Thus promise ideas in carbonates singing of the mantle is difficult tectonics is understood way. Nonetheless this process has been proposed as responsible for the Troodos-type ores found on Cyprus, which are associated with spreading centers; the young, massive sulfide ores associated with island arcs above subduction zones; and many older massive sulfide and precious metal deposits.

The interaction of seawater and crustal materials, and its implications for ore formation, may go beyond the presence of hydrothermal systems. Fyfe believes that chemical reactions involving seawater are not restricted to the area around spreading centers but continue as the oceanic plate moves. In particular, he believes that rocks in the upper portion of oceanic crust continue to change composition and to become more hydrated, locking in large volumes of water and other volatiles. Since most newly formed oceanic crust is eventually subducted and returned to the mantle, the plate tectonic process removes water from the oceans at a rate that, according to Fyfe, would deplete the oceans every 300 to 500 million years if it did not return. Thus Fyfe envisions a massive exchange of water and other volatiles between the crust and the hydrosphere which may be important in the production of volcanic and igneous rocks and their ore deposits above subduction zones. For example, melting of the oceanic crust being subducted is thought to be facilitated by the presence of seawater in the upper portion of the slab.

The ongoing reevaluation of ore formation processes in the context of plate tectonics is so broad that in some cases it is difficult to distinguish between it and more fundamental investigations of the earth's evolution. Some researchers, for example, are looking into the idea that the earth's oceans did not gradually evolve by degassing of the mantle but instead formed early in the planet's history and have been gradually diminished since then—a possibility suggested to them by mineral evidence. Thus whether or not the new metallogenic ideas improve our ability to find and extract metals, and they probably will, they promise to enliven geology for years to come.—Allen L. Hammond

OFFICE OF SCIENTIFIC AND TECHNICAL RESEARCH OVERSEAS
(Office de la Recherche Scientifique et Technique Outre-Mer)

L'ALUMINIUM DANS LES SOLS
[Aluminium in Soils]
Aluminium is the third most abundant element in soils. It is responsible for many soil properties and its knowledge greatly helps to understand the development of soils. This book consists of two main parts: the aluminium constituents of the soil and their dynamics starting with the weathering of rock minerals and ending with the concentration of hydroxides. Finally different unsolved problems are considered.
P. SEGALI—1 vol., 281 p., ISBN 2-7099-0314-8 $26.00

LES MASSIFS PERIDOTITIQUES DE NOUVELLE-CALEDONIE (Type d'appareil ultrabasique stratiforme de chaîne récente)
(The New-Caledonian peridotitic massifs as an overlapping stratiform type ultramafic complex of young orogenic arcs)
The book describes the results of a general study of the New-Caledonian U.M. complex which leads to specify the genesis and the mechanism of emplacement of one of the most spectacular ultramafic—mafic assemblages of the alpine arc.
J. H. GUILLOTT—1 vol., 150 p., 16 pl. photo, 2 cart. h.t. ISBN 2-7099-0350-4 $33.80

L'ÉVOLUTION GEOCHIMIQUE SUPÉRÉGNE DES ROCHES ULTRABASIQUES EN ZONE TROPICALE (La formation des gisements nickéliers de Nouvelle-Caledonie)
(Geochemistry of the supergene evolution of ultramafic rocks in tropical zone. Genesis of nickeliferous ore deposits in New-Caledonia)
Description and interpretation of the geomorphological environment (peridotitic karst). Mineralogical transformations and geochemical sorting made by weathering (combined study of "lithites" and draining waters). Weathering—Erosion balance (geodynamical evolution of the landscapes). Factors controlling the genesis of nickel ore deposits.

These books are in French. The last two titles have an English abstract.

For information, delivery terms, subscriptions orders, rates and catalogue, please apply to:
311 West 57th Street New York, N.Y. 10019 Phone (212) 581-5095
(A consortium of Scientific and Medical French Publishers)

FAST, DIRECT TLC SCANNING of radioactive isotopes... with 'fingerprints'
Tritium, Carbon 14, Phosphorus 32 and all other radioisotopes are easily detected on TLC plates with this special sensitive Berthold TLC Plate Scanner. Selected programs can scan the entire plate or just a portion, or handle 4, 6 or 8 chromatograms on one 20 x 20 cm plate— all automatically. Adjustable scanning speeds are 15 to 6000 mm/h; fast return at 6000 mm/h. A dot-printer permits the registration of two-dimensional radioactivity distributions, providing a "fingerprint" (shown above). For more details, contact Shandon Southern Instruments, Inc., 515 Broad Street, Sewickley, Pa. 15143.

SHANDON
PITTSBURGH • LONDON • FRANKFURT

Circle No. 133 on Readers' Service Card
Personnel Placement

Only those employers who will not discriminate on the basis of race, sex, religion, age, color, or national origin should submit Personnel Placement advertising.

POSITIONS WANTED: 40¢ per word; use of box number counts as 10 additional words. Minimum charge $10. Prepayment required. This rate applies to individuals only; personnel agencies and companies take display rate for all advertising.

DISPLAY (POSITIONS OPEN, MARKET PLACE, AND SO FORTH): $1.10 per inch, minimum (1 inch is equivalent to 12 lines of 48 characters each). Ads over 1 inch billed to nearest quarter inch. No charge for box number rates. No agency commission allowed for ads under 4 inches. No cash discount. Prepayment required for foreign advertising. Purchase orders and billing information must accompany all other advertising.

COPY for ads must reach SCIENCE by Wednesday, 3 1/2 weeks before issue date (Friday of each week) requested. Send copy for all positions wanted ads and display ads under 5 inches to:

SCIENCE, Room 207
1515 Massachusetts Ave., NW
Washington, D.C. 20005

Send copy for display ads 1/8 page and larger to:

Scarcher Associates, Inc.
11 West 42nd Street
New York, N.Y. 10036

BLIND AD replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Ave., NW
Washington, D.C. 20005

POSITIONS WANTED


Clinical Associate, M.S., Ph.D., M.T. (ASCP) (CDH). Full service experience in clinical and anatomical pathology, medical research, automated methods, data processing, and clinical instruction. Seeks responsible position in training clinical laboratory and allied health personnel. Box 396, SCIENCE.

Ecologist/Biologist, Ph.D., 1975. Background in radiation biology, radioecology, mineral cycling and toxic trace metals, and analytical chemistry. Eight years of experience with National Park Service focusing on man-environment interactions. Teaching experience. Broad public-speaking experience. Desires teaching or teaching-research position. Also seeks responsible position with active conservation organization. Box 397, SCIENCE.

Immunochemist-Immunologist-Biochemist, Ph.D., 1962 (immunochemistry), M.S. (microbiology); B.S. (chemistry). Research experience: antigens isolation-purification; antibody production-characterization; antigen-antibody interactions and assays (including radioimmunoassay); various immune responses and immunological-immunochemical techniques; enzymes and membrane receptors; protein-protein and protein-drug bindings; protein chemistry and biochemical methods. Also, teaching experience, publications, radiotopes license. Desires position in research (minimum 50 percent basic), research/teaching. Available shortly. P.O. Box 58, Rancocas, New Jersey 08073.

Zoologist, Ph.D. Desires teaching position. Interests include invertebrate zoology, limnology, aquatic microbiology, parasitology, embryology, comparative anatomy. Dr. Wilson, Rt. 2, Box 573, Russell Springs, Kentucky 42642. 9/12, 19, 26.

POSITIONS OPEN

ARECIBO OBSERVATORY NATIONAL ASTRONOMY AND IGONOSPHERE CENTER

An opening exists for an astronomer at the research associate level to conduct research in ionospheric and atmospheric physics. The work will involve theoretical interpretation of satellite and coherent scatter data on upper atmosphere. Opportunities will also exist to conduct observations using the Arecibo Radar. Applicants are sought with experience in ionospheric physics or atmospheric dynamics. Curriculum vitae, publications list, and the names of three references should be sent to Personnel Manager, Arecibo Observatory, P.O. Box 995, Arecibo, Puerto Rico 00612.

An Equal Opportunity Employer, F/M

ASSISTANT DEAN OF THE GRADUATE SCHOOL AND COORDINATOR OF RESEARCH

The University of Toledo, a comprehensive state university with 700 faculty, anticipates enrollment of 16,500 students in fall 1975. Applications and nominations invited for position of assistant dean of the Graduate School. Graduate enrollment approximates 2,000 doing work at master's and doctoral level in five colleges. Assistant dean will have central responsibility for planning and development of research coordination. Experience in graduate teaching and research required. Of special interest will be candidates with experience in research support administration. Fringe benefits attractive. Salary negotiable. Appointment date open with selection to be made as soon as possible for the 1975-76 year. Send letters and detailed résumés to David G. Barry, Dean, The Graduate School, The University of Toledo, Toledo, Ohio 43606.

A Affirmative Action/EQUAL Opportunity Employer

ASSISTANT DEAN ANNOUNCEMENT

Kansas State University invites applications for the position of assistant dean of the College of Arts and Sciences. Applicants should have teaching experience in an academic discipline in the college and possess the terminal degree in that discipline. In addition to responsibilities as assistant dean, the person may also teach.

The assistant dean will coordinate part of the advising program in the college, will serve as an advisor to undergraduate students, will participate with the associate dean and dean in development of the College’s out-reach programs to off-campus persons, and will help faculty members to secure funds from internal and external sources for program development.

Applications should include a curricu-

918

SCIENCE, VOL. 189

only those employers who will not discriminate on the basis of race, sex, religion, age, color, or national origin should submit Personnel Placement advertising.

POSITIONS WANTED: 40¢ per word; use of box number counts as 10 additional words. Minimum charge $10. Prepayment required. This rate applies to individuals only; personnel agencies and companies take display rate for all advertising.

DISPLAY (POSITIONS OPEN, MARKET PLACE, AND SO FORTH): $1.10 per inch, minimum (1 inch is equivalent to 12 lines of 48 characters each). Ads over 1 inch billed to nearest quarter inch. No charge for box number rates. No agency commission allowed for ads under 4 inches. No cash discount. Prepayment required for foreign advertising. Purchase orders and billing information must accompany all other advertising.

COPY for ads must reach SCIENCE by Wednesday, 3 1/2 weeks before issue date (Friday of each week) requested. Send copy for all positions wanted ads and display ads under 5 inches to:

SCIENCE, Room 207
1515 Massachusetts Ave., NW
Washington, D.C. 20005

Send copy for display ads 1/8 page and larger to:

Scarcher Associates, Inc.
11 West 42nd Street
New York, N.Y. 10036

BLIND AD replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Ave., NW
Washington, D.C. 20005

POSITIONS WANTED


Clinical Associate, M.S., Ph.D., M.T. (ASCP) (CDH). Full service experience in clinical and anatomical pathology, medical research, automated methods, data processing, and clinical instruction. Seeks responsible position in training clinical laboratory and allied health personnel. Box 396, SCIENCE.

Ecologist/Biologist, Ph.D., 1975. Background in radiation biology, radioecology, mineral cycling and toxic trace metals, and analytical chemistry. Eight years of experience with National Park Service focusing on man-environment interactions. Teaching experience. Broad public-speaking experience. Desires teaching or teaching-research position. Also seeks responsible position with active conservation organization. Box 397, SCIENCE.

Immunochemist-Immunologist-Biochemist, Ph.D., 1962 (immunochemistry), M.S. (microbiology); B.S. (chemistry). Research experience: antigens isolation-purification; antibody production-characterization; antigen-antibody interactions and assays (including radioimmunoassay); various immune responses and immunological-immunochemical techniques; enzymes and membrane receptors; protein-protein and protein-drug bindings; protein chemistry and biochemical methods. Also, teaching experience, publications, radiotopes license. Desires position in research (minimum 50 percent basic), research/teaching. Available shortly. P.O. Box 58, Rancocas, New Jersey 08073.

Zoologist, Ph.D. Desires teaching position. Interests include invertebrate zoology, limnology, aquatic microbiology, parasitology, embryology, comparative anatomy. Dr. Wilson, Rt. 2, Box 573, Russell Springs, Kentucky 42642. 9/12, 19, 26.

POSITIONS OPEN

ARECIBO OBSERVATORY NATIONAL ASTRONOMY AND IGONOSPHERE CENTER

An opening exists for an astronomer at the research associate level to conduct research in ionospheric and atmospheric physics. The work will involve theoretical interpretation of satellite and coherent scatter data on upper atmosphere. Opportunities will also exist to conduct observations using the Arecibo Radar. Applicants are sought with experience in ionospheric physics or atmospheric dynamics. Curriculum vitae, publications list, and the names of three references should be sent to Personnel Manager, Arecibo Observatory, P.O. Box 995, Arecibo, Puerto Rico 00612.

An Equal Opportunity Employer, F/M

ASSISTANT DEAN OF THE GRADUATE SCHOOL AND COORDINATOR OF RESEARCH

The University of Toledo, a comprehensive state university with 700 faculty, anticipates enrollment of 16,500 students in fall 1975. Applications and nominations invited for position of assistant dean of the Graduate School. Graduate enrollment approximates 2,000 doing work at master's and doctoral level in five colleges. Assistant dean will have central responsibility for planning and development of research coordination. Experience in graduate teaching and research required. Of special interest will be candidates with experience in research support administration. Fringe benefits attractive. Salary negotiable. Appointment date open with selection to be made as soon as possible for the 1975-76 year. Send letters and detailed résumés to David G. Barry, Dean, The Graduate School, The University of Toledo, Toledo, Ohio 43606.

A Affirmative Action/EQUAL Opportunity Employer

ASSISTANT DEAN ANNOUNCEMENT

Kansas State University invites applications for the position of assistant dean of the College of Arts and Sciences. Applicants should have teaching experience in an academic discipline in the college and possess the terminal degree in that discipline. In addition to responsibilities as assistant dean, the person may also teach.

The assistant dean will coordinate part of the advising program in the college, will serve as an advisor to undergraduate students, will participate with the associate dean and dean in development of the College’s out-reach programs to off-campus persons, and will help faculty members to secure funds from internal and external sources for program development.

Direct applications and nominations to: Dean, College of Arts and Sciences, Kansas State University, Manhattan, Kansas 66506. Applications should include a curriculum vitae and names of three reference persons. Deadline for applications is 1 November 1975.

Kansas State University is an Affirmative Action Employer.