

Current Research

FORTHCOMING MEETINGS

THE UNDERWATER MINING INSTITUTE

The Eighth Underwater Mining Institute will be co-sponsored by the University of Alaska and the University of Wisconsin Sea Grant Programs in cooperation with the University of Washington Sea Grant Program and the AIME. It will be held in Seattle, Washington on November 10-11, 1977, and topics will include the following:

- Environmental aspects of coastal zone mining
- Economics and marine mining
- Ocean Law and deepsea nodule mining
- Nodule nucleation and metals
- Nuclear methods in marine minerals exploration
- Geophysics - some new techniques
- Conservation and marine mining
- New frontiers in marine minerals, exploration and mining
- Coastal mining in Alaska

For program content contact:

Professor J. Robert Moore
Program Chairman
Institute of Marine Science
University of Alaska
Fairbanks, Alaska 99701
Telephone (907) 452-5220

For registration fees and arrangements:

Dr. Gregory Hedden
Institute Coordinator
Sea Grant Advisory Services
University of Wisconsin
1815 University Avenue
Madison, Wisconsin 53706
Telephone (608) 262-0644

COASTAL ZONE 78

A specialty conference (Coastal Zone 78) will be held March 14, 15 and 16, 1978 at the Jack Tar Hotel in San Francisco, California. This will be a symposium on technical, environmental socio-economic and regulatory aspects of coastal zone planning and management.

COASTAL ZONE 78 will be a multidisciplinary specialty conference to provide an opportunity for those scientists, engineers, planners, and other involved professionals to convene and exchange information and views. The purpose of the conference is to provide a forum for discussion of coastal zone management, beneficial use, protection and development leading hopefully to a better understanding of the interrelationships between the environmental, socio-economic, engineering, and regulatory decisions involved. The conference will foster more effective and meaningful jurisdictional arrangements, conservation considerations, regulations, enforcement policies, planning activities, and design parameters in the development and implementation of coastal plans.

This conference will include, in addition to the standard presentation of papers and social functions, (1) a short course on the history and implementation of Coastal Zone Management preceding the conference, (2) a bus tour to several nearby coastal areas following the conference, and (3) a one-day Gordon Conference Type workshop (predicted on availability of a sponsor). Conference proceedings will be published and made available to participants at the conference. Subsequent to the conference, they will be for sale on a permanent basis.

Correspondence to:

Orville T. Magoon, Chairman
COASTAL ZONE 78
P.O. Box 26062
San Francisco, California, 94126
U.S.A.

SYMPOSIUM SUR L'Océanographie de l'Estuaire du St. Laurent (SOUQAR) - AVRIL 12-14, 1978

- Organisé par: Section d'Océanographie, Université du Québec à Rimouski (SOUQAR)
En collaboration avec:
Institut National de la Recherche Scientifique (INRS-Océanologie),
Pêches et Environnement Canada,
Groupe Interuniversitaire de Recherche Océanographique du Québec (GIROQ),
Ministère de l'Industrie et du Commerce, Québec, et
Marine Sciences Centre, Université McGill.

Comme vous le savez, l'Estuaire du St-Laurent est l'un des plus grands et des plus complexes, quoique le moins connu des estuaires. Malgré que l'exploration océanographique dans l'estuaire ait commencé au 19^e siècle, ce ne fut qu'en 1973 que des travaux considérables furent entrepris sur le terrain pour comprendre la dynamique de l'Estuaire du St-Laurent. Les efforts concertés de l'Institut Océanographique de Bedford (N.E.), de la Section d'Océanographie de l'Université du Québec à Rimouski (SOUQAR), du Groupe Interuniversitaire de Recherches Océanographiques du Québec (GIROQ), de l'Institut National de la Recherche Scientifique (INRS-Océanologie), du Centre des Sciences Marines de l'Université McGill et du Ministère de l'Industrie et du Commerce, Québec (MIC), ont permis d'appeler l'année 1973 "l'année de l'Estuaire".

La présence de tous ces groupes gouvernementaux et universitaires permet de maintenir une saine diversité des recherches sur l'estuaire. Cet esprit de collaboration assure un support fécond à la volonté de connaître et de comprendre les mécanismes marins y agissant. Toutes ces études devraient permettre de jeter les bases scientifiques nécessaires à l'élaboration de politiques cohérentes de surveillance et d'aménagement de l'Estuaire.

Ces faits ont amené la SOUQAR, en collaboration avec tous les groupes ci-haut mentionnés, à organiser un "Symposium sur l'Océanographie de l'Estuaire du St-Laurent", lequel se tiendra à Rimouski en avril

1978. Le but de ce Symposium est de faire le point des connaissances actuelles de tous les aspects océanographiques de l'Estuaire, soit l'Océanographie physique, chimique, biologique, géologique, géochimique, la pollution et les pêches.

Les chercheurs intéressés à présenter une communication à ce Symposium devront faire parvenir un résumé détaillé (maximum 500 mots) avant le 15 novembre 1977, et le manuscrit complet avant le 1er avril 1978. Les communications devraient être constituées de résultats originaux de recherches non-publiées ou des comptes-rendus critiques. Les manuscrits seront tous sujets à revue par le comité scientifique et par des arbitres extérieurs. Les résumés des communications acceptés seront distribués aux participants pré-inscrits environ quatre semaines avant le Symposium.

L'acceptation d'un résumé pour la présentation d'une communication au Symposium ne signifie pas nécessairement que le manuscrit sera accepté pour publication. Les manuscrits retenus seront publiés dans un périodique d'envergure internationale vers la fin de 1978.

La sélection des manuscrits nécessite un temps considérable. Aussi les futurs auteurs sont priés de respecter rigoureusement les dates limites du 15 novembre 1977 pour les résumés et du 1er avril 1978 pour les manuscrits complets. Le comité scientifique se réserve le droit de refuser les documents soumis après ces dates.

L'organisation des sessions dépendra du type et du nombre de documents recus et de l'intérêt des délégués. Aussi, vous apporterez une aide précieuse au comité scientifique en complétant et retournant le questionnaire ci-inclus avant le 1er juin 1977.

Une deuxième circulaire d'information, donnant plus de détails spécifiques sur le programme du Symposium, l'hébergement, le transport et les activités sociales, sera distribuée en janvier 1978.

Un montant de \$25.00 (\$5.00 pour les étudiants) sera chargé à chaque participant. Ce montant inclut une copie des résumés, une réception et le café entre les sessions.

Toute correspondance devra être adressée au coordonnateur du Symposium:

M.I. EL-SABH
Section d'Océanographie
Université du Québec à Rimouski
300, des Ursulines
RIMOUSKI, Qué. G5L 3A1

Tel.: (418) 724-1755
724-1650

COASTLINE CANADA '78

A conference on the coastline of Canada will be held at the Hotel Nova Scotian, Halifax, Nova Scotia, May 1-3, 1978. This meeting will deal

with the morphology, sediments and dynamics of the coastal zone in Canada. Some papers will be invited but the remainder will be contributed. Persons interested in attending the conference or in presenting a paper should contact:

Dr. Brian McCann
Atlantic Geoscience Centre
Geological Survey of Canada
Bedford Institute of Oceanography
Dartmouth, Nova Scotia, Canada
B2Y 4A2

or:

Dr. Michael Lewis
Terrain Sciences
Geological Survey of Canada
601 Booth Street
Ottawa, Ontario, Canada
K1A 0E8

'78 INTERNATIONAL CONFERENCE (C.S.P.G.)

The Canadian Society of Petroleum Geologists (C.S.P.G.) International Conference will be held in Calgary, Alberta, Canada from June 26 to 28, 1978, under the sponsorship of the C.S.P.G. The conference theme is "The Facts and Principles of World Oil Occurrence", and will be covered by a technical program on the following: one series of papers will explore the facts of world wide oil basins, plays and fields; another series of papers will review the principles of oil and gas occurrence, and a series of one-day seminars will deal with specialized conference themes in greater detail. Field trips to the Alberta Foothills, Athabasca Tar Sands, the Mackenzie Delta and Arctic Islands are planned. Papers are by invitation (in English) and will be published in bound volume. Abstracts will be published in the CSPG publication, and in the abstract and program booklet. Exhibits are also planned.

Executive of the conference:

J.M. Browning, General Chairman
302 Brae Glen Drive S.W.,
Calgary, Alberta, Canada
T2W 1B6

T.J. Hawkings, Technical Chairman
Imperial Oil Ltd., 500-6th Avenue S.W.,
Calgary, Alberta, Canada
T2P 0S1

P.A. Batson, Publicity Chairman
Gulf Oil Canada Ltd., 707 - 7th Avenue S.W.,
Calgary, Alberta, Canada
T2P 2H7

CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS
612 Lougheed Building
Calgary, Alberta, Canada
T2P 1M7

SHELF DYNAMICS WORKING GROUP (SANDS)

The Shelf and Nearshore Sedimentations and Dynamics Society (SANDS) will sponsor a session entitled "Shelf Dynamics" at the coming Tenth International Sedimentological Congress, in Jerusalem, July, 1978.

Co-convenors are:

Yaakov Nir
Marine Geology Division
Geological Survey of Israel
30 Malkei Israel Street
Jerusalem 95501, Israel

and

Donald Swift
Atlantic Oceanographic & Meteorological Labs.,
NOAA
Marine Geology & Geophysics Laboratory
15 Rickenbacker Causeway
Miami, Florida, 33149

Processes on Mediterranean shelves will be compared with those on ocean shelves. Persons interested in participating should contact the Chairman of the Organizing Committee of the Tenth Sedimentological Congress and obtain forms for abstracts and information concerning the meeting:

Dr. G. Gvirtzman
Israel Geological Survey
30 Malkei Israel Street
Jerusalem 95501, Israel

Request that your paper be presented in the Shelf Dynamics Session.

BOOKS

CATALOG OF DIGITAL BATHYMETRIC DATA FOR THE UNITED STATES COASTAL REGIONS by CHRISTOPHER LAWRENCE, LT. NOAA Corps.

Over the past several years NOAA's National Ocean Survey has been engaged in digitizing hydrographic data from more than 3200 hydrographic surveys as part of a project to automate the nautical chart production process. Soundings, bottom characteristics and danger-to-navigation data from all coastal waters of the United States including Alaska, Hawaii, Puerto Rico and the Great Lakes are included in the project.

The Environmental Data Service (EDS) of NOAA has been designated as the agency to disseminate these data to the public. To describe and clearly define geographic coverage of available data, a series of catalogs is being produced. The first, covering the North Atlantic coastal area, is enclosed.

These data will have strong appeal to state coastal zone management programs, environmental assessment programs, the commercial fishing industry, and the oil and gas industry, as well as groups engaged in a wide range of other marine oriented endeavors in research and industry.

Published by:

United States Department of Commerce,
National Oceanic and Atmospheric Administration
National Geophysical and Solar-Terrestrial
Data Center
Boulder, Colorado 80302
U.S.A.

EXPLORING THE GEOLOGY OF SHELF SEAS by R. McQUILLIN and D.A. ARDUS

This book is a compendium of methodology dealing with marine technology in its application to geological exploration at sea. Various positioning devices are explained including the latest short range radio systems. More than one third of the book covers geophysical surveying and interpretation, including seismic refraction, continuous seismic reflection profiling, gravimetrics and magnetics. A good account of echo-sounders and side scan sonar surveys is also given. The remainder of the book deals with bottom-sampling devices and techniques and includes descriptions of dredging, grab-sampling, rock drilling and vibro-core drilling. Submersibles are described, and their use explained. Most useful is the excellent illustrative material. Graphs, photographs, sketches, explanatory drawings all give the book exceptional credibility, and easy comprehension.

This book is fully illustrated with approximately 100 diagrams and photographs, including examples of survey records and their interpretation. Published by Graham and Trotman Ltd., London, U.K., Price £9.50 or \$19.

GEOLOGY OF THE NORTH-WEST EUROPEAN CONTINENTAL SHELF

Volume 1: The British Shelf by D. NAYLOR

Part 1 includes: structural setting, introduction and morphology; plate tectonics and north-west European margin; seafloor spreading and the opening of the North Atlantic; development of rift systems; outline description of major rift systems of the northwest European shelf.

Part 2 gives the geology of the west British shelf and includes: the Channel Basin (introduction, stratigraphy, geophysical and bottom sampling data, structure); the Western Approaches Basin; Celtic Sea Basins; Porcupine Seabight; Rockall and related basins; West Scottish Basins; Paleogeographic Summary; History of Exploration and the Future. Price £6.5 or \$13.

Volume 2: The North Sea by R. PEGRUM

This book gives an introduction and the regional setting. Its account of stratigraphy includes the Pre-Permian, Lower Permian, Upper Permian, Triassic/Jurassic, Lower Cretaceous, Upper Cretaceous, Tertiary, Recent, and volcanic and igneous rocks. Other subjects are: reservoir rocks, source and cover rocks, structure (epeirogenic movements, halo-kinetic movements), important gas and oil fields in the North Sea basins, history (legislation,

review of regulations, exploration review).
Price 8.50 or \$17.

Both volumes are published by Graham and Trotman,
London, U.K.

MECHANICS OF SEDIMENT MOVEMENT by GERARD V. MIDDLETON,
McMaster University and JOHN B. SOUTHARD, Massachusetts
Institute of Technology

This book consists of lecture notes for Short
Course No. 3, sponsored by the Eastern Section of
the Society of Economic Paleontologists and
Mineralogists, and given in Binghamton, New York,
March 29, 30, 1977. It contains preliminary and
detailed statements on the movement of sand grains,
and the process that act upon them. Mathematical
statements following from the laws of physics and
empirical observations support this study through-
out.

The authors have presented civil engineering
facets, physics and sedimentology of clastic grains
as virtually a single subject. This is a remark-

able achievement which takes the sedimentologist
away from the colossal aspects of geosynclinal
filling to the basic framework study of fluid
mechanics and sediment movement. It is this latter
fact that is so significant, because it is on
this phenomenon that an understanding of basinal
filling must be based. The grains must move to
the final site somehow, and Middleton and Woodward
have done the job in explaining it to us.

It is superbly referenced for essential material
and should definitely be on the bookshelf of all
sedimentologists and civil engineers. The
illustrations consist of sketches and graphs and
all are clearly labelled, even though some of the
labels are hand-printed. However this is a com-
pilation of the original lecture notes and the
method of presentation is most economical,
particularly for the student. We appreciated this
fact, but more so, the excellent quality of its
contents. That is what will really sell this fine
document.

Copyright, Society of Economic Paleontologists
and Mineralogist. Price \$7.00.