. Skinner, who could not attend the meeting. It is hoped that this report will be suitable for all four organizations. If further details are needed, they can be provided.

The meeting was attended by approximately 100 people, representing a wide spectrum of scientific societies, and government and commercial research groups. The main objective of the meeting was to inform the attendees as to progress in the field of compilation of critical tables since the previous similar meeting was held in 1963. A series of speakers, in particular F.D. Rossini and Guy Waddington, discussed the history, present activities, and the activities of some of the present data centers. There was also a little time for discussion and questions from the floor.

The OCT essentially is an organization to stimulate and encourage the production of critical tables; it is neither equipped nor expected to prepare such tables. It had six objectives:(1) identify all data centers that

meet quality standards; (2) publish directories of these; (3) coordinate and encourage the activities of these centers; (4) encourage new data projects where desirable; (5) promote high standards and compatibility (consistent nomenclature, fundamental constants, annexing procedures, etc); and (6) provide a central indexing service. Implicit throughout the discussion was a seventh objective - to insure continuity of data tabulation and updating. Its main activities are hence advisory and liason, on a national and international basis.

In the various earth science fields, the existing data centers appear to this writer to cover most of the major current needs. These "centers" include Dana's System of Mineralogy, API project 44, ASTM powder diffraction data, and a series of data compilation activities particularly concerned with thermodynamics and crystallography that are effectively summarized in National Bureau of Standards Technical Note 448, edited by E.L. Brady and issued June, 1968, on the National Standard Reference Data System (Government Printing Office, $.70). There are needs for a variety of highly specialized critically evaluated data compilations in many earth science fields, but most of these projects are still sufficiently small that the individual worker or group can satisfy the need.

In 1969 the OCT plans to issue a new publication, a Survey of Centers (there are currently 153). Several meetings on critical tables are planned for the future, including a Gordon Conference in 1969 and two international ("CODATA") meetings, one in 1969 in Warsaw and another in 1970 in the UK. Further information on the past publications and future plans of many of the individual data projects covered at the meeting will be found in the NBS Technical Note 448 mentioned above. Earth sciences are ably repre - sented on the eight-member Executive Committee of OCT by Sydney P. Clark., Jr.

Edwin Roedder

COUNCIL ACTIONS

Secretary's Report:

In response to the question concerning the mailing of abstracts, it was moved and passed by the Council that in the future, the Society will continue to mail circulars of the GSA annual meetings to all members, but that the Abstracts volume would not be mailed. Any member of the society who is not also a member of the Geological Society of America may obtain the abstracts volume directly from that Society.

The minutes of the previous meeting were approved as printed in the Geochemical News.

Treasurer's Report:

The treasurer's report for the period January 1, 1968, to October 31, 1968, was distributed at the Council meeting. The interim financial statement was tentatively accepted by Council, pending the Auditing Committee's final report at the end of the fiscal year.

The new treasurer, who will take office at the close of the fiscal year December 31, 1968, was requested to look into the matter of establishing life memberships and the cancellation of further membership dues at a given age and/or retirement. The problem of printing a new membership list (existing stocks are almost gone) is intimately connected with the timing of the installation of a new computerized address system at the American Geological Institute. The Council agreed to leave the matter up to the Executive Committee to decide when and how this new list can most advantageously be obtained.

Program Committee:

Considerable discussion centered on the problems of planning the annual meeting and the handling the abstracts. In particular it should be noted that of 840 abstracts submitted to GSA this year only 497 (59%) were accepted (verbal and by title). All discussions of past difficulties in the planning sessions were rendered more or less obsolete, however, by a report to the Council by R.O. Fournier, as a member of the GSA ad hoc Committee on Long Range Planning of Annual Meeting Programs. This Committee has come up with an extensive report (18 pages) proposing a complete reorganization of the mechanics of the program planning, and the establishment of a new category of paper, the discussion paper. Although a drastic change is admittedly in order, some aspects of this report were not received well by all members of the Council. The GSA plans to "begin to implement" the plan in 1969, so a letter detailing eleven suggested changes has been prepared for transmittal to the GSA.

With the retirement of P. Damon after three years of arduous service as Program Committee Chairman, Council agreed to set up the Program Committee of three on a rotating basis, with 1-, 2-, and 3-year appointments this year, followed by a new 3-year appointment each year. Specific appointments other than H.L. Barnes, the current Chairman, have not yet been made.

Tellers Committee:

The Committee report was accepted and approved by Council except for the suggestion of abolition of balloting when there are no nominations other than the Council-approved slate. Council is to consider this and other suggested changes in the bylaws and make recommendations by correspondence.

International Association of Geochemistry and Cosmochemistry (IAGC):

It was announced that the Society has affiliated with the IAGC. Since the Society is international, it cannot represent the United States in the Association, but the National Academy of Sciences has appointed such representatives.

Geochimica et Cosmochimica Acta:

A. A. Levinson discussed correspondence he has had with Klaus Keil of The Meteoritical Society concerning possible co-sponsorship of Geochimica et Cosmochimica Acta by the two societies. After discussion it was moved and carried by the Council to accept Klaus Keil's proposal that The Meteoritical Society become a co-sponsor of Geochimica et Cosmochimica Acta. This will require a change in the bylaws, so that a representative of The Meteoritical Society can be appointed as a member of an ad hoc Nominating Committee for the post of Executive Editor of the journal in those years

(every third) that nominations are made for this position.

EDUCATION 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. Papers are urgently needed!

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. Checks should be made payable to The Geochemical Society.

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.

BOOK REVIEWS

ELEMENTS OF MINERALOGY, Brian Mason, and L. G. Berry, W.H. Freeman and Co., 1968. $9.50.

This book is described by the authors as a modified and revised version of their earlier text. Echoes of the earlier work (Mineralogy; concepts, descriptions, determinations, 1959) do indeed come through but the change in authorship from Berry and Mason to Mason and Berry heralds a significant change in approach. Mineralogy here is presented as a part of geochemistry rather than in its traditional more independent format. A strong case may be made for this, but the combination should not be made to the loss of mineralogical facts, particularly at the introductory level.

Patrick M. Hurley

THE HEART OF THE EARTH, O. M. Phillips, 211 pages, illustrated, Freeman, Cooper and Co., 1736 Stockton Street, San Francisco, California 94133, 1968.

This is a truly delightful book. The author has written knowingly of the broad areas in geophysics that lead to an understanding of the nature of the earth's interior and its history. The discussion of these subjects naturally leads into the debate on such topics as continental drift and convection in the mantle, giving the reader an insight into the kinds of evidences. The level of treatment is for the educated reader with a non-physics background, starting with basic concepts explained in an unusually lucid and pleasant manner. Despite the elementary level the subjects are cleverly treated so that they make serious reading even for the scientific non-specialist. In other words, the book is a statement of the scope and objectives of solid earth geophysics without getting into details, giving an understanding of the interior of the planet. As such it would be good reading matter for those geochemists and geologists who have had no geophysics, at any level in their education. Subject areas are gravitation and the figure of the earth, the mass of the earth, earthquakes and seismic waves, volcanoes and the temperature inside the earth, the earth's magnetic field, and continental drift. The author presents some of his own ideas, which are well worth considering. In all of the text he introduces the subject matter with a fresh approach that holds the interest of the reader. It is seldom that an author will treat a scientific topic with such a combination of authority and simplicity. We have a great need for such writers today, and he is to be highly commended for this excellent work.

William H. Dennen

A New Commission and Publication

At the 21st International Geological Congress (IGC) in 1960 an international but informal organization was set up among fluid inclusion workers. The organization has now found a home as the Commission on Ore-Forming Fluids in Inclusions (COFFI), under the International Association on the Genesis of Ore Deposits (IAGOD). This Commission now consists of N.P. Yermakov of the USSR, as Chairman; Edwin Roedder as Vice-Chairman and G. Deicha of France as Secretary. It's main activity has consisted of establishing contacts between fluid inclusion workers throughout the world and the organization of several symposia on fluid inclusion research during and after the 23rd IGC in Prague in August-September, 1968.

These symposia have emphasized the need for a new publication whose main purpose it is to provide communication between fluid inclusion workers and to publicize the work of COFFI. Although affiliated with the 23rd IGC, the forthcoming symposia on fluid inclusion research are not part of the official IGC program, and hence the abstracts will not be published by the IGC. We plan that Volume 1 of the continuing Proceedings series will include abstracts presented in English and French, and English translations of the Russian abstracts. These many abstracts constitute, in effect, the essence of current international work on inclusions. Although they are mainly directed towards problems of ore genesis, the are pertinent to almost any application of fluid inclusion research such as the degradation of organic compounds and the environment of diagenesis of sediments and the P, T, and X of pore fluids during metamorphic and igneous processes. Stud-

ies of silicate melt inclusions, also covered in these abstracts, are pertinent to many additional problems in the origin and thermal history of igneous rocks, including most particularly olivine nodules and meteorites. A simple news letter is planned to be mailed at intervals to all subscribers.

The charter subscription prize is $3.00 U.S., per year. Libraries and other organizations may enter charter subscriptions at the same rate.Checks should be made payable to COFFI, and sent to Edwin Roedder, U.S. Geological Survey, Washington, D. C., 20242, U.S.A.

After the preliminary study, the Institute will develop a concept for a national information system, with a definition of a general program policy and long-range goals. It expects to stress cooperation by existing organizations and systems.

Also it will develop a general plan for specific information activities for 3 years beginning in 1969.

ION EXCHANGE COLUMN

News from AGI

The American Geological Institute has begun a 2-year study of information services in the earth sciences. Backed by a grant of $190,000 from the National Science Foundation the Institute will study the ways that geologists and geophysicists store information, and how they retrieve it and exchange it -- formal meetings, reports, and journals; libraries, bibliographies, and data banks; informal and unconventional communications.

News from the Engineers Joint Council

Engineers Joint Council (EJC), 345 East 47th Street, New York,New York 10017, has established a Learning Resources Information Center (LRIC).

The Center's main product will be a directory -- Learning Resources -- which will be a compilation of essential information on courses, seminars, conferences, workshops and other education activities through which practicing engineers and industrial managers may enhance their professional competence. The thrice-yearly directory, which will be available by subscription will list programs from all sources, including; colleges and universities; engineering societies; education entrepreneurs and specialists; and government and industry. Learning resources in Learning Resources will be indexed by subject, date and location.

Other functions of the Center, which is partially funded by a $40,000 contract with the U.S. Department of Commerce's Office of State Technical Services, will be to identify and include in its data bank information about correspondence courses, programmed learning materials, films and video tapes, and to provide a selective alerting service on specific subjects, a consultation service, and a basis for research.

CALENDAR

June

15-19 — 21st National Organic Chemistry Symposium, University of Utah, Salt Lake City. (Organic Chemistry Symposium, Department of Chemistry, University of Utah, Salt Lake City, Utah 84112.)

16-18 — Status of the art; Computers in each science. International symposium by Kansas Geological Survey and International Association for Mathematical Geology; Lawrence, Kansas. (D. F. Merriam, Kansas Geological Survey, University of Kansas, Lawrence, 66044.)

17-20 — Planning challenges of the 70's in space and the public domain will be the theme of the joint national meeting of the American Astronautic Society and the Operations Research Society of America, Brown Palace Hotel, Denver, Colorado. (Dr. George W. Morgenthaler, General Program Chairman, Martin Marietta Corporation, P.O. Box 179, Denver Colorado 80201, 303-794-5211 Ext. 4575/3658.)

23-25 — American Water Resources Association symposium, Water Balance in North America, Banff, Alberta. (A. H. Laycock, Department of Geography, University of Alberta, Edmonton, Alberta.)

29-July 2 — American Association of Petroleum Geologists & Institute of Petroleum Geologists & Institute of Petroleum, Joint meeting, Brighton, England. (AAPG headquarters, Box 979, Tulsa, Okla. 74101.)

30-July 2 — Rudolfs Research Conference, Rutgers University: organic compounds in aquatic environments. (Roger Locandro, Office of Resident instruction, College of Agriculture & Environmental Sciences, Rutgers University, New Brunswick, N.J. 08903.)

July

7-11 — Annual congress, Geological Society of South Africa, Pretoria. Theme: South Africa's contribution to International Upper Mantle Project. (L. E. Kent, Geological Survey, Private Bag 112, Pretoria, South Africa.)

8-12 — Layered igneous intrusions, symposium in Pretoria, plus field trips to Bushveld Complex and maybe to Great Dyke of Rhodesia. (D. J. Visser, Department of Geology, University of Pretoria, Pretoria, South Africa.)

13-25 — International Seminar for Hydrology Professors, Urbana, Ill. (V. T. Chow, Department of Civil Engineering, University of Illinois, Urbana, 61801.)

22-25 — Annual Northeast Regional Antipollution Conference, University of Rhode Island. C.J. Wilson, Bliss Hall, University of Rhode Island, Kingston, Rhode Island 02881.)

26-27 — American Chemical Society Short Course, Interpretation of Infrared Spectra. (Education Office, American Chemical Society 1155-16th St., N.W., Washington, D. C. 20036.)

31-Aug.2 — AIME Intermountain Section, annual minerals conference, Vail, Colorado. (H.B.Ham, Intermountain Section AIME, Box 713,Leadville, Colorado 80461.)

Geochimica et Cosmochimica Acta

DR. A. A. LEVINSON
Executive Editor

JOURNAL OF THE GEOCHEMICAL SOCIETY

Published by **PERGAMON PRESS**

Do you WASTE MONEY? . . . . . .

Do you WASTE TIME?. . . . . .

Surely, Pergamon is wrong! The publisher says that Geochemical Society members would rather dissipate their resources than have the CUMULATIVE INDEX for volumes 1 through 20!

Why does he say so?

Because sales for the CUMULATIVE INDEX for volumes 1 through 20 are so poor -- see table:

COUNTRY	NO. OF SALES	% of Sales POTENTIAL	REMARKS
Ecuador	1	100	Reasonably Good
Malagasy Republic	0	100	
Albania	Low	50	Countries at the fore-front of science.
Biafra	Low	40	
Great Britain	Very Low	12	
United States	Very Low	7	

PLEASE:

Check today and get the CUMULATIVE INDEX for volumes 1 through 20 ordered for your library, (only $15.00 ; £ 5.0.0.); or for yourself at only $10.00 or £ 3.10.0.

Then I can answer Pergamon and tell him that he is wrong; you do not waste money and time!

Your editor,

A A Levinson

A.A. Levinson

P.S. Please Order directly from Pergamon Press at: Headington Hill Hall, Oxford, England, or 44-01 21st Street, Long Island City, N.Y. 11101, USA.