

GIS newsletter

Published bi-monthly by the Geoscience Information Society
Numbers 64/65 ISSN 0046-5801 June/August 1980

GIS Annual Meeting, November 16-20, 1980, Atlanta

The GIS Annual Meeting will be held November 16-20, 1980 in Atlanta, Georgia with the Annual Meeting of the Geological Society of America. To preregister for the meeting, return the preregistration form from the enclosed *GSA news and information* to GSA by October 17.

The GIS Annual Luncheon, scheduled to follow the Business Meeting on Monday, November 17, is not included on the preregistration form. To register for the luncheon, please return the enclosed form by October 17 with your check for \$10 to GIS Treasurer Marie Dvorzak, Winchell Library of Geology, University of Minnesota.

If you are interested in receiving a packet of information on Atlanta or interested in visiting the Georgia Tech Library, please return the other enclosed form by October 1 to Mary Nell Maule, Special Cataloging Dept., Price Gilbert Memorial Library, Georgia Institute of Technology. The early deadline is necessary in order to get the packet mailed to you before the meeting.

The GIS program follows. The *Keeping Current Symposium* and the *Contributed Papers Session* (both on Tuesday) will be held in the Georgia World Congress Center. The business meetings and cocktail party (on Monday) and the GeoRef Workshop (on Wednesday) will be held in the Marriott. Executive Board meetings are open to all interested GIS members.

Any questions about the GIS program should be directed to:

Nancy J. Pruett
UCLA Geology-Geophysics Library
405 Hilgard
Los Angeles 90024
213/825-1055

PROGRAM

Sunday, November 16, 1980

1300-1600
1979 Executive Board Meeting

Monday, November 17, 1980

0900-1200
Annual Business Meeting

1200-1400
Annual Luncheon (Please return enclosed reservation form with \$10 to Marie Dvorzak by October 17.)

1400-1600
1980 Executive Board Meeting

1830-2030
Cocktail Party (cash bar)

Tuesday, November 18, 1980

0830-1200
GIS Symposium: *Keeping Current with Geoscience Information*

Presiding: Nancy J. Pruett

1. Samuel B. Romberger (Colorado School of Mines)
Keeping Informed within the Minerals Exploration Community.
2. Richard K. Bambach (VPI)
Keeping Current in an Interdisciplinary Field: Paleontology.
3. E. D. Michael (Consulting Geologist)
Research and the Consulting Geologist.
4. Gary W. North (USGS)
Information and Data Services of the U.S. Geological Survey's National Mapping Division.
5. Nancy Ann Henderson (SDC Search Service)
Keeping Current with GeoRef.
6. John G. Mulvihill (AGI)
GeoRef Coverage and Improvements in the *Bibliography and Index of Geology*.
7. Ann L. Farren (BioSciences Information Service)
Use of the BIOSIS Database to Retrieve Geology-related Information.

1330-1630
Contributed Papers Session

Presiding: Claren M. Kidd (U. Oklahoma)

1. John F. Price (Library of Congress)
A Directory of Information Resources in the United States: Geosciences and Oceanography.
2. Judy Bacskai (U.C.-Berkeley) et al.
Bibliography of Fossil Vertebrates: Cooperative Venture for a Specialized Service.
3. Robert G. Heidlage (U. Missouri)
The Bureau of Mines Map Repository: Services and Activities.
4. Kerry L. Burns (Syracuse University)
Retrieval of Tectonic Process Models from Geological Maps and Diagrams.
5. Patricia R. Emerson (GEOMET Technologies, Inc.)
Scientific Research Tracking: A Pilot Study.
6. John D. Crissinger (VPI)
The Use of Serial Citations in Theses as a Collection Development Methodology.

7. Donald B. McIntyre (Pomona College)
Using GeoRef, Geoarchive, SCI and SSIE in Undergraduate Teaching.
8. Jim O'Donnell (UCLA)
Geology Library Reference Training for Student Library Assistants.
9. Julian W. Green (Harvard)
Geoscience Information for Developing Countries: A Forgotten Priority.

Wednesday, November 19, 1980

0800-1200
GeoRef Workshop

1330-1700
Field Trip to Georgia Tech Library (Via public transportation; please return enclosed form to express interest.)

Not yet scheduled

Poster Session: Dallas D. Rhodes et al. (Whittier College)
The Fairchild Collection: Aerial Photography of California (1924-1964).

Other GSA programs of interest:

Sunday, November 16, 1980

1830-2130
Welcoming Party (at the Hyatt Regency)

Monday, November 17

0800-1200
History of Geology Symposium: Geology and Other Disciplines: Historical Perspectives

1600-1700
GSA Presidential Address

Tuesday, November 18

Bluegrass Night

Wednesday, November 19

1300-1700
Geologic Education: Geology of the National Parks

1300-1700
Symposium on Mt. St. Helens

David Reade Named Manager, GEOSCAN

David S. Reade, formerly Head of Automated Search Services, Geological Survey of Canada Library, has been appointed to the newly created position of Manager, GEOSCAN, Canada Centre for Geoscience Data. The Canada Centre for Geoscience Data, a division of the Science and Technology Sector, Department of Energy, Mines and Resources, is responsible for development of a national system for geological information. Mr. Reade's responsibilities include the maintenance of the national bibliographic data base for geology (GEOSCAN), the provision of information products and services, and the coordination of data compilation activities of federal, provincial, and other contributing services.

Cartographic Info' Society To Organize In Milwaukee

The organizational meeting of a new professional association, the Cartographic Information Society, will be held in Milwaukee, Wisconsin, Thursday evening, October 2, through Saturday, October 4, 1980.

The organization will be of interest to cartographic information specialists, map librarians, cartographic archivists, cartographers, earth scientists and computer specialists, remote sensing experts and other professionals seriously interested in improving access to cartographic information. The Cartographic Information Society will be an independent, cross-disciplinary, national association. Its purpose and objectives are to: Promote communication, coordination, and cooperation among the producers, disseminators, and users of cartographic information and to promote and coordinate activities with all other professional organizations and institutions involved in cartographic information. Promote graphicacy and improve understanding of cartographic materials through education. Promote and coordinate the acquisition, preservation, and automated retrieval of all types of cartographic material. Influence governmental policy on cartographic materials and cartographic information.

The program for the organizational meeting in Milwaukee will include an opening hospitality evening (featuring Milwaukee Gemutlichkeit); noted speakers; working sessions to organize the society formally; geographical and cultural tours of Milwaukee and the surrounding area; and a feature tour of the American Geographical Society collection in the Library of the University of Wisconsin-Milwaukee. Pre-registration for the Milwaukee meeting will cost \$35.00 if the registration is postmarked prior to Friday, September 5. Registration at the meeting or after September 5 will cost \$45.00. Registration for the Milwaukee meeting will include first year membership in the Cartographic Information Society. A separate annual membership for those who can't attend the Milwaukee meeting will be \$25.00. For pre-registration or further information contact:

Cartographic Information Society
c/o Christine Reinhard
143 Science Hall
University of Wisconsin-Madison
Madison 53706
Telephone: 608/262-3065

Reports Of Meetings

Nancy Pruett, President-Elect of the Geoscience Information Society, recently addressed the issue of "The Role of Information Professional Societies in the Development of Government Information Policy." She joined with other society presidents or presidents-elect from AALL, ALA, ASIS, ASI, AECT, CAIS, SLA, DPMA, DIA, MLA, SAA and SLA as panelists in a special program on this issue held at the ASIS Mid-Year Meeting in Pittsburgh on May 16. The panel reacted to a challenge paper presented by Alexander Roth from AFIPS and contributed additional viewpoints from the perspectives of their own societies. Nancy's remarks reinforced the general agreement on the early need to cooperate and coalesce positions in order to influence more effectively government information policy.

She also reported the success of the Geoscience Information Society (in cooperation with the Cartographic Users Advisory Committee) in influencing the U.S. Geological Survey to include microfiche copies of the USGS *Open-file reports* in the GPO depository library program. As reported in the last *Newsletter* and mentioned in the CUAC report, the *Open-file reports* will be coming on microfiche through the GPO depository program. In order to be sure these are available in their own libraries or nearby depositories, GIS members should ask the appropriate documents librarian to select the OFR's as a depository item. The Open-file Service Center will continue to process orders for OFR's.

The presidents group expects to meet again at the ASIS annual meeting in Anaheim in October 1980 to further discuss the possibilities of cooperation.

The Cartographic Users Advisory Committee (CUAC) met at the Special Libraries Association meeting in Washington, D.C., June 8-12. An open meeting was held at the USGS National Center in Reston, Virginia. USGS officials reported progress on various products and issues of concern to the committee including: the proposed second edition of the *National atlas*, land use/land cover maps, a new map numbering system and a new format for topographic indexes, the new availability of the *Open-file reports* through GPO, various computerized information systems, including the Geographic Names Information System and the *National gazetteer* (see Editor's note) and various other issues. A full report of the meeting will be published in the *Special Libraries Association, Geography and Map Division, Bulletin*.

CUAC also met with the staff of the Joint Committee on Printing and expects to meet with representatives of the Defense Mapping Agency in late June. CUAC (renamed the Cartographic Users Advisory Council) has representatives from Special Libraries Association's Geography and Map Division, the Map and Geography Round Table of the American Library Association, the Western Association of Map Libraries and Geoscience Information Society. Nancy Pruett is the current GIS representative to CUAC.

Editor's note: "The U.S. Geological Survey has developed an automated Geographic Names Information System (GNIS) and is in the process of building the geographic names file. The GNIS will be capable of providing basic information on about 3 million names used in the United States when the collection of data is completed in 1981. The system is designed for use by all levels of Federal, State, and local governments, educational institutions, and the general public. Based on USGS standard map series and containing names identified as official by the

U.S. Board on Geographic Names, GNIS is capable of providing information on a number of data elements, including official name, feature class, location of named feature (State, county, and geographical coordinates), variant names, map sheet, and elevation (when practical)... As part of its mapping program, the Geological Survey began cataloging names as early as 1892. It was planned to produce a series of State gazetteers "designed as an aid in finding any geographic feature upon the atlas sheets published by the Geological Survey." Compilation was initially done by Henry Gannett, Chief Topographer, under the direction of John Wesley Powell, second Director of the Survey. Gazetteers for 12 states, Puerto Rico, Cuba, Territory of Alaska, and Indian Territory (Oklahoma) were published between 1894 and 1906. Topographic mapping, however, is a slow process, and inadequate map coverage restricted the gazetteer program.

With published large-scale topographic maps now available for more than 70 percent of the country, the Geological Survey, by authority of the U.S. Board on Geographic Names, will be publishing the *National gazetteer of the United States* on a State-by-State basis. Each State gazetteer of the series will include new names, formal name changes, and corrections. All volumes of the *National gazetteer of the United States* will be published as chapters of USGS *Professional paper 1200*.

Specific information about GNIS and the *National gazetteer* may be obtained by writing to: Geographic Names, U.S. Geological Survey, National Center, MS 523, Reston, Virginia 22092."

The Vice-President of GIS is traditionally asked to write a brief review of geoscience information for the annual summary issue of *Geotimes*. Readers who would like to express their opinions (What do you think is the most important geoscience information issue or happening in 1980?) are invited to write or telephone Nancy Pruett.

IGCP Catalogue To Be Published

GeoRef Information System, a division of the American Geological Institute, has been working with the International Geological Correlation Programme since January 1980 to produce a bibliography of the IGCP. A manuscript of the 4000-reference bibliography will be on display at the International Geological Congress in Paris, July 7-17. Before UNESCO publishes the programme catalogue early in 1981, GeoRef will prepare the subject index. The programme catalogue, in its final form, will include a bibliography of each of the 63 projects, an author index, subject index, and a serials list of nearly 400 periodicals. IGCP involves more than 1,000 geologists in 115 countries. At this time, 2800 of the references are searchable online; all 4000 will be online before the end of the year. The IGCP references will also be printed in the *Bibliography and index of geology*. In the future, GeoRef will continue to add new IGCP references systematically to the file.

The International Union of Geological Sciences and UNESCO formulated a proposal to create IGCP in October 1967 at a meeting in Prague. The programme was formally started in May 1973 as a joint IUGS/UNESCO enterprise. The programme receives some governmental support and is designed to encourage international research on geological problems, specifically problems related to the identification and assessment of natural resources and the improvement of man's environment.

AGI/BRGM/CNRS To Produce Joint Geological Data Base

The American Geological Institute (AGI), the Bureau de Recherches Géologiques et Minières (BRGM), and the Centre National de la Recherche Scientifique (CNRS) have signed an agreement to begin production of a joint geological data base in 1981. This cooperative venture reflects a major effort to improve worldwide coverage and bibliographic control of the geologic literature. The existing data bases, AGI's GeoRef, BRGM's GEODE, and the geology sections of CNRS's PASCAL, will continue, but each will contain all references in the joint data base. French and English will be the base languages. Cooperation will begin slowly in 1981 and accelerate as the year progresses. During 1981, documents with a 1981 imprint will be subject to this agreement. Pre-1981 documents will continue to be covered by both data bases. This procedure has been adopted to provide a clear break between the duplication of the past and the shared input under the agreement. The printed bibliographies now produced from the individual data bases will be produced from the joint data base. AGI will continue to publish and sell the *Bibliography and index of geology*, and BRGM-CNRS will continue to publish and sell the *Bulletin signalétique-bibliographie des sciences de la terre*.

Coverage will include all materials previously indexed by the individual data bases. To eliminate duplication, but assure full coverage, the parties have produced a master list of serials and have worked out the handling of books, reports, theses, and maps. AGI will provide references for North American publications and BRGM-CNRS for European publications. Other areas will be divided between the parties to assure worldwide coverage. West Germany, Spain, Romania, Poland, Czechoslovakia, Hungary, and Finland will furnish references from their countries. The agreement also provides for other countries to participate.

A common indexing vocabulary has been worked out. Index terms will be translated by computer, using the International Council of Geological Sciences sponsored multilingual thesaurus of geological terms. Titles will be given in the original language as well as in French and English. AGI will provide English translations and BRGM-CNRS, French. Records transferred between AGI and BRGM-CNRS will be in the exchange format specified in the *Reference manual for machine readable bibliographic descriptions*, a standard developed by ICSU-AB, sponsored by UNISIST, and maintained at the UNIBID offices in the British Library.

Report On SLA Annual Meeting Washington, D.C., June 8-12, 1980

By John D. Crissinger, Geology Librarian, VPI

Special Libraries Association's Geography and Map Division has temporarily weathered the "secession" that was anticipated this year. With much less fanfare and emotional explosion than was expected, the Division appears to have survived the split that was expected. A showing of hands reflected about 75% of the members present planned to attend the Atlanta meeting next year. The real decision that reflects G&M's health will come about by the number of membership renewals - the pocketbook vote. With a contingent forming a Map and Geography Roundtable at ALA and another forming

the Cartographic Information Society (or similar title), members will have to decide which is best for them and their institution. It will be financially difficult to belong to all three groups in addition to other professional obligations such as GIS. Whatever is decided, remember the *Bulletin* is available as a subscription journal to non-SLA members. Special Libraries passed a motion to raise dues to \$55 and increase multiple division/chapter memberships by 15% during their business meeting. There are presently about 360 members in the G&M Division.

Several of the committee reports will be touched on here to update GIS members on SLA-G&M Division developments. The Cartographic Users Advisory Committee (CUAC), which grew out of G&M to include other cartographically concerned organizations, including GIS as represented by Nancy Pruett, reported that the U.S. Geological Survey *Open-file reports* will begin arriving via depository status through the GPO. They will be in microfiche format with the July starting date delayed until about October due to publication problems. The *National farm land map series* is still being negotiated, as is the *National waterways map series*. One piece of interesting news is that the committee has made contact with the Defense Mapping Agency, which could be the beginning of a very beneficial communication system with the organization.

The G&M Division presented its Honors Award to Maud Cole in recognition of a very distinguished and successful cartobibliographic career.

Other bits of news include the nomination of officers for next year. These include Mai Treude as chairperson-elect and David Carrington as secretary-treasurer. Mary Murphy, the G&M *Bulletin* editor, requested all contributions be submitted for publication no later than six weeks before the *Bulletin* goes to press (mid-July for the September issue, mid-October for the November issue, etc.). The state cutter lists for map cataloging are being considered for publication. At present nine states are fully completed. The cataloging working group will continue its ad hoc status for another year. It plans to have a manual published. The New York group merged with the Social Science Group, ending a long independent existence. The Washington, D.C. groups, however, conducted six meetings this past year. Finally, the OCLC Map Users Group begun by Jim Minton of the University of Michigan this past year successfully negotiated with the newly forming RLIN group to merge into the Map On-line Users Group. Dues were set at \$5 to help defray newsletter and other expenses.

Relevant contact persons and their addresses include the following:

ALA—Map and Geography Roundtable:

David Cobb, Map and Geography Library, University of Illinois, Urbana 61801

Mary Larsgaard, Arthur Lakes Library, Colorado School of Mines, Golden 80401

SLA—Geography and Map Division:

John Schroeder, Geography and Map Division, Library of Congress, Washington, D.C. 20540

Mai Treude, Wilson Library, University of Minnesota, Minneapolis 55455

Cartographic Information Society:

Christine Reinhard, Wisconsin State Cartographic Office, 144 Science Hall, Madison 53706

Jim Minton, Hatcher Graduate Library, University of Michigan, Ann Arbor 48104

Map On-Line Users Group:

Laura Macqueen, Cataloging Section, U.S. Geological Survey Library, National Center, Mail stop 950, Reston, Va. 22092

Elizabeth Mangen, Geography and Map Division, U. S. Library of Congress, Washington, D.C. 20540

Literature Citations

(GIS members in caps)

Baker, F.W.G. Science information and information science: The role of ICSU. *UNESCO journal of information science, librarianship and archives administration*, vol. 1, no. 4, October-December 1979, p. 233-241.

Brown, Mary Ruth and HALL, VIVIAN S. Proposal writing for librarians. *Kentucky Library Association. Bulletin*, vol. 44, no. 2, Spring 1980, p. 5-10.

BUREK-CUBITT, CYNTHIA V. Developing an interdisciplinary graduate curriculum for geological information. *Journal of geological education*, vol. 28, no. 3, May 1980, p. 161-164.

COPPIN, A.S. and Palmer, L. L. From the research laboratory to the operating company: how information travels. *Special libraries*, vol. 71, no. 7, July 1980, p. 303-309.

A directory of societies in earth science. *Geotimes*, vol. 25, no. 7, July 1980, p. 21-28. U.S. state surveys, *ibid*, p. 28-29.

WESTERBACK, MARY and Yukawa, Masako. Using government documents to obtain information on national parks, monuments and forests. *Journal of geological education*, vol. 28, no. 3, May 1980, p. 148-152.

New Publications

Annual review of earth and planetary sciences, vol. 8, May 1980. 624 p. clothbound. \$17.00 (U.S.A.) \$17.50 (elsewhere), postpaid. (ISBN 0-8243-200805). Annual Reviews, Inc., 4139 El Camino Way, Palo Alto, Calif. 94306.

Bibliography of geology theses and dissertations at Syracuse University, 1879 to 1979. Compiled by D. F. Merriam. 1980. 35 p. \$1.00 (*Syracuse University geology contribution 7.*) Department of Geology, Syracuse University, Syracuse, N.Y. 13210.

Conklin, James E. and Conklin, Barbara M. *Selected glossary of eastern North American Devonian stratigraphy, pyroclastics, bone beds, disconformities, and correlation*. 1979. 32 p. \$3.00 plus 50 cents mailing charge. (*University of Louisville studies in paleontology and stratigraphy* no. 9). Available from the University of Louisville Campus Store, Louisville 40208.

Cretaceous research. Vol. 1, March 1980. Quarterly. \$88.50. New York, Academic Press.

Directory of North American geoscientists engaged in mathematics, statistics and computer applications, by the Mathematical Geologists of the United States. 1980. 92 p. \$2.75 (includes postage). Available from Department of Geography, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24061.

MGUS, the U. S. regional organization of the International Association for Mathematical Geology, has issued its first directory of geoscientists in the interdisciplinary fields of mathematics, statistics and computer applications. The publication lists the names and backgrounds of over 200 individuals.

Hazen, Robert M. and Hazen, Margaret H. *American geological literature, 1669 to 1850*. 1980. Published by Dowden, Hutchinson & Ross, Inc., Stroudsburg, Pa.; distributed by Academic Press, New York, 448 p. \$32.00 (ISBN 0-12-786646-9)

International tectonic lexicon. Editors: J.G. Dennis, H. Murawski, and K. Weber. 1979. 153 p. DM 48.-, U.S. \$29.80. (International Union of Geological Sciences. International Geological Correlation Programme Project no. 100). Available from: E. Schweizerbart'sche Verlagsbuchhandlung (Nagele u. Obermiller), Johannesstrasse 3A, D-7000 Stuttgart 1, West Germany.

McGraw-Hill encyclopedia of environmental science, by the Staff of the *McGraw-Hill encyclopedia of science and technology*. 2d ed. Sybil P. Parker, editor-in-chief. New York, 1980. 880 p. 650 halftones and line drawings; 11 maps. \$34.50. (LC 79-28098).

Sarjeant, William A.S. *Geologists and the history of geology: an international bibliography from the origins to 1978*. New York, Arno Press, 1980. 5 vols. \$350.00 set. (LC 77-78075; ISBN 0-405-10469-3).

GIS Members In The News

Julie Bichteler has been elected Chairman-Elect of the Division Cabinet, Special Libraries Association for 1980/81.

Dederick C. Ward, formerly Earth Sciences Librarian, University of Colorado, Boulder, has been appointed Geology Librarian, University of Illinois at Urbana-Champaign, effective August 21.

New Members

Sue-Ellen Shaffer
Geologist, Sandia National Laboratory
Division 4511, P.O. Box 5800
Albuquerque, New Mexico 87185

Julia H. Triplehorn
Reader's Services Librarian
Rasmuson Library
University of Alaska, Fairbanks
Fairbanks 99701

Letter To The Editor

I have become very apprehensive about the new AACR2 rules as applied to a small specialized library such as we have here at the Institute. Our first reaction was "We will just ignore them." We are used to the old system, our users know the old system, and anyway, our catalog is primarily a librarian's tool. How many times a day does someone walk in and say "Do you have . . . ?"

However, while listening to some of our colleagues at SLA a few weeks ago, I began to realize that there are more and more serious implications to this whole problem. I am not opposed to change if it actually accomplishes some good, but there are some things built into this change that can only confuse instead of enlighten.

A case in point which will affect every geology library is the new headings for the geological surveys. A review of "Cataloging Service Bulletin" no. 8, Spring 1980, with its list of revised headings shows the following changes:

Kentucky. University. Geological Survey
becomes
Kentucky Geological Survey
(This is probably an improvement.)

Maryland. Geological Survey
becomes
Maryland Geological Survey
(O.K., we get rid of a period.)

But Wyoming. Geological Survey
becomes
Geological Survey of Wyoming

Now really where's the logic to this kind of name "authority"?

I feel that we as geoscience librarians have a responsibility to our users to maintain a library that is a useful tool. Is this kind of change really an improvement? Perhaps if enough letters reached the Cataloging Division of LC it could nip this permutation problem in the bud. There is no telling how many more atrocities have been committed. If anyone runs into one, I would appreciate it if he or she would let me know.

Sincerely yours,
Fran Waranius
Manager, Library Information Center
Lunar and Planetary Institute
3303 Nasa Road 1
Houston, Texas 77058

1980 GIS Officers

PRESIDENT: Rosalind Walcott, Earth and Space Sciences Library, State University of New York at Stony Brook, Stony Brook, New York 11794 (516/246-3616)

PAST PRESIDENT: Julie H. Bichteler, Graduate School of Library Science, The University of Texas at Austin, Box 7576, University Station, Austin, Texas 78712 (512/471-3821)

VICE-PRESIDENT and PRESIDENT-ELECT: Nancy J. Pruett, UCLA Geology-Geophysics Library, 405 Hilgard Avenue, Los Angeles, California 90024 (213/825-1055)

SECRETARY: Caryl L. Shields, U.S. Geological Survey Library, Mail stop 914, Denver Federal Center, Box 25046, Denver, Colorado 80225 (FTS: 234-4133; commercial: 303/234-4133).
Please send mail to home address: 510 22nd Street, Boulder, Colorado 80302.

TREASURER: Marie Dvorzak, Winchell Library of Geology, 204 Pillsbury Hall, 310 Pillsbury Drive, S.E., University of Minnesota, Minneapolis 55455 (612/373-4052)

The *GIS newsletter* is published bi-monthly on the first of February, April, June, August, October and December by the Geoscience Information Society. Subscription to the *Newsletter* is \$12.00 per year and is included in the Society's annual membership dues. All correspondence relating to dues, membership status and address changes should be directed to the GIS Secretary.

GIS members are invited to contribute articles or news of general interest to the membership. Please submit all material to the Editor by the first of the month, one month prior to publication.

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600 - 500 = 100
100 + 50 = 150
150 + 200 = 350
350 + 200 = 550
550 + 100 = 650
650 - 100 = 550
550 + 100 = 650

Geol. 5
cost. x 2
3/4 mts 176 222 3520 44
rep. to 120
air 256