THE GEOCHEMICAL NEWS

Number 11 August 1958

EXCERPTS FROM THE COUNCIL MEETING REPORT

The Geochemical Society Council meeting was held February 26, 1958, at 9:00 A.M. in the Geophysical Laboratory, Washington D.C. Attending were Farrington Daniels (presiding), George T. Faust, Earl Ingerson, K. B. Krauskopf, Willard Libby, J. F. Schairer, and H. S. Yoder. Following routine reports of the officers, the report of the Committee on Russian Translations was received:

Committee on Russian Translations. Ingerson reported substantial progress in efforts to arrange for the translation of Geokhimiia and other Russian publications. The Council expressed great enthusiasm for having the translations made, but a long discussion arose on methods of financing the venture and handling details of operation.

The latest estimate of total costs for translating a single year of Geokhimiia is $19,250, of which the NSF has agreed to contribute $15,500. This leaves $3,750 to be made up by sales. The Council felt that sufficient sales were assured so that it was safe to go ahead on this basis. In any event, the Society would not be liable for a deficit of more than $1,000. Libby suggested that the AEC might be willing to assume part of the burden, but Ingerson thought it would be best if outside subsidy came from a single source. Libby then suggested that the AEC might make a contribution if the financial burden proves to be heavier than expected or if additional translations are undertaken.

To a suggestion that the translating job be turned over to Associated Technical Services or a similar organization, Ingerson objected that the Society would then have no control over the quality of the translation.

The Council agreed that the translation should be undertaken, but that the Society must guard itself against becoming heavily involved financially. Faust emphasized the desirability of setting up a new office, separate from the treasurer's office, for handling details of getting the translation done, editing the copy, having the material published, and keeping track of subscriptions. Yoder summarized much of the discussion in the following motion:

"That the Society accept responsibility for translating Geokhimiia and other Russian geochemical publications; that the office of editor be created to execute the responsibility; that the editor be appointed by the President; that the editor be ex officio a member of the Council; that financial support be sought from the NSF, the AEC, or similar organizations; that the amount to be transferred to the project from Society funds must not exceed $1,000 during the first year; that the maximum amount for succeeding years be fixed by the Council at subsequent meetings; and that the price to be charged for the translations be fixed by the editor in consultation with the donor of financial subsidy."

The motion was seconded by Schairer and passed unanimously. The president appointed Ingerson as principal editor for the first year, and Ingerson agreed to serve. Yoder recommended that the editor if possible leave the printing of the translation and the mailing and collecting of bills to a commercial firm. Ingerson reported that V. P. Sokoloff would be willing to serve as a translator, and the Council recommended that he be hired in this capacity.

(Note: The NSF grant has been received and No. 1 of Geokhimiia for 1958 has been translated. Subscriptions should be sent to Professor E. Wm. Heinrich, Mineralogical Laboratory, University of Michigan, Ann Arbor, Michigan. Price, $20.00 per year; to members of the Geochemical Society, $10.00. See last page of this issue of the NEWS for subscription coupon.

The Society has also applied to the National Science Foundation for funds to undertake the translation of eleven Russian books in geochemistry and related subjects.)

Bowen Award. The question of a possible Bowen award to be given annually by the Society was briefly discussed. Yoder and Schairer agreed to discuss with Mrs. Bowen the possibility of an award in the form of a medal.

A.A.A.S. Affiliation of the Society with the AAAS was announced. The Council agreed that we should request affiliation with Sections C (Chemistry) and E (Earth Sciences). The president appointed M. D. Foster and Philip Abelson as representatives from the Society to serve on the Council of the AAAS.

A.G.I. The president appointed Schairer to serve as a second representative of the Society (with Ian Campbell) on the AGI. Schairer succeeds E. F. Osborn, and is to serve from November 1957 to November 1959.

I.M.A. Ingerson reported that an International Mineralogical Association is to be organized in Madrid next month, and suggested that the Geochemical Society could emphasize its international character by affiliating

with the new organization. It was suggested that C. E. Tilley, who plans to be in Spain at that time, should be appointed official delegate to the organization meeting.

(Note: The International Mineralogical Association was organized at Madrid in April. The following officers were elected to serve until August 1960: Robert L. Parker, President, Zurich, Switzerland; Frans E. Wickman, First Vice-President, Stockholm, Sweden; Dmitry P. Grigoriev, Second Vice-President, Leningrad, U.S.S.R.; Jose L. Amoros, Secretary, Madrid, Spain; D. Jerome Fisher, Treasurer, Chicago, Ill.; Councilors: Tei-Ichi Ito, Tokyo, Japan; Ettore Onorato, Rome, Italy; Jean Orcel, Paris, France; Advisory member, G. Frank Claringbull, London, England.)

ACTIVITIES OF RELATED SOCIETIES

Clay Sciences of Japan
by T. Sudo

The first general annual meeting of Clay Sciences of Japan was held on November 29-30, 1957, at the Hall of the National Institute of Agricultural Sciences, Tokyo, under the auspices of the six societies concerning Geology, Mineralogy, Economic Geology, Ceramics, Soil Sciences, and Chemistry. 35 papers were read. Among them, 7 papers concern somewhat longer survey lectures on subjects of general interest: wall rock alteration, laterite, soil clay minerals, crystal chemistry, acid clays and activated clay, electron microscopy, and clay-water relationship. Other subjects cover all the fields of interest of the above societies. All of the papers read in this meeting will be published as a book at the end of 1958.

At the end of November, 1958, the second general annual meeting of Clay Sciences of Japan will be held in Tokyo. Those who hope to make suggestions concerning the book and also the forthcoming meeting in 1958 should inform T. Sudo, Geological and Mineralogical Institute, Faculty of Science, Tokyo University of Education, Otsuka, Bunkyo-ku, Tokyo, Japan.

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The Canadian Mineralogist

The main medium for publication of Canadian mineralogical papers, until 1955, was Contributions to Canadian Mineralogy. This journal, founded in 1921 by Dr. T. L. Walker, Professor of Mineralogy and Petrography at the University of Toronto, appeared annually with few exceptions, at first as non-consecutive numbers of the Geological Series of the University of Toronto Studies and later as a regular annual issue of The American Mineralogist.

In 1954 a national organization, later called the Mineralogical Association of Canada, was organized to sponsor a mineralogical publication. The new journal, the Canadian Mineralogist, publishes papers in the fields of crystallography, geochemistry, mineralogy, petrology and allied sciences and accepts papers in either English or French. The first number of The Canadian Mineralogist was designated Volume 6, part 1, to continue the numbering system of Contributions to Canadian Mineralogy, but it was not issued until 1957; no publication appeared in 1956.

Professor L. G. Berry of Queen's University is the editor of The Canadian Mineralogist. The journal is issued once a year and is sent to all members of the Association. Membership at present exceeds 400 and includes members from more than 25 countries.

The annual fee for ordinary and associate members is $2.00; for corporate members, including libraries, $5.00; for student members $1.00. Enquiries regarding membership should be sent to Mr. S. Kaiman, Sec'y., Mineralogical Association of Canada, c/o Mines Branch, 552 Booth St., Ottawa, Canada.

GEOCHEMICAL ACTIVITIES IN SOUTHERN AFRICA
by L. H. Ahrens

1. Establishment of post of senior lecturer in geochemistry at Cape Town. This newly established post will be taken up by Dr. S. R. Taylor, previously at Oxford, and Bloomington, Indiana, and originally from New Zealand.

2. A fairly large-scale investigation of the distribution of trace elements in rocks of the Bushveld igneous complex has been completed by Dr. C. J. Liebenberg, Pretoria University. Much of the experimental work was carried out by spectrographic procedures when Dr. Liebenberg spent some months with Ahrens at Oxford.

3. Geological age research:
   (a) Lead method: mainly by de Villiers and Burger at the National Physical Research Laboratory, Pretoria. This research is involving the use of radioactive minerals (particularly monazites), and also galena.
   (b) Strontium method: by Nicolaysen and Schreiner at the Bernard Price Institute, Johannesburg. This investigation has been concerned mainly with biotite and with the possibility of using granite as a whole.

4. Development of sensitive analytical procedures involving enrichment in ion exchange resins (cationic and anionic) followed by spectrochemical analysis: a fresh field of research with many possibilities. A variety of elements not normally detectable by direct spectrochemical analysis of a rock may be determined; for example, Tl, Bi, Zn, Cs, Sn, and several others. Ahrens, Edge and Brookes at Cape Town University.

TRANSLATIONS

In Numbers 7 and 9 of Geochemical News there were lists of translations of interest to geochemists. A third list appears below. In the past these have been available on request from Earl Ingerson, U.S. Geological Survey, Washington 25, D.C. With the increasing numbers of translations and requests, it will not be possible to continue this arrangement. All of the translations on hand (all copies of some of them are out on loan) are being sent to the John Crerar Library and it is hoped that most of them will be listed shortly in the S.L.A. Translation Monthly. The ones listed there can be ordered for a nominal figure from:

S.L.A. Translation Monthly,
The John Crerar Library
86 East Randolph Street
Chicago 1, Illinois

ALEKIN, O. A. and MORICHEVA, N.P.: The saturation of the Volga water by calcium carbonate. 4 typed pages.

BARSUKOV, V. L. and KURIL'CHIKOVA, G. E.: The boron content of serpentinites.

BELYAEV, Yu. I. and MIKHAILOVA, G. V.: Experiment in utilizing color photography to the interpretation of spectra obtained by diffraction grating spectrographs. 3 typed pages.

BUR'YANOVA, E. Z. and KOVALEV, G. A. and KOMKOV, A. I.: The new mineral cadmoselite. 3 typed pages.

DOLIVO-DOBROVOL'SKII, V. V.: Crystals of tyuyamunite. 23 typed pages.

DORFMAN, M. D.: A new manganese mineral of the chinglusuite type. 8 typed pages.

GERLING, E. K.: Occurrence of rare gases in meteorites and their isotopic composition. 6 typed pages.

GERLING, E. K. and BARANOVSKAYA, N. V.: On the abundance of xenon and krypton in meteorites. 6 typed pages.

GERLING, E. K. and LEVSKII, L. K.: On the origin of rare gases in stony meteorites. 9 typed pages.

GERLING, E. K., LEVSKII, L. K. and AFANAS'YEVA, L. I.: On the occurrence of argon 38 in minerals containing potassium. 12 typed pages.

GERLING, E. K. and RIK, K. G.: On the forms of occurrence of argon in meteorites. 6 typed pages.

GRIGOR'EV, Iv. F. and DOLOMANOVA: Smirnovskite - A new mineral of the group of hydrous fluoro-silico-phosphates of thorium.

KALITA A. P.: On the composition of obruchevite - A hydrated uranium-yttrium variety of pyrochlore. 6 typed pages.

KANEKO, KATSU: On the geologic activities in USSR, and other western nations. 17 typed pages.

KAZAKOV, A.V., TIHOMIROVA, M. M. and PLOTNIKOVA, V. I.: The $FeO-CO_2-H_2O$ system and conclusions.

KAWAI, MAKIO: Minor components in the Clay from the Seto District (Japan). 6 typed pages.

KAZAKOV, A. V., TIHOMIROVA, M. M. and PLOTNIKOVA, V. I.: The system of carbonate equilibria (dolomite, magnesite). 45 typed pages.

KHITAROV, N. I.: The first all-union conference of geothermal investigations in USSR. 9 typed pages.

KHITAROV, N. I. and MALININ, S. D.: Experimental characteristics of a part of the system H_2O - CO_2. 8 typed pages.

KHLOPIN, V. G.: An oxygen method for the determination of geologic age from atomic disintegration, and its application to the age determination of carelian uraninites and uraninites from Wilberforce and South Dakota.

KHLOPIN, V. G. and GERLING, E. K.: New data in the geochemistry of the rare gases. 10 typed pages.

KORZHINSKII, D. S.: Derivation of thermodynamic potentials for systems with mobile components. 9 typed pages.

KOSTYLEVA, E. E.: Problems of mineralogy, geochemistry and petrography. 14 typed pages.

KUSAKOV, M. M. and MEKENITZKAIA, L. I.: The film and the capillarily-retained water in a porous medium. 7 typed pages.

LEVIN, B. Yu., KOZLOVSKAYA, S. V. and STARKOVA, A. G.: The average chemical composition of meteorites. 26 typed pages.

LEVIN, B. Yu. and SLONIMSKII, G. L.: Problem of the origin of the meteoritic chondrules. 5 typed pages.

LIZUNOV, N. V. and LISITSYN, A. P.: Composition of the suspended matter in the Bering Sea according to spectral analysis. 8 typed pages.

NABOKO, S. I.: A case of gaseous fluorine metasomatism at an active volcano.

PETROVA, E. S.: A new hydrous calcium borate - frolovite. 6 typed pages.

RODE (ROHDE), E. IA.: On tyuyamunite and the minerals of the uranite group. 9 typed pages.

SARDAROV, S. S.: New reactor for the release and purification of radiogenic argon. 4 typed pages.

SEMENOV, E. I.: Isomorphism and camouflage of rare earths. 25 typed pages.

SEMENOV, E. I. and T. A. BUROVA: On the new mineral labuntsovite and on the so-called titanoelpidite. 5 typed pages.

SHKOL'NIK, M. YA., and STEKLOVA, M. M.: In reference to physiological role of boron in plants. 7 typed pages.

SHTERNINA, E. B., and E. V. FROLOVA: Solubility in the system $CaCO_2$-$CaSO_4$-NaCl-CO_2-H_2O. 8 typed pages.

SKROPYSHEV, A. V.: Gaseous-liquid inclusions in crystals of Iceland spar. 35 typed pages.

SOSEDKO, T. A.: Variations in the structure and properties of beryls with increased contents of alkalies. 4 typed pages.

STARIK, I. E.: The role of the secondary processes in the age determination of radiometric methods.

STARIK, I. E., ATRASHENOK, L. Ya. and KRYLOV, A. Ya.: Determination of uranium in accessory minerals.

STARIK, I. E. and SOBOTOVICH, E. V.: Determination of the isotopic composition of lead in rocks.

TIKHONENKOV, I. P. and KAZAKOVA, M. E.: Nioboloparite - A new mineral of the perovskite group. 7 typed pages.

VINOGRADOV, A. P.,: Geochemistry of isotopes - Address presented at the General Session of the Academy of Sciences, USSR, February 1, 1954.

VINOGRADOV, A. P.: Geochemical history of oxygen and photosynthesis. 34 typed pages.

VINOGRADOV, A. P.: Comparison of data on the age of the rocks obtained by different methods and geological conclusions.

VINOGRADOV, A. P. and ZYKOV, S. I.: New data on the isotopic composition of leads. 5 typed pages.

VOTINTZEV, K. K.: In reference to role of sponges in dynamics of silica in water of Lak Baikal. 4 typed pages.

ZUBENOK, L. I.: The water cycle of continents and oceans. 8 typed pages.

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The University of Michigan Library has provided the editor with a list of English translations of Russian periodicals which may be available on interlibrary loan, especially through Wayne State University Library or the Library of Dow Chemical Co., Midland, Michigan. Enquiries should be addressed to the Director, University of Michigan Library, Ann Arbor, Michigan.

Chemistry

Academy of Sciences, USSR, Proceedings
(Akademiia Nauk SSSR Doklady) 1956-
- Chemistry Section
- Chemical Technology Section
- Agrochemistry Section
- Geochemistry Section

Journal of General Chemistry
(Zhurnal Obschchei Khimii) 1955-

Journal of Analytical Chemistry
(Zhurnal Analiticheskoi Kimii)

Academy of Sciences, USSR, Bulletin, Div. of Chemical Science
(Akademiia Nauk SSSR, Izvestiia, Otdelenie Khimicheskikh Nauk)

Journal of Applied Chemistry
(Zhurnal Prikladnoi Khimii)

Chemical Science and Industry
(Khimichesaia Nauka I Promyshcennost) 1957-

Chemical Industries
(Khimicheskais Promyshlennost)

Geology and Geophysics

Academy of Sciences, USSR, Proceedings
(Akademiia Nauk SSSR Doklady) 1957-

Academy of Sciences, USSR, Bulletin, Geophysics Series
(Akademiia Nauk SSSR, Izvestiia, Seriia Geofizicheskaia) 1957-

Geophysics Institute of the Academy of Sciences, Proceedings
(Trudy Geofizicheskogo Instituta Akademii Nauk) 1957-

Physics

Academy of Sciences, USSR, Proceedings
(Akademiia Nauk SSSR Doklady) 1956-

Journal of Experimental and Theoretical Physics
(Zhurnal Eksperimental' Noi I Teorticheskoi I Fiziki) 1955-

Journal of Technical Physics
(Zhurnal Tekhnicheskoi Fiziki) 1956-

Colloid Journal
(Kolloidnyi Zhurnal)

Academy of Sciences, USSR, Bulletin, Physical Series
(Akademiia Nauk SSSR, Izvestiia, Seriia Fizichdskaia) 1955-

PUBLICATIONS

Thermal Properties of Ceramics, a report from the New Jersey Ceramic Research Station, Bureau of Engineering Research, by E. J. Smoke and J. H. Koenig. Bull. No. 40, 53 pp. Bureau of Engineering Research, College of Engineering, Rutgers University, New Brunswick, N. J. 75¢.

Infrared Analysis of Sulfur Dioxiode, Data Sheet IR-4201, 4 pp. Gives detailed information on three important areas of sulfur dioxide analysis: sulfur recovery from petroleum sour gas, controlling reaction velocity in the sulfuric acid plant, and monitoring stack gas in power plants for air pollution regulation. Beckman Process Instruments Div., Dept. IL, Fullerton, Calif.

Geologische Rundschau, an international journal of physical geology written and read by geologists around the world. Founded by G. Steinmann (1910), continued by H. Cloos, succeeded by a board of editors in Germany and Switzerland, and contributing editors in the United States, Great Britain, and France. Well known for its issues on special subjects, discussing them in detail and providing syntheses--in recent years:

1955 Active Tectonics
Proceedings of the 4th Intern. Congress of Sedimentology (Göttingen 1954)
Tectonics and Economic Deposits of the Rhenish Schiefergebirge
1956 Earth and Life
1957 Geology of South America
Geology and Geophysics of the Deeper Zones of the Earth
1958 The Sea, Past and Present

Publishes papers in English, French, and German; each issue contains English, French, German and Russian summaries. 46 volumes published; 2-3 issues annually, about 500 pages, many maps and illustrations. You will receive the "Rundschau" regularly when you become a member of the Geologische Vereinigung, or a subscriber. Membership or subscription $5.00 a year. Send applications to: Geologische Vereinigung, Nussallee 2, Bonn, Western Germany.

A Survey of the Literature on Rhenium, by C. T. Sims, E. N. Wyler, G. B. Gaines and D. M. Rosenbaum. All information accumulating in the literature during the 27 years prior to 1955 is classified into such major fields of interest as the history of rhenium, its occurrence, recovery and production, and its physical, electronic, chemical, and metallurgical properties. 236 pp., $4.50.
PB121826. Available through Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C. Remittance must accompany order.

Theoretical Principles of Isotope Methods for Investigating Chemical Reactions, by S. Z. Roginsky, Institute of Physical Chemistry, Academy of Sciences, USSR. Deals with the application of isotopes to investigations of the mechanisms of chemical transformations and of the reactivity of substances. 456 pp., $2.20.
AEC-tr-2873. Available through Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C. Remittance must accompany order.

CALENDAR OF FORTHCOMING EVENTS

Sept.
2-5 9th Alaskan Science Conf., Univ of Alaska, College, Alaska.
17-19 AIME: Rocky Mountain Minerals Conference, Newhouse Hotel, Salt Lake City.
22-25 American Mining Congress Mining Show, Civic Auditorium, San Francisco.

Oct.
16-17 AIME: Southern California Petroleum Sect. Fall Mtg., Biltmore Hotel, Los Angeles.
20-23 7th National Clay Conf., U.S. National Museum, Washington, D.C.
22-24 AAPG, Southwest Regional Mtg., sponsored by SW Fed. of Geol. Socs., City Auditorium, Mineral Wells, Tex.
23-25 AIME: Mid-America Minerals Conf., Chase-Park Plaza Hotels, St. Louis, Mo.
27-29 Gulf Coast Assoc. of Geological Soc's., Ann. Mtg., Corpus Christi, Tex.
29-1 Soc. of Exploration Geophysicists, Ann. Mtg., Roosevelt Hotel, New Orleans.

Nov.
6-7 AAPG: Pacific Sec. Ann. Mtg., Ambassador Hotel, Los Angeles, Calif.
6-8 GSA: Ann. Mtg., St. Louis, Mo. Also SEcG, SVP, PS & AGT.
6-8 Geochemical Soc. Ann. Mtg., St. Louis, Mo.

Field Trips
Aug.
20-23 Alberta Soc. of Petr. Geol., Calgary, Alta. Field trip to Front Range Canadian Rockies.

Sept.
17-20 Kansas Geol. Soc., Wichita, Kan. To south central Colorado.
18-20 Rocky Mt. Assoc. of Geologists field trip, Maroon Basin of N.W. Colo., to be held in conjunction with Colo. Pennsylvanian Symposium guidebook presentation. Date tentative.

Oct.
4 Utah Geological Soc., Ann. field trip to Stansbury Range.
Write 200 Mines Bldg., Univ. Utah, Salt Lake City, Utah.
16-18 New Mexico Geol. Soc., Roswell, N.M. To Black Mesa Basin.
27-29 Gulf Coast Assoc. of Geol. Soc's., Corpus Christi, Tex. Trip as conducted by Corpus Christi May 15-17.

ION-EXCHANGE COLUMN

Arthur H. Sorensen, Mining Geologist of the Engineering and Geological Office of the Hecla Mining Co., Burke, Id., has sent us a copy of his informative paper "Wallrock alteration in the Silver Summit Mine, Shoshone County, Idaho", presented April 18 at the 1958 Pacific Northwest Regional Conference of the American Institute of Mining Engineers. He generously invites "..if any members of the Geochemical Society would be interested in having a copy, or copies, of the paper I would be happy to furnish them." Many thanks.

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Dow Chemical Company of Midland, Michigan, has developed a new process for the recovery of gallium. The method consists of treating sub-divided ore containing the metallic element with a current of hydrogen chloride or hydrogen bromide under substantially anhydrous conditions at a temperature ranging from 700°C to 950°C. The current is used in an amount sufficient to volatilize gallium as the trihalide and condensing and recovering it as the pure material.

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As granitizationists view the enigma
One can banish the igneous stigma
With processes deep
That promote ion creep
And yield no mere magma, but migma

J.R.S. & E.W.H.

E. Wm. Heinrich
Editor

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Ann Arbor, Michigan

(See Subscription Blank on page 8)

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The Geochemical Society
c/o Prof. E. Wm. Heinrich
Mineralogical Laboratory
University of Michigan
Ann Arbor, Michigan

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