

GIS newsletter

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GIS members interested in presenting a paper at the annual GIS meeting in Denver in November should contact John Mulvihill, Program Chairman, by May 28. The symposium topic is a broad one: "Information Science." Mr. Mulvihill's address: John G. Mulvihill, Manager, GeoRef, American Geological Institute, 5205 Leesburg Pike, Falls Church, Va. 22041. Telephone: 703/379-2480.

GIS Member Needed To Speak At IGC In Sydney, August '76

GIS President Vivian Hall has received a request from Australia for a GIS member to speak, at the International Geological Congress in Sydney, to a group interested in forming a geoscience information organization similar to GIS. Anyone who plans to attend the Congress in August and who thinks he/she would be interested in being on the program should contact Ms. Hall immediately, as program arrangements must be made.

Dick Walker Reports On GeoRef Advisory Meeting

"I attended the AGI Advisory Committee on GeoRef as GIS representative on February 7 at the AGI Headquarters in Falls Church. The meeting was well attended and was chaired by Geogre Becraft of U.S.G.S. The current status of GeoRef was presented by Messrs. Mulvihill and Rassam. The budget, the expenses, and income were detailed by E.W. Kain, AGI business manager. Reports were made on the several projects underway, including the Colorado bibliography, reloading of GeoRef at SDC, and others. Progress on a thesaurus was reported. Changes in printing of *Bibliography and index of geology* were discussed (and we even discussed the possibility of going to a loose-leaf format). Two topics of direct concern to GIS:

1. GIS workshops on GeoRef at GSA, Denver, in 1976: I agreed to work with John Mulvihill on a workshop of some undetermined length; 2 days or 2 half days, before or after the GSA program. It was suggested (by John Frye of GSA) that it should be directed to geologists. John thinks the audience might better be GISers; a workshop for geologists would be poorly attended. He does plan (as one of the two GIS sessions) to have an on-line workshop with *Petroleum index*.
2. The Committee agreed to supply the University of Wisconsin with a year's file of GeoRef, as they are produced, as an experiment to see if they can be of value on a university campus. They are to be used as a current awareness service only—probably SDI. I have done what I can to get the local geologists and other potential users interested (and educated) in the service. It would now appear that a number will use it and students in a class of mine are going to help implement it. I have offered to write up the demonstration for presentation at Denver."

EDITERRA Publishes *Earth Science Editing*

EDITERRA (European Association of Earth Science Editors) has issued a new publication, *Earth science editing*. The first issue appeared September 1975. The publication aims to distribute quickly information and concepts which are of interest not only to EDITERRA members but also to those concerned with editing and publishing in the earth sciences. It will be distributed twice a year, free to EDITERRA members, and available at an annual subscription of £ 1.50 to libraries and organizations. For further information, write: Ms. Nancy P. Morris, EDITERRA Secretary, 30 Longdown Road, Lower Bourne, Farnham, Surrey, U.K.

EDITERRA was established in Paris in December 1968 at a meeting of editors of European earth science serials. It meets in General Assembly every three years. The organization aims "to promote improved communications in the earth sciences . . . raise the quality of journals and the standard of editing in Europe . . . and persuade universities to educate students in the preparation of scientific papers and to recognize the modern creative editor's role in the mechanisms of research and education." Membership dues of £ 5 entitles one to receive reports of the General Assemblies, the Association's circulars and *Earth science editing*.

REMINDER: 1976 GIS membership dues must be paid in order to receive future issues of the *Newsletter* and the 1976 *GIS Proceedings*.

GEOLOGY

GIS 10th Annual Meeting Proceedings Now Available

Proceedings of Geoscience Information Society's tenth annual meeting in Salt Lake City October 21, 1975, are now being distributed to GIS members. Non-members may purchase volume 6 of the *Proceedings* for \$12.00. Checks are to be made payable to the Geoscience Information Society and forwarded to:

Geoscience Information Society
c/o American Geological Institute
5205 Leesburg Pike
Falls Church, Virginia 22041

The volume contains papers presented at two symposia: "The Location and Retrieval of Energy Resource Information" and "Data Retrieval for the Student, Researcher and the Environmentalist." Of particular interest to GIS members is Marta L. Dosa's paper "Environmental Policy Making and Information" (p. 159-171) in which she discusses a potential role for the Geoscience Information Society:

"In a remarkable article on geological data systems and their implications nationally and internationally, Daniel F. Merriam focused on a number of interesting policy questions. For example, he suggested establishment of a *U.S. index of geoscience data* that would include computer-based files and unpublished open-file reports in addition to traditional forms of literature. Perceptions such as this should become the basis of systematic policy formulation concerning scientific data and information. National resources such as the *Index of geoscience data* could then be linked with other resources in UNEP's (United Nations Environment Programme's) International Referral System.

The Geoscience Information Society may consider the following approaches:

1. The Society could explore its potential role as an "NGO" having specialized expert knowledge in the transfer of geoscience data and information. A committee or task force could investigate possible linkages with UNEP and ways to contribute to environmental information policy formation.
2. Geoscientists and information specialists in government, industry and the non-governmental sector should develop stronger links of communications with each other in order to discuss policy alternatives concerning data resources. Regional workshops could be jointly sponsored by various institutions to facilitate:
 - a) the on-going review of current policies at the national and international levels and the potential impact of the International Referral System (IRS) on the coordination of geoscience data systems, the standardization of data recording and the exchange of information,
 - b) recommendations to appropriate policy setting groups in the public and private sectors,
 - c) dissemination of information to the scientific community."

Guidebook Committee Urges Libraries To Submit Holdings

Those libraries who have not as yet submitted their guidebook holdings to members of the GIS Guidebook and Ephemeral Materials Committee are urged to do so as soon as possible. The Committee is collecting the information for the third edition of *Geologic field trip guidebooks*. Ms. Harriet W. Smith, Librarian, Geology Library, University of Illinois at Urbana-Champaign, is Chairperson of the Committee.

ERDA Announces Publication Changes

The Energy Research and Development Administration (ERDA) has made its monthly abstract journal, *ERDA research abstracts (ERA)*, available to the public with the January 1976 issue. Publication of *ERA* began in March 1975 as an in-house service, with distribution limited to ERDA's staff and its contractors. *ERA* abstracts and indexes ERDA-originated, energy-related, scientific and technical reports, patents, journal articles, conference papers, theses, books, and monographs. Subject, author, issuing-organization, and report-number indexes are included with each monthly issue and will be cumulated and issued annually. ERDA will cease publication of *Nuclear science abstracts (NSA)* as of volume 33, number 12, June 30, 1976. ERDA-originated nuclear-related abstracts will be included in *ERA*, and the International Atomic Energy Agency plans to expand the scope of its publication *Atomindex* to include all nuclear-related abstracts.

Subscriptions to *ERA* will be sold by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. One-year subscription prices are as follows: *ERA* and an annual index will be \$119 (domestic), \$148.75 (foreign); index only \$30.50 (domestic), \$38.15 (foreign); individual copies, \$7.10 (domestic), \$8.90 (foreign). *Atomindex* is available from UNIPUB, P.O. Box 433, Murray Hill Station, New York, New York 10016, at a subscription rate of \$150 per year, including cumulated indexes, or \$110 per year for the 24 regular issues without cumulated indexes.

COGEODATA Reports On International Meetings

COGEODATA Newsletter, January 1976, reports on international meetings of interest to geoscientists:

APCOM International Symposium, Altenau, Federal Republic of Germany, 5-11 October 1975. This was the 13th in the series of successful symposia on "Application of Computers and Mathematics for Decision-making in the Mineral Industries" (APCOM), which this year was sponsored by universities from the United States of America, Canada, South Africa, Australia, and the Federal Republic of Germany. As the symposium name implies, the meeting dealt primarily with mathematical, statistical, and computer methods applied to the entire range of activities related to the mineral industries. However, this year there was a special emphasis on computer-based data systems which are of interest to the geosciences and COGEODATA members. The Secretary, who represented COGEODATA at the meeting, reports that papers presented included such topics as data systems for coal resources, national and international mineral availability systems, data-base management systems, and geochemical data files. Proceedings of the symposium (2 volumes) were made available at the meeting. CONTACT: Prof. Dr.-Ing. F.L. Wilke, Technische Universität Clausthal, D-3392, Clausthal-Zellerfeld, Erzstrasse 20, Federal Republic of Germany.

Mathematical Methods in Geology, Mining Pribram in Science and Technique, Pribram, Czechoslovakia, 13-17 October 1975. The section of the Mining Pribram conference on "Mathematical Methods in Geology" is held every two years and was co-sponsored this year by the International Association for Mathematical Geology (IAMG) and the Czech Society of Science and Technique. The technical program included a session on "Geological Data Processing" with

speakers from Czechoslovakia, German Democratic Republic, France and Canada. COGEO DATA was represented by the Secretary who spoke on "Planning an Earth Resources Data System in Canada." Proceedings were made available at the conference. As with the APCOM meeting, the increase in attention paid to data management by those primarily concerned with mathematical geology, statistics and problem-solving is a healthy sign which recognizes the mutual interdependence of these two fields. During the conference the Secretary convened a meeting of ten geoscientists interested in activities of COGEO DATA, including Dr. J. Hruska of Geindustria, Praha, who has been an active member since the inception of COGEO DATA in 1967. Others represented the German Democratic Republic, France and Poland. All expressed keen interest in COGEO DATA and a proposal was made that COGEO DATA and the International Association of Mathematical Geology co-sponsor a meeting in central Europe during 1977 or 1978. CONTACT: Dr. Vaclav Nemeč, Geindustria n.p., U pruhonu 32, 170 04, Praha 7, Czechoslovakia.

Atlas Computing Division—COGEO DATA Workshop on System Intercommunication for Geological Data, Didcot, United Kingdom, 21-22 November 1975. This workshop was scheduled prior to the COGEO DATA Symposium in Paris to allow a group of invited experts to use, discuss and assess a recently developed generalized technique for transferring computer-processable data from one "host" file management system to another. The technique, called FILEMATCH, was developed at the Atlas Computing Division of the U.K. Science Research Council under the direction of Prof. Peter G. Sutterlin while he was a Visiting Scientist at ACD. Professor Sutterlin is on staff at the Department of Geology, University of Western Ontario, London, Canada. The workshop was attended by 25 participants from Canada, United Kingdom, France, Netherlands, United States, Sweden, and the Federal Republic of Germany. The designers of several of the commonly used file management systems in geology were represented, and the systems themselves were operational for the workshop on the Rutherford Laboratory IBM 370/195. These included G-EXEC (United Kingdom), GRASP (U.S.A.) SAFRAS (Canada), SIGMI (France), DASCH (Federal Republic of Germany), and GEOMAP (Sweden). Installation of these diverse systems was accomplished prior to the workshop, which provided a unique opportunity for discussion of design philosophies.

The basis of FILEMATCH is the transfer of explicit information on the structure of the data. Through the use of FILEMATCH, workshop participants were able to generate new versions of their file in FILEMATCH format, which could then be read and integrated into other systems having a FILEMATCH interface. Unfortunately, turnaround time was slow throughout the workshop period and less actual transfer of data between systems was achieved than had been hoped for. Nevertheless, the practicality of the FILEMATCH approach was satisfactorily demonstrated and there was considerable discussion on the merits of this technique. Some felt that the approach provided a useful and cost-effective mechanism for transferring data while others felt it was unduly complex and that the creation of *ad hoc* interface programs was a better approach. Probably the most beneficial aspect of the workshop was the opportunity afforded for many individuals interested in data management to discuss their problems in an operational and hospitable environment. CONTACT: Mrs. Elizabeth M. Gill, Atlas Computing Division, Science Research Council, Chilton, Didcot, Berkshire, OX11, OQY, United Kingdom.

Symposium on Capture, Management and Display of Geological Data, with special emphasis on energy and mineral resources, Paris, France, 14-16 November 1975. This symposium was sponsored by COGEO DATA, UNESCO and École des Mines de Paris. The meeting included six sessions: Session I: Introduction, Session II: Data Management, Session III: Data Capture and Display, Session IV: Fossil Fuel Data, Session V: Mineral Data, and Session VI: The Future. The introductory session dealt primarily with the need for geological data systems especially in areas relating to energy and mineral resources. The presentations ranged from consideration of theoretical aspects of geological data structures and their implication for data-base modeling through

to specific applications of data files for handling energy and mineral deposit data. In addition, examples were given on how the data may be processed and displayed once they have been effectively stored and retrieved. Examples included the analysis of contouring by J.M. Botbol and J.C. Davis, and the use of correspondence analysis by J.M. Monget and P. Roux in their study of the chemistry of manganese nodules. Although development of geological data bases is still at a pilot stage in many organizations or it is simply the topic of research, data bases have nevertheless been used in a major fashion, especially by the petroleum industry. For example, the Petroleum Data System described by J.A. Bright and J.R. Century contains data on approximately 70,000 oil fields and pools. Requests for retrievals from this system indicate the value of the contained data. There were few surprises in the final session dealing with the future except for momentary unrealistic glimpses of possible scenarios that we may be facing in the decades to come, according to S. Bie.

There were salient strengths and weaknesses in the application of computer-based methods as described in this symposium. The strengths were varied. They included the broad spectrum ranging from major applications to very specific areas of new scientific endeavour, the high level of interest and activity in building the appropriate files and the no-nonsense everyday use of major data files by some petroleum companies. There were also some weaknesses. For example, there was a lack of adequate analysis as to why a computer-based approach was taken. In many instances there was no indication of user satisfaction and furthermore there was rare clear indication of cost effectiveness. Perhaps the greatest contribution of this meeting was to bring together an increasing number of talented people involved in all levels and stages of effective use of geological data. There was an obvious high level of interest and excellent interaction during discussions and especially informally during the extended coffee breaks and lunch hours. Certainly it is becoming quite evident that the geologist is effectively "honing" the rapid evolving technology of computer science to more effectively serve his needs. CONTACT: Dr. C.F. Burk, Jr., Secretary, COGEO DATA, Canada Centre for Geoscience Data, Energy, Mines and Resources Canada, 580 Booth Street, Ottawa K1A 0E4, Canada.

Standards for Computer Applications in Resource Studies (International Geological Correlation Programme, Project 98), Organizational Meeting, Paris, 27-28 November 1975. The purpose of this meeting was to formulate specific tasks and methodology for attaining the objectives given in the project proposal. Nine countries were represented by 23 participants of which six each were from Canada and the United States. Others were from Czechoslovakia (2), Australia, India, U.S.S.R., and Norway. During the planning session, the participants heard informative presentations on a variety of topics: A.L. Clark, "Value of Standards for Applications of Computer-based Information Systems"; J.M. Botbol, "Categories of Information Amenable to Standardization"; G.D. Williams and R.V. Longe, "Example of Standardization on a National Level—Canada"; and M.S. Rao, "Example of Standardization on a National Level—India." The participants divided into two working groups to discuss content of data records and methodology of resource analysis.

As a result of these discussions, two courses of action are underway. First, the draft report (14 Nov. 1975) of the Mineral Deposit Working Committee of the (Canadian) National Advisory Committee on Research in the Geological Sciences (NACRGS): "Computer-based files of mineral and fuel deposit data: Recommended basic standards for content and notation" was adopted as a working document, and will be reviewed to determine its suitability and applicability to the IGCP project. (The Canadian document will be published by mid-1976.) This process has begun through an international teleconferencing session among selected participants. Second, a workshop is being organized to develop an inventory of resource assessment techniques and to define data elements required to support mineral and energy resource studies. Participation by resource investigators from developing nations will be encouraged in both phases of this IGCP project and reports will be published. Because of the subject matter and techniques involved, COGEO DATA will be available to assist on an

advisory basis. CONTACT: Dr. A.L. Clark, Chief, Office of Resource Analysis, U.S. Geological Survey, Mail Stop 920, Reston, Virginia 22092, U.S.A.

COGEOLOGICAL Rock Chemical Task Group Meeting, Paris, 1-2 December 1975. The meeting was attended by 16 delegates, representing 20 organizations having geochemical data files. The participants recognized the need for establishing "retrospective" data bases from the swelling corpus of published data on geochemistry, but chose to concentrate their efforts, at this meeting, on discussions of the problems involved in the appraisal and exchange of existing and newly generated data files. In order to appraise the usefulness of a geochemical file a user will need an index document about the file and its content. Such a document was prepared which included a part containing general information relating to the whole file, and a part describing the specific file content, i.e. the data items and their frequency of occurrence. To facilitate the exchange of geochemical data it was decided to work out an effective and simple standard for file communication, independent of any data-base management system. Interfaces allowing files created by G-EXEC (U.K. Institute of Geological Sciences) and GRASP (U.S. Geological Survey) to read this communication file are presently being worked out, and similar interfaces to other systems could be written whenever needed. It was further decided to undertake two pilot projects. The first is to update the bibliography of data files prepared by A. Hubaux (*COGEOLOGICAL Bulletin 8*) using the above-mentioned file index document. The results of the compilation of the index questionnaire will tell us to what extent there is compatibility between these data bases and furthermore to what extent these could comprise the elements of a distributed data base. The second project will be an experiment in data exchange, by means of the already mentioned standard for file communication, in a study of two mica granites between geochemists in London, Nancy and Bern. CONTACT: Richard Sinding-Larsen, Geological Survey of Norway, Box 3006, Trondheim, Norway.

Symposium on Geographic Information Processing, Ottawa, Canada, 24 January 1976. Although not directly related to geological applications, this symposium co-sponsored by the University of Ottawa and Carleton University dealt with a technological development of considerable potential relevance—computer-based "geographic" information systems. Four such systems operating in the Ottawa area were described: Automated Cartography System (ACS) of Surveys and Mapping Branch, Department of Energy, Mines and Resources; Canada Geographic Information System (CGIS) of Lands Directorate, Department of the Environment; Geographically Referenced Data Storage and Retrieval System (GRDSR), Census Data Processing Division, Statistics Canada; and Geographic Information System, National Capital Commission. To date only the first (ACS) has been applied to the handling of geological data, and this on an experimental basis only, but such systems will ultimately provide the means for processing spatially distributed data of many types and allow for multidisciplinary work with a wide range of environmental data. Proceedings of the meeting are available for Can. \$5.00. CONTACT: Prof. D.R.F. Taylor, Department of Geography, Carleton University, Colonel By Drive, Ottawa, Ontario, K1S 5B6, Canada.

FUTURE MEETINGS

17-18 May 1976

Workshop on computer applications. Edmonton, Canada. An introduction to those who wish to become familiar with computer techniques, including storage and retrieval systems, quantitative analysis, contouring, and simulation. Registration deadline 15 April 1976. CONTACT: Dr. G.D. Williams, Department of Geology, University of Alberta, Edmonton, Alberta, Canada T6G 2E3.

24-26 May 1976

Computer applications to geology. New Orleans, U.S.A. Papers will include use of interpreted gravity-magnetics, seismic, velocity and geological data in exploration and production of oil, gas, coal, oil shale and nonpetroleum minerals. American Association of Petroleum Geologists, Committee on Computer

Applications to Geology. CONTACT: Mark McElroy, Phillips Petroleum Company, 250 FPB, Bartlesville, Oklahoma 74004, U.S.A.

15-16 June 1976

The acquisition, processing and exploitation of geological data by computer. Orleans, France. A conference on computer-assisted cartography, management and exploitation of geological data bases, and mathematical methods applied to geology. Convened by Directors of the Geological Services of Western Europe. CONTACT: M. Mendioni, Bureau de Recherches Géologiques et Minières, B.P. 6009, 45018 Orleans Cedex, France.

18 June-1 July 1976

Fifth biennial international CODATA conference. Boulder, Colorado, U.S.A. Conference covering broad scope of quantitative data on the properties and behaviour of matter, characteristics of biological and geological systems, etc., and dealing with all disciplines represented by ICSU Unions. CONTACT: CODATA Secretariat, 51 Boulevard de Montmorency, 75016 Paris, France.

18-20 August 1976

Seminar on data storage and retrieval of geological data for developing countries. Sydney, Australia. Seminar sponsored by COGEOLOGICAL with cooperation from the Association of Geoscientists for International Development (AGID). Topics will include basic concepts of file management (manual and computer-based), criteria for determining the optimum approach, and potential utility of computer technology. CONTACT: Dr. D.F. Davidson, United States Geological Survey, National Center Mail Stop 917, Reston, Virginia 22092, U.S.A.

16-25 August 1976

Geological information and mathematical geology (Section 16, 25th International Geological Congress). Sydney, Australia. Includes sessions on geological information systems and mathematical geology. CONTACT: Secretary-General, 25th International Geological Congress, P.O. Box 1892, Canberra City, A.C.T. 2601, Australia.

15-22 August 1976

Symposia on natural resource management in developing countries. Sydney, Australia. Sponsored by Association of Geoscientists for International Development (AGID). Two meetings entitled: "Mining resource management in developing countries: state participation, private enterprise or both?" and "New directions in earth science education in developing countries." CONTACT: Dr. A.R. Berger, Department of Geology, Memorial University, St. John's, Newfoundland, Canada A1C 5S7.

4-8 October 1976

The application of computer methods in the mineral industries. APCOM 14th International Symposium, University Park, Pennsylvania, U.S.A. CONTACT: Ron Avillion, The Pennsylvania State University, 410 Keller Building, University Park, Pennsylvania 16802, U.S.A.

19 December 1976-5 January 1977

Palynological data handling and methodology, (Division 5 of International Palynological Conference). Lucknow, India. CONTACT: Dr. G.O.W. Kremp, Department of Geosciences, The University of Arizona, Tucson, Arizona 85721, U.S.A.

June 1977

Data capture and display for geological data. Sponsored by COGEOLOGICAL. Exact dates and location under discussion by Working Group on Data Capture and Display. CONTACT: Dr. J.C. Davis, Kansas State Geological Survey, University of Kansas, Lawrence, Kansas 66044, U.S.A.

October 1977

Mathematical methods in geology. Pribram, Czechoslovakia. A section of symposium on "Mining Pribram in Science and Technique." Contribution to be focussed on application of mathematical methods for evaluating mineral deposits, mathematical methods and problems of tectonics, and geological data processing. CONTACT: Dr. Vaclav Nemecek, Symposium Secretariat, Post. Schr. 41, 261 01 Pribram, Czechoslovakia.

(Editor's note: *COGEDATA Newsletter* is edited by GIS member C.F. BURK, JR., and is published quarterly for COGEDATA by the Canada Centre for Geoscience Data, Energy, Mines and Resources Canada, 580 Booth Street, Ottawa K1A 0E4. Issues are available free upon request to the Editor.)

Early Editions Of GIS Publications To Be Sent To A. Mamoulides

GIS members housing early editions of GIS publications are urged to send them to Aphrodite Mamoulides, Head Librarian, Shell Development Company, P.O. Box 481, Houston, Texas 77001. Reimbursement for mailing costs may be received by sending postage receipts to Kay Keener, GIS Treasurer.

GSA Representative To Attend SLA Conference In Denver

Lee Swift is looking forward to seeing many of her GIS friends at the Special Libraries Association's conference in Denver, June 6-10. She cordially invites all GISers and their friends to stop by Geological Society of America's booth (no. 317). SLA's 67th annual conference is entitled "Information: The Unlimited Resource." Further information on the conference may be obtained by writing: Special Libraries Association, 235 Park Avenue South, New York, New York 10003.

Literature Citations

(GIS members are in caps)

Geological Survey aerial and space photographic materials fee schedule. *Special Libraries Association. Geography and Map Division. Bulletin*, no. 102, December 1975, p. 46-48.

Library of Congress. Geography and Map Division. Selected geographical and cartographical serials containing lists and/or reviews of current maps and atlases. Comp. by Donald A. Wise. *Special Libraries Association. Geography and Map Division. Bulletin*, no. 102, December 1975, p. 42-45.

SMITH, HARRIET W. Geological reference publications. *Journal of geological education*, vol. 24, no. 2, March 1976, p. 50-56.

This updates Ms. Smith's article in the *Journal of geological education*, vol. 18, no. 1, 1970 (CEGS short review 14).

Treude, Mai. Reference services with maps. *Special Libraries Association. Geography and Map Division. Bulletin*, no. 102, December 1975, p. 24-29.

New Publications

(GIS members are in caps)

ANSARI, MARY. *Nevada collections of maps and aerial photographs*. Reno, Camp Nevada, 1976. 40 p. \$2.00. (Camp Nevada monograph no. 2).

Fifty-six collections are listed in the soft-cover directory. Directory entries are arranged alphabetically by name of reporting agency, followed by a detailed subject and geographic index to collections. Each entry contains information on the location, accessibility, size, scope and composition of the collection. Make checks payable to Camp Nevada. Address: Camp Nevada, P.O. Box 13798, University Station, Reno 89507.

Borko, Harold and Charles L. Bernier. *Abstracting concepts and methods*. New York, Academic Press, 1975. 250 p. \$14.95. (LC 75-13069; ISBN 0-12-118650-4).

Contents: Characteristics and types of abstracts. Historical review of abstracting services. Criteria, instructions, and standards. Contents and format. Editing. Publishing. Abstracting services. Automatic abstracting. Career opportunities. Appendix: exercises. References. Glossary. Subject index. "A very useful text for all those interested in writing abstracts of the literature: librarians, information scientists, authors, and library school students."

Bowen, Roger W. and Joseph Moses Botbol. *The Geologic Retrieval and Synopsis Program (GRASP); a portable data-retrieval system requiring minimal user training*. Washington, D.C., U.S. Government Printing Office, 1975. 87 p. \$2.05. (U.S. Geological Survey. Professional paper 966).

"... (GRASP) was designed and written specifically to accommodate interactive access to earth-science data banks. (It) is portable, easy to use, and data-base independent (and) is manipulated by 11 user commands which select, describe, access, retrieve, summarize, and display data." (GRASP is reviewed in *Geotimes*, vol. 21, no. 4, April 1976, p. 32, 34.)

Crook, Leo. *Oil terms; a dictionary of terms used in oil exploration and development*. New York, International Publications Service, 1976. 160 p. \$15.00. (LC 75-38510; ISBN 0-8002-0164-7).

Directory of Canadian map collections. Compiled by Ralph M. Daehn. 2d ed. 1975. Publisher: Association of Canadian Map Libraries, c/o National Map Collection, Public Archives of Canada, 395 Wellington Street, Ottawa K1A 0N3. Price: Members, \$4.00; non-members, \$6.00.

Energy. Quarterly. Volume 1, number 1, Fall 1975. Subscription: \$35.00 a year. For further information, write: Energy, 471 Glenbrook Road, Stamford, Conn. 06906.

Geothermal world directory. 1975-1976 edition. May 1976. 350 p. \$25.00. Geothermal World Directory, P.O. Box 997, Glendora, California 91740.

Contains over 1,000 listings of commercial firms, government agencies, public and private utilities, journals and periodicals, universities, securities dealers, geologists and consultants, associations and individuals, as well as maps and photos of recent

geothermal discoveries and projects and encyclopedic articles on special aspects of geothermal resources.

Göbel, Volker W. *German-English dictionary of rock mechanics; Deutsches-Englisches Wörterbuch der Felsmechanik*. 1975. 153 p. \$6.00. (Giessener Geologische Schriften 5) Publisher: Lenz-Verlag, Riegelpfad 32, D-6300 Giessen, Germany.

This dictionary of over 1700 terms gives synonyms, rather than definitions, and thus may have to be used with English and/or German dictionaries of geology.

Marine micropaleontology. Chief editors: W.A. Berggren and B.U. Haq. Quarterly. Volume 1, 1976. Subscription: U.S.-\$46.95; Dfl. 117.00, including postage. Publisher: Elsevier Scientific Publishing Company, P.O. Box 211, Amsterdam, The Netherlands.

1976 USA oil industry directory. \$45.00. Order from: The Petroleum Publishing Company, P.O. Box 1260, Tulsa, Okla. 74101.

Salmon, Stephen R. *Library automation systems*. New York, M. Dekker, c1975. 291 p. \$24.50. (Books in library and information science, v. 15) (LC 75-25168; ISBN 0-8247-6358-0).

University map libraries in Canada, a folio of selected plans. Serge A. Sauer, ed. 1975? \$7.50 incl. postage. Publisher: Association of Canadian Map Libraries, c/o National Map Collection, Public Archives of Canada, 395 Wellington Street, Ottawa K1A 0N3.

"University map libraries are recent developments in Canada. For example, all university map collections in Ontario have been created since 1964. It has been evident that the special requirements of the map library are not considered adequately by architects and professional library planners. Having established the need for some graphic illustrations to depict contemporary library layouts, as well as to demonstrate some obvious deficiencies and shortcomings, the Association of Canadian Map Libraries decided to produce a folio of map library plans . . . The drawings show a variety of typical facilities which range from converted corridors and sections of general library space to modern units, constructed and designed as specialized areas for the storage and use of maps."

The weather almanac. Ed. by James A. Ruffner and Frank Bair. 2d ed. Detroit, Gale Research Company, 1976. 650 p. \$20.00. (LC 73-9342; ISBN 1043-0).

World mining glossary of mining, processing, and geological terms: English, Svenska, Deutsch, Français, Español. Editors: R.J.M. Wyllie and George O. Argall, Jr. 2d rev. ed. San Francisco, M. Freeman Publications, 1975. 432 p. \$40.00. (LC 74-20169; ISBN 0-87930-031-0).

Ms. Matthaei And Bishop Retire From Academic Positions

GRACE MATTHAEI retired from her position as Librarian, Department of Geology, University of Melbourne, last December. Ms. Matthaei writes ". . . I was a foundation member of the (Geoscience Information) Society and have enjoyed belonging to it. To me the affiliation has been a symbol of international cooperation as well as practical help. It pleases me, in

retrospect, that I have been able at times to furnish some of you people in the USA with information about Australian geoscience literature, and, in turn, to have your help with the literature of your country. I should like to think that, even though I have retired, any GIS members in dire straits will invite my help to untangle an Australian geoscience literature knot. I am still interested in the literature and I hope my knowledge won't grow too rusty!"

OLGA B. BISHOP, University of Toronto, Faculty of Library Science, plans to retire at the end of the academic year.

New Members

DR. JAMES A. CALKINS
U.S. Geological Survey
National Center - Mail Stop 952
12201 Sunrise Valley Drive
Reston, Va. 22092
(Geologist, U.S.G.S.)

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