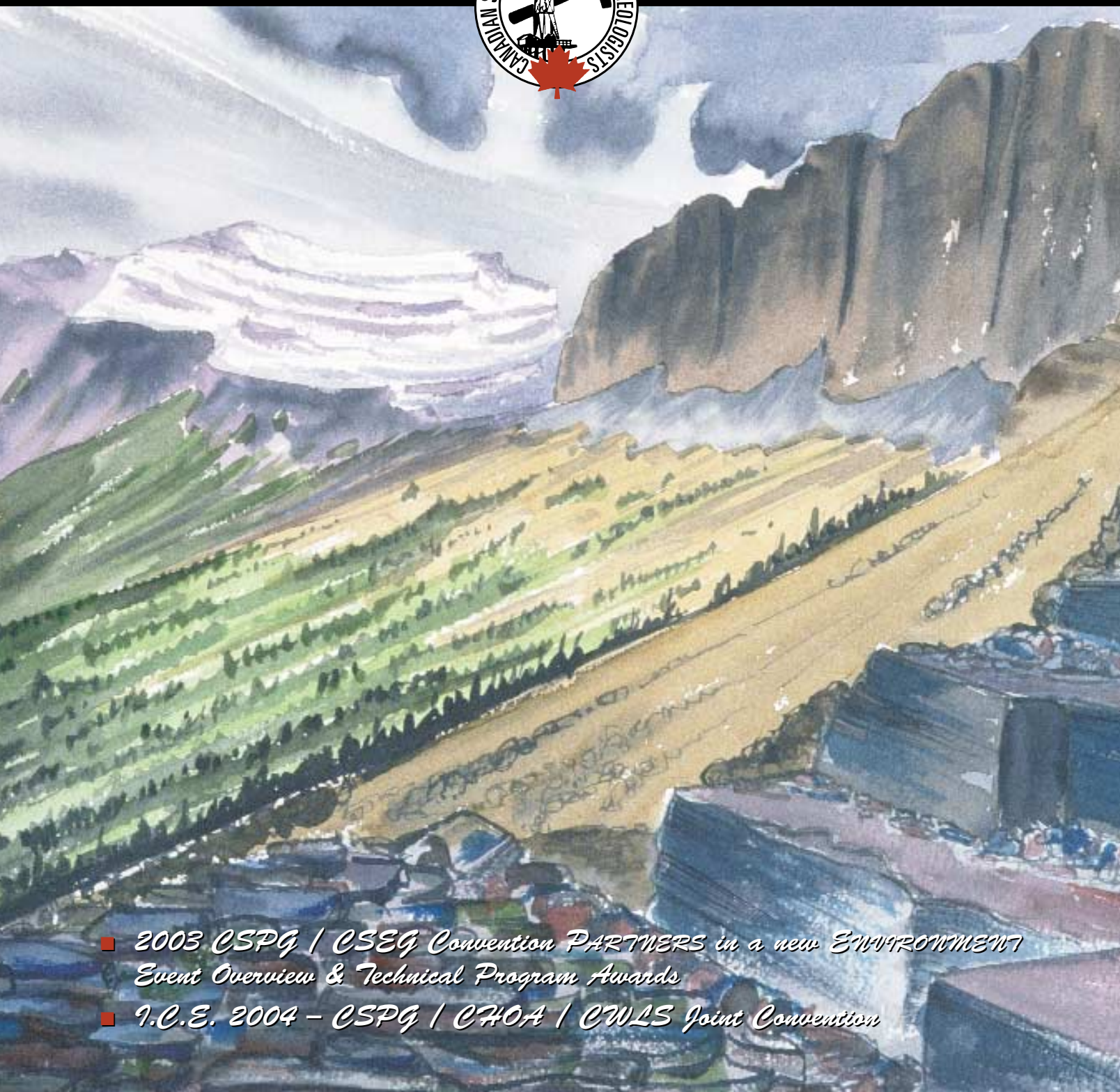
THE MONTHLY MAGAZINE OF THE CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS

RESERVOIR

Canadian Publication Mail Contract - 1534939 $3.00

VOLUME 30, ISSUE 8

SEPTEMBER 2003



- 2003 CSPG / CSEG Convention PARTNERS in a new ENVIRONMENT
  Event Overview & Technical Program Awards
- I.C.E. 2004 – CSPG / CHOA / CWLS Joint Convention

In your pursuit of oil & gas, we're with you every step of the way.

For more than 10 years, IHS AccuMap has provided the most comprehensive and trusted oil and gas information and software tools for the Western Canadian Sedimentary Basin, Northern Territories, and East Coast. From mineral rights to surface information, E&P data to M&A, we offer an unmatched breadth of data and analysis tools. From now on, the synergy of tools and expertise which is IHS AccuMap will be known as IHS Energy.

We have aligned our proven products, services and industry-leading consulting expertise with your business goals and workflow processes. Whatever you need to know, whatever you need to interpret, whatever decisions you have to make, we'll help you optimize your assets, your people, and your capital to create a competitive edge. New ventures. Exploration. Economics. Exploitation. Drilling. Production. Delivery. Acquisitions and Divestitures. Wherever your opportunities take you, we'll be there with you every step of the way.

www.ihsenergy.ca

IHS ENERGY™
ANYWHERE YOU GO, THE POWER TO KNOW.™

For a complimentary map of worldwide discoveries in the new millennium log onto www.ihsenergy.ca/map

CSPG OFFICE
#160, 540 - 5th Avenue SW
Calgary, Alberta, Canada T2P 0M2
Tel: 403-264-5610 Fax: 403-264-5898
Email: cspg@cspg.org Web: www.cspg.org
Office hours: Monday to Friday, 8:30am to 4:00pm

Business Manager: Tim Howard
Email: tim.howard@cspg.org
Office Manager: Deanna Watkins
Email: deanna.watkins@cspg.org
Communications Manager: Jaimè Croft
Email: jaime.croft@cspg.org
Conventions Manager: Lori Humphrey-Clements
Email: lori@cspg.org
Corporate Relations Manager: Kim MacLean
Email: kim.maclean@cspg.org

EDITORS
Please submit RESERVOIR articles to the CSPG office. Submission deadline is the 23th day of the month, two months prior to issue date. (i.e., January 23 for the March issue).

To publish an article, the CSPG requires digital copies of the document. Text should be in Microsoft Word format and illustrations should be in TIFF format at 300 dpi. For additional information on manuscript preparation, refer to the Guidelines for Authors published in the CSPG Bulletin or contact the editor.

COORDINATING EDITOR & OPERATIONS
Jaimè Croft
CSPG
Tel: 403-264-5610 Fax: 403-264-5898
Email: jaime.croft@cspg.org

TECHNICAL EDITOR
Ben McKenzie
GEOCAN Energy Inc.
Tel: 403-261-3851
Email: bjmck@telusplanet.net

ADVERTISING
All inquiries regarding advertising and technical specifications should be directed to Kim MacLean. The deadline to reserve advertising space is the 23th day of the month, two months prior to issue date. All advertising artwork should be sent directly to Kim MacLean at the CSPG.

The RESERVOIR is published 11 times per year by the Canadian Society of Petroleum Geologists. This includes a combined issue for the months of July/August.

Advertisements, as well as inserts, mailed with the publication are paid advertisements. No endorsement or sponsorship by the Canadian Society of Petroleum Geologists is implied.

The CSPG Rock Shop is an attractive and affordable way for advertisers to present their services to the CSPG Readership. Spaces are sold at business card sizes (3.5" wide by 2" high) and will eventually fill an entire Rock Shop page. For more information or to book a space please contact Kim MacLean at 403-264-5610, ext. 205.

Design & Layout by McAra Printing
Printed in Canada by McAra Printing

Additional copies of the RESERVOIR are available at the CSPG office for $3.00.

CONTENTS

ARTICLES

2003 CSPG / CSEG CONVENTION PARTNERS IN A NEW ENVIRONMENT
EVENT OVERVIEW 26
2003 CSPG / CSEG CONVENTION PARTNERS IN A NEW ENVIRONMENT
TECHNICAL PROGRAM AWARDS 30
I.C.E. 2004 – CSPG / CHOA / CWLS JOINT CONVENTION 34
2003 HONORARY ADDRESS:
EARTHQUAKES AND TIDAL WAVES: WHEN THE EARTH MOVES 35

DEPARTMENTS

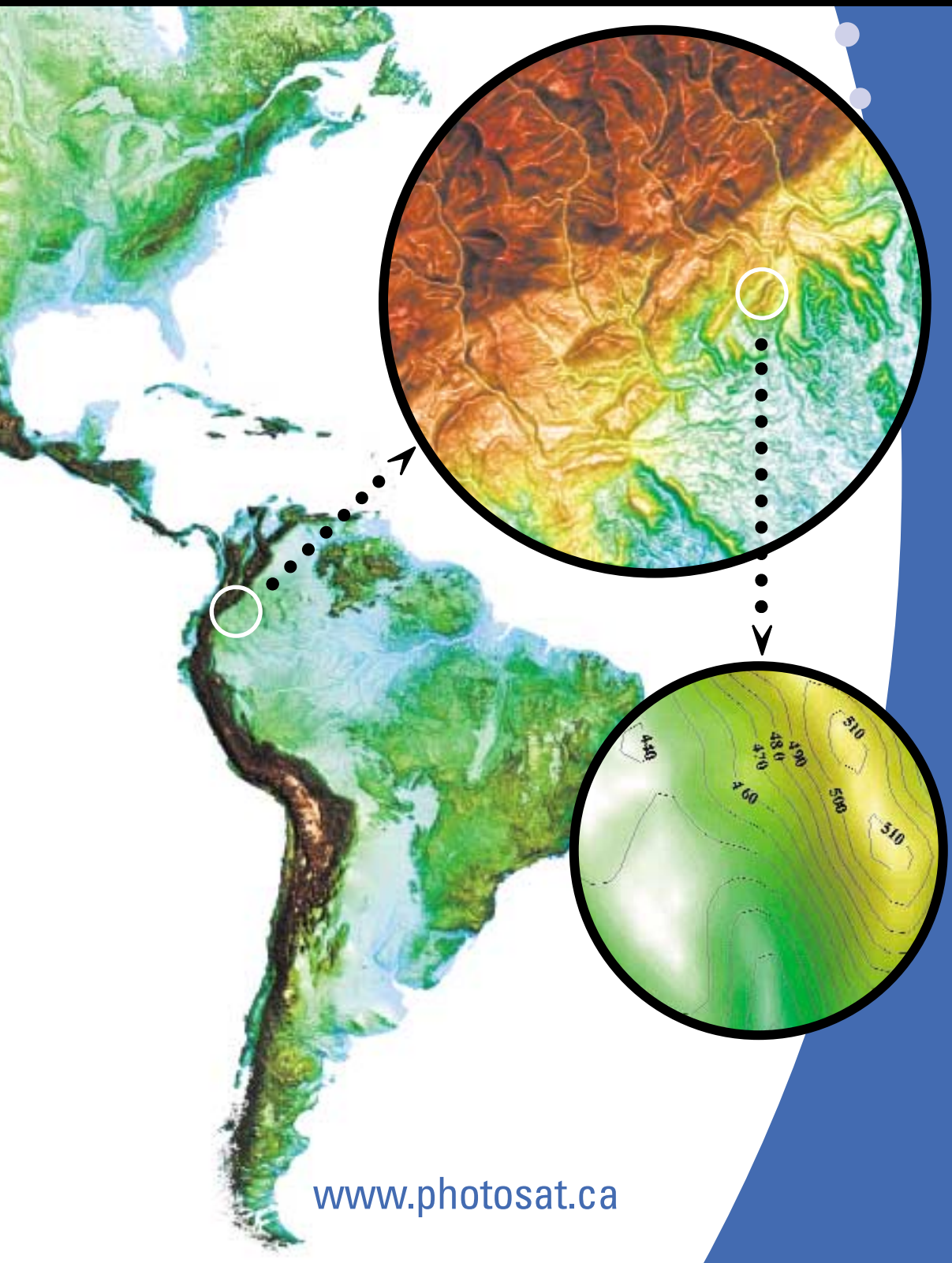
CALL FOR NOMINATIONS - 2004 EXECUTIVE COMMITTEE 5
CORPORATE MEMBERSHIP 5
EXECUTIVE COMMENT 7
2003/2004 TECHNICAL LUNCHEON ANNOUNCEMENT 9
TECHNICAL LUNCHEONS 10
DIVISION TALKS 14
ONLINE INDEX AVAILABLE AT WWW.CSPG.ORG 18
VOLUNTEER MANAGEMENT COMMITTEE 22
JACK PORTER: VIGNETTES OF CANADIAN PETROLEUM GEOLOGY 24
ROCK SHOP 37

FRONT COVER
Yoho National Park, B.C. – View north from the Walcott Quarry, Burgess Shale.
Original watercolour by George Eynon.

PhotoSat™

Imagery & Information for
Mapping & Monitoring

serving the oil and gas industry since 1993 • *formerly RGI Resource GIS and Imaging*



new highly accurate elevation data for North and South America

10m contours now available from 60° north to Tierra del Fuego

stereo ASTER satellite images

- fourteen bands of multi spectral imagery – in stereo
- stereo interpretation workstation
- structural interpretation
- lithology mapping

www.photosat.ca

tel **604 681 9770**

CORPORATE MEMBERS

THE CSPG GRATEFULLY ACKNOWLEDGES ITS

*CORPORATE MEMBERS:

ABU DHABI OIL CO., LTD. (JAPAN)

ARCHEAN ENERGY LTD.

BURLINGTON RESOURCES CANADA ENERGY LTD.

CALPINE CANADA

CANADIAN FOREST OIL LTD.

CONOCOPHILLIPS CANADA RESOURCES LIMITED

DEVON CANADA CORPORATION

DOMINION EXPLORATION CANADA LTD.

DUVERNAY OIL CORP.

ECL CANADA

EL PASO OIL & GAS CANADA, INC.

HUNT OIL COMPANY OF CANADA, INC.

HUSKY ENERGY

IHS ENERGY

IMPERIAL OIL RESOURCES LIMITED

LARIO OIL & GAS COMPANY

MJ SYSTEMS

MURPHY OIL COMPANY LTD.

NCE RESOURCES GROUP INC.

NEXEN INC.

NORTHROCK RESOURCES LTD.

PENN WEST PETROLEUM LTD.

PETRO-CANADA OIL AND GAS

REEVES WIRELINE

SAMSON CANADA

SHELL CANADA LIMITED

SPROULE ASSOCIATES LIMITED

SUNCOR ENERGY INC.

TALISMAN ENERGY INC.

TOTALFINAELF E&P CANADA LIMITED

UPTON RESOURCES INC.

*CORPORATE MEMBERS AS OF

JULY 24, 2003

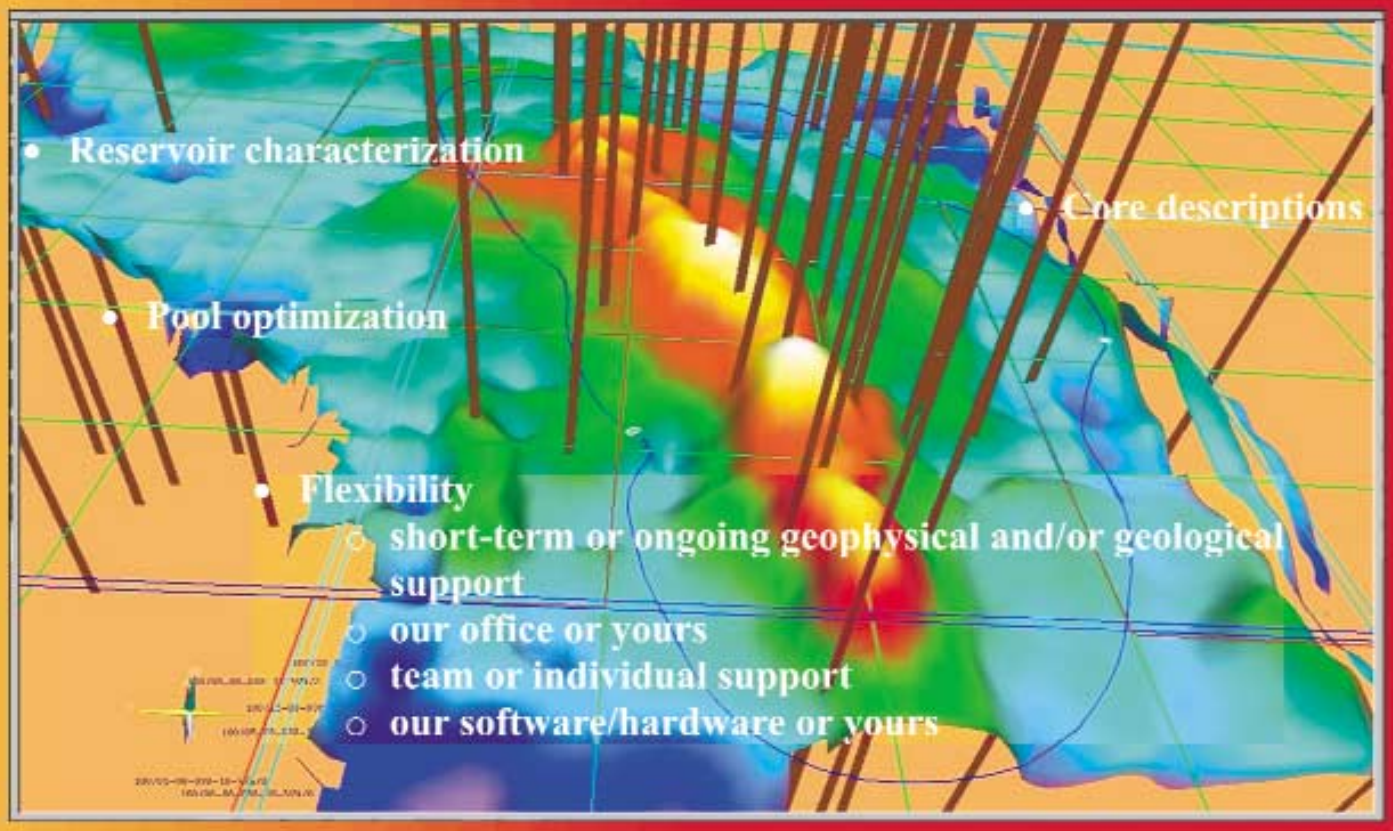
CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS CALL FOR NOMINATIONS 2004 EXECUTIVE COMMITTEE

In accordance with Article VI, subparagraph (a) of the By-Laws, the Nominating Committee hereby calls for Nominations to Stand for Election to the 2004 Executive Committee of the Canadian Society of Petroleum Geologists. Nominations are to be made in writing, signed by at least twenty-five members in good standing and endorsed by the nominee who is consenting to stand for office. Nominations should be forwarded to the CSPG office by September 15, 2003. The slate of candidates will be published in the November Reservoir and the election will take place on November 30, 2003. The following vacancies exist for 2004:

Vice President
Assistant Finance Director
Assistant Program Director
Assistant Services Director

Successful candidates for the Directorships will serve two-year terms and the elected Vice President, a three-year term. Interested parties should contact the office for details and general requirements of service on the Executive.

What Do You Need?



The Solution? GEDCO

We provide flexible and experienced technical help when and where you need it.

We offer integrated geology and geophysics so you can assess the risks and rewards of your pools, plays and prospects.

We bring proven oil finding and reservoir characterization experience to your project.

GEDCO

For More Information Contact:

Lisa Griffith, P.Geol. Or Doug Pruden, P.Geoph.
Phone: 403-262-5780 Website: www.gedco.com
Email: lgriffith@gedco.com or pruden@gedco.com

EXECUTIVE COMMENT

A MESSAGE FROM THE ASSISTANT FINANCE DIRECTOR

As Assistant Finance Director, I have had the pleasure of sitting on the CSPG Executive for eight months. In that time, I have witnessed the strategic direction of our Society unfold as we moved from the annual Business Planning exercise to the resulting strategic three-year financial planning process and finally to the 2004 budget cycle, for which I am responsible as next year's Finance Director. Each of these steps builds on the other to create a business model that establishes an operational plan and the financial base to execute that plan. However, a plan is only as good as the foundation on which it rests. To ensure a solid base, our Executive reviews the Society's budget-to-actuals each month and, as year-end approaches on August 31st, forecasts the bottom line. We can then measure against our audited results, which are received in October. The result is a closely monitored accounting system that is capable of reacting to emerging trends, unforeseen emergencies, or committee budget variances. In short, the past eight months have given me confidence in both our Society's financial management and its fiscal position.

As a non-profit organization, we work toward creating a conservative budget that breaks close to even or with a slight profit. Good fiscal management has resulted in surpluses over the last couple of years. This has allowed our Executive to invest prudently in enhanced programs and services for the membership, and transfer funds to the CSPG Educational Trust Fund endowment. Revenues and expenses contributing to this annual surplus are watched scrupulously; the rare membership fee increases are debated hotly, as are convention registration fees and Technical Luncheon ticket prices. Revenue diversification is a by-word of CSPG financial management and has stood us in good stead while more single-source-focused professional societies may have suffered. Similarly, both operational and administrative expenses are reviewed continuously with an eye to the bottom line. Whether it be facility usage for committees, office space or technology, or staffing increases, our Executive is intimately involved in the decision-making process on the membership's behalf. While expenses in the last seven years have risen, gross revenues have kept in pace. Program and services for members have expanded as well. Members are now better served through enhanced information accessibility through our website, an expanded Reservoir, increased corporate partnering, and consistent and more versatile convention administration.

So where are we headed in the coming fiscal year that starts September 1st? Conventions, membership dues, and technical luncheons will continue to be the cornerstone of our operations. Our annual convention remains a significant contributor to our overall financial health and allows the Society to keep fees constant in other areas. Membership dues will remain low. If we consider that our current fees do not even cover the cost of production and mailing of the Reservoir and Bulletin, we can appreciate the value we receive for our annual CSPG membership. As in the past, we expect the net revenue from Technical Luncheons to just about break even next year. While ticket prices will rise slightly to offset a major increase by our caterer, I am sure that most would agree that this is a good value for the money (lunch, networking, presentation, venue). With the re-introduction of mini-conferences in 2004, online membership renewals this October, and several other initiatives now in the design stage, programs and services will continue to improve in the coming program year.

I look forward to being the navigator for this strong financial ship in the coming year. As we prepare for exciting and innovative projects to better serve all members, I am confident the resources necessary to execute these initiatives will be readily available and we will continue to enhance the fiscal strength of the Society. I would like to thank my fellow Executive members for their guidance and support during my tenure on the Exec, the membership for their continued support of this premier professional society, and the staff for their dedication and loyalty to our collective needs.

Pauline Chung
Assistant Finance Director

IN MEMORIAM AND IN CELEBRATION OF
David William Evan Organ
1926 – 2003

Born February 21, 1926 on SW33-24-18 W1 near Paulson, Manitoba, Dave attended elementary school in rural Manitoba at Helston, took Junior High School by correspondence, then moved to Russell, Manitoba in 1942 and took grades 11 and 12. A good deal of his early education was, by necessity, self-taught, and early in life Dave developed an appreciation that while knowledge may be contained in books, application is up to the individual. That belief remained with him throughout his life.

During Word War II, Dave served in the Infantry from 1944 to 1946. After discharge from the Canadian Army, he intended to take Engineering at the University of Manitoba, but instead enrolled at Brandon College and graduated with a B.Sc. in Geology in 1949. Dave had a natural curiosity and his thinking took him outside the norm where he could see and appreciate other possibilities. It is not surprising that it was an easy transition from Engineering at Winnipeg to Geology at Brandon College. Dave realized a proficient geologist needed more education than a three-year B.Sc., and he returned to university and obtained a M.Sc. in Geology from the University of Manitoba Graduate School in 1952.

Dave continued his geologic education as an undergraduate during a field season with the Geologic Survey of Canada, as a mine geologist at Snow Lake Manitoba, and as a field assistant with the California Standard Company (now Chevron Canada Resources). Upon completing his M.Sc. course work in 1951, Dave was offered a position with the California Standard Company where his first job was mapping surface structures in Southern Saskatchewan, an area where he did not think there was any significant structure. He soon found out, "someone knew better, for there was a good deal of structure, mostly what is now known to be salt solution related".

In addition to field mapping, Dave was one of the earliest wellsite geologists for Cal Stan, and sat on many early Manitoba and Saskatchewan wells. One of the most memorable was at Elkhorn Manitoba where he (or the wellsite engineer) accidentally burned down the geologist's shack. Dave found working in one of the earliest oil exploration hot spots in Western Canada (and in the Williston Basin), "very enjoyable and agreeable".

In 1953, Dave was assigned to evaluate the Daly Oilfield waterflood, one of the earliest waterfloods in Canada. After paddling around the largest local sloughs to measure available water volumes and examining core for the entire Daly field, Dave announced the waterflood would be effective. It was.

In the early days of exploring a new basin it was often a case of learning as they went along – particularly in the case of the Cal Stan Frobisher Silurian test which provided an early look at older rocks. The well was a dry hole, but to Dave, meeting Doreen VanderPloeg in Estevan was, "by far the best outcome of the Frobisher well"!

Dave and Doreen married in December 1954 and have three charming daughters, Jan, Cathy, and Shelley and six grandchildren. Jan has a B.Sc. in Mechanical Engineering and Cathy and Shelly each have B.Scs in Commerce and both are CMAs. Dave was devoted to his family and took great interest in their education, careers, and families.

From 1951 to 1989, Dave served in various line and staff positions with the California Standard Company/Chevron Canada Resources. In 1969, he was appointed Chief Geologist of Chevron, a position he held until his retirement in 1989. His duties as Chief Geologist included supervising recruitment, hiring, and training a professional staff of approximately 80. Dave was an independent thinker and held his own ideas on training. He believed the most successful managers concentrate on results, not on procedures, and require only vague knowledge of details. Dave deplored the lack of formal training programs to that end.

Dave had an ability to think clearly in four dimensions and was a constant lateral thinker – both huge assets to a geologist. Artistically gifted, he was able to quickly sketch and portray any geologic situation. Dave believed a picture is worth a thousand words. He simply did not clutter his mind with extra trivia and his work was always simply stated, clear, and easily understood. Because of these talents, Dave had an unusual ability to explain otherwise complex geology – particularly to younger geologists.

Dave believed an important function of professional societies (CSPG, APEGGA, and others) was "keeping a constant and steady flow of quality individuals, into the system", and lent his continual support to these professional societies.

Dave was elected president of the Canadian Society of Petroleum Geologists in 1975 and also served on or chaired a wealth of committees: the CSPG Exhibits Committee in 1960; the Advisory Committee to the National Conference on Earth Science, 1973-1975; Vice President of the CSPG in 1974; the CSPG Disciplinary Committee, 1976-78; Chair of the CSPG Tracks Award Committee, 1976; chaired the CSPG Nominating Committee, 1976; a member of the Exhibits Committee, CSPG International Hydrocarbon Conference, 1978; CSPG Representative to the Canadian GeoScience Council, 1980; and chaired the CSPG Research Committee, 1981.

Dave was a member of the Canadian Geoscience Committee, Organization and Activities Review, Alberta Geological Survey, 1984, and was elected Vice President of the CGC in 1984 and president in 1985. He was the CGC Member of Canadian Council for the Ocean Drilling Program, 1985.

Dave became an AAPG member in 1953 and chaired the CSPG/AAPG Liaison Committee in 1974.

In 1971 he became a Professional Geologist with APEGGA and was a member of the APEGGA Nominating Committee, 1975 and 1976.

In May 1990, Dave was honored with a life membership in the CSPG. It was typical of Dave that in his acceptance speech, he mentioned none of his own accomplishments, but spoke about two outstanding humorists he had known, W.O. Mitchell and Paul Hiebert of Sarah Binks fame. He finished it off with a bemused discussion of dowsers, "who find oil and gas by mysterious means"! This acceptance speech is a tribute to his sense of humour and to his irreverent approach to tradition. And, as always, there was a message.

In addition to being honored with a life membership in the CSPG, Dave was also Emeritus Member, Canadian Society of Petroleum Geologists and Emeritus Member, American Association of Petroleum Geologists.

Dave's 38-year career took him through the hectic excitement of a young and rapidly growing petroleum industry, a time when nearly all of the major oil pools in Canada were discovered. Wherever Dave went, "there were always rocks that told a story". Dave had many other interests as well, including travelling, painting, sketching, gardening, model airplanes, and building furniture of his own design. He expected, "in each day at least eight hours of golden opportunity".

Dave will be remembered by his friends and associates, not only for his professional knowledge and contributions to geology, but also for his ready wit and humour, his honesty, his friendly and unassuming nature, his tendency to recite 'nonsense' poetry when confronted by a situation he felt absurd or amusing, and his quizzical smile and the sparkle in his eye that meant the world was not coming to an end and a bigger picture existed that should be appreciated in our lives. He will be missed by his many friends and by his family.

2003/2004 TECHNICAL LUNCHEONS

Effective September 1st the CSPG's Technical Luncheon Ticket Price will rise from the current $25.00 per ticket to $28.00 per ticket. This price increase is in response to a rise in costs at the Marriott Hotel, the caterer for our luncheons. Concurrent with this, prices have also been rising for audio-visual support and facilities rental at the Telus Convention Centre. While we always regret any price increase, our luncheon tickets are still competitive with other organizations offering like events in similar facilities. Despite the price increase, the Technical Luncheon budget for the coming year will continue to operate just at break-even.

CSPG Technical Luncheon Committee

It is once again time to plan for the CSPG twice monthly Technical Luncheons. The CSPG has nineteen luncheons planned for the 2003/2004 Season. There are two methods for having tickets sent directly to a ticket representative in your office:

1.) **For Corporate Members of CSPG**
Corporate Members may order a set number of tickets per luncheon, which will be couriered to you with an invoice. For orders of less than 10 tickets per luncheon, a $5.00 handling fee will be added to the invoice. You must take the same number of tickets for each luncheon and returns are not accepted. The following month's tickets will be sent out if the previous month's invoice has been paid. Any changes to your standard number of tickets must be made well in advance of tickets being sent out. Additional tickets may be arranged through the CSPG office. If you wish to use this option, you must register with the office by September 1, 2003.

2). **For those who are not Corporate Members - Prepayment:**
For companies who are not Corporate Members you may elect to pre-purchase a set number of tickets for the 2003/2004 Season's 19 luncheons. For orders of less than 10 tickets per luncheon, a $5.00 handling fee needs to be added to each mailing to cover courier/mailing/handling costs. Returns are not accepted and extra tickets can be purchased direct from the CSPG office. If you wish to use this option, you must register with the office by September 1, 2003. Payment is required upon registration for this program.

If you do not wish to use either of these options tickets can be purchased directly from the CSPG office, using cheque, cash, debit, Visa, American Express, or MasterCard. Luncheon tickets are $28.00 plus GST each and go on sale two months in advance. Please watch your Reservoir or visit www.cspg.org for luncheon abstracts.

TICKET REPRESENTATIVE REGISTRATION FORM

COMPANY NAME: _____ PHONE: _____

TICKET REP NAME: _____ FAX: _____

ADDRESS (including Postal Code) _____ E-MAIL: _____

_____ _____

OPTION 1 – CSPG CORPORATE MEMBERS ONLY

_____ NUMBER OF TICKETS FOR EACH LUNCHEON.

FOR TICKET ORDERS OF LESS THAN 10/LUNCH, A $5/MONTH HANDLING FEE WILL BE ADDED TO YOUR INVOICE.

OPTION 2 – PREPAYMENT

_____ NUMBER OF TICKETS FOR EACH LUNCHEON.

PREPAYMENT DUE: _____ TICKETS X $29.96 (INCL. GST) X 19 (TOTAL # OF LUNCHEONS) = $ _____. IF LESS THAN 10/LUNCH ORDERED, A HANDLING FEE OF $53.50 ($5.00 PLUS GST PER MONTH) IS INCLUDED IN THIS PAYMENT.

TOTAL PREPAYMENT ENCLOSED IS:

$ _____ (TICKETS)

+ $ _____ (HANDLING FEE)

= $ _____

We accept Visa, MasterCard, American Express, or cheque as payment. If paying by credit card:

Card Type _____

Credit Card # _____

Expiry Date: _____

Signature: _____

Please return your completed form to: Jaimè Croft, Communications Manager, 160, 540 – 5th Avenue SW, Calgary, Alberta, T2P 0M2.

SEPTEMBER LUNCHEON

Energy Supply/Demand Trends and Forecasts: Implications for a Sustainable Energy Future for Canada and the World

SPEAKER
J. David Hughes
Geological Survey of Canada

11:30 am
Tuesday, September 9, 2003

TELUS CONVENTION CENTRE
CALGARY, ALBERTA

Please note:
The cut-off date for ticket sales is 1:00 pm, Wednesday, September 3rd.
Ticket price is $28.00 + GST.

An analysis of world and North American energy production and consumption over the past several decades indicates strong growth. Even with the growth of "zero emission" nuclear and large hydro projects, hydrocarbons (oil, gas, and coal) made up more than 85% of the world's primary energy consumption in 2001, and are forecast to make up more than 80% of a greatly expanded energy demand by 2020. Energy demand in the developing world is forecast by the U.S. Energy Information Administration to grow by 115% through 2020, when these regions will account for nearly half of the world's energy consumption. The question is, are these forecast growth rates sustainable, given the magnitude and distribution of the world's remaining energy reserves, and what are some of the political and social ramifications of maintaining this rate of consumption? Natural gas in North` America is of particular concern, as it is largely a captive market (with the exception of about 1% LNG at present) and demand, particularly for electricity generation, is forecast to grow dramatically over the next two decades. This talk focuses on the "Big Picture" and how Canada fits into it, as well as what must be considered going forward to assure a sustainable energy future.

BIOGRAPHY

David Hughes is a geologist with more than 30 years experience studying the energy resources of Canada for the Geological Survey of Canada and the private sector. He is the Leader of the National Coal Inventory, which is a digital knowledge base on coal and is used to determine the availability of resources for conventional and non-conventional uses such as coalbed methane production and the sequestration of CO_2. He is also Team Leader for Non-conventional Gas for the Canadian Gas Potential Committee. For the past several years, he has developed a keen interest in the "Big Picture", as it relates to the longer term prognosis for continuity of energy supplies and some of the political and environmental ramifications concerning their use.

SEPTEMBER LUNCHEON

Understanding North African & Middle East Basins: Whole Lithospheric Folding versus Disparate Rifting

SPEAKER
B.G.M. Wood
International Geological Consulting

11:30 am
Tuesday, September 23, 2003

TELUS CONVENTION CENTRE
CALGARY, ALBERTA

Please note:
The cut-off date for ticket sales is 1:00 pm, Wednesday, September 17th.
Ticket price is $28.00 + GST.

For those working in the Afro/Arabic area with varying degrees of success or those intending to acquire acreage in the region, a new regional geological model will enhance exploration success on the ground. Hard data refutes the widely held belief that the troughs and ridges of North Africa and the northern Middle East originated under extension during the disintegration of Gondwana since the Carboniferous. G&G data for Syria and Egypt demonstrate that these basins, which can be used as analogues throughout the region, originated in compression. Adherence to rift models has hindered discovery and development of new oil resources in the region.

Synthesis of an extensive volume of good quality seismic, well, magnetic, and gravity data from western Syria documents intraplate, lithospheric-scale compression folding of the northern Afro-Arabian Plate resulting in plate-scale, NE-oriented troughs and arches at least since the Carboniferous. Intermittent NW-oriented fracturing facilitated domino-like, counter-clockwise rotation of inter-fracture platelets. Basement association with folding and fracturing is verified by seismic, stratigraphic sections, and isocore maps of distinct, stacked, sedimentary sequences (basins). The ostensibly complex disintegration of the region occurred under a single, constant, NE-directed stress field.

The regional implications of lithospheric-scale compression folding are considerable. First, the familiar passive, low-energy sedimentary sequences of the region were deposited in broad compressional downwarps open to the warm Tethys Seas. Second, regional terminations of these same sedimentary cycles synchronized with basin inversion, cross-basin fracturing, magmatic activity, trough narrowing, and basin dissection, together suggesting rapid, end-of-cycle, brittle failure of a compressed crust. Third, offset shearing along cross-basin fractures and a persistent counter-clockwise rotation of the depositional (fold) axes of individual sub-basins, offers a mechanism for plate-scale rotation. Further, as end-of-cycle occurrences of

intense tectonic activity of northern Arabia (uplift, volcanism, shearing, plate rotation) coincide with periods of tectonic and magmatic activity as far afield as Europe and greater Africa, a tectonic-scale driving mechanism is clear.

This new model of plate-scale deformation fits well with the known geological history of Afro-Arabia. It offers improved prediction of basins of interest to the oil industry in areas of poor geologic control and enhanced field-scale sedimentary and structural prediction as demonstrated by examples in the Western Desert and Gulf of Suez of Egypt.

BIOGRAPHY

Barry Wood graduated in 1972 from Queen's University with a BSc(Hon) in geology, Barry joined Shell Canada in Calgary where he participated in exploration and basin analysis efforts in Canada's East Coast, Arctic, Hudson Bay, and West Coast. After a short spell working the Western Canadian Basin with Western Decalta (later Pembina Pipeline), he shifted to international activities moving through seven countries with his family while working on business development, exploration, and development across Southeast Asia, Europe, Africa, and the Middle East.

Barry currently advises companies on conducting business in his areas of experience. He is also a Director of PetroQuest International Ltd., a company concentrating on exploration in Afro/Arabia. He is a Fellow of the Geological Society of London and an active member of the Petroleum Exploration Society of Great Britain and the American Association of Petroleum Geologists. A committed traveler, he can best be contacted by e-mail, bgwood@mac.com.

KEEPING TRACK

JOHN WEISSENBERGER

New:
Senior Staff Geologist
Husky Energy
Calgary, Alberta

Previous:
Geological Support,
Carbonates
Encana Corporation
Calgary, Alberta

OCTOBER LUNCHEON

Exploration Model for CBM in the Alberta Plains

SPEAKERS
Olwen F.R. Wirth
MGV Energy, Inc., Calgary, Alberta, Canada
owirth@mgvenergy.com
Melany D. Hysert
MGV Energy, Inc., Calgary, Alberta, Canada
mhysert@mgvenergy.com

11:30 am
Tuesday, October 7, 2003

TELUS CONVENTION CENTRE
CALGARY, ALBERTA

Please note:
The cut-off date for ticket sales is 1:00 pm, Wednesday, October 1st.
Ticket price is $28.00 + GST.

This presentation will focus on the coal zones of the Alberta Plains and some of the factors that have allowed MGV Energy Inc. to develop coalbed methane (CBM) so quickly. We will summarize the major attributes of the target coal zones and MGV's approach to evaluating their CBM potential. We will also discuss some the important differences between the geologic approach to CBM exploration in Canada before and after 1998.

The first phase of CBM exploration and development in Canada began in the late 1970s and concluded in the early 1990s when most activity took place. During this period more than 80 wells were drilled in Western Canada of which approximately 50 wells were drilled in the Alberta Plains evaluating Ardley and Mannville coals. No significant commercial production resulted from these initial efforts.

The second phase of Canadian CBM exploration and development began in 1998 and is continuing today. As part of this recent activity, additional coal zones have been tested in the Alberta Plains, including the low-rank Horseshoe Canyon and Belly River Formations.

MGV embarked on CBM exploration in Canada in 1998. To date, MGV's main focus has been in the Alberta Plains where we have drilled more than 200 wells. In February 2003 MGV was the first company to book CBM reserves in Canada. MGV is currently producing sales gas from coal seams in the Horseshoe Canyon and Belly River Formations. MGV is testing these formations in new areas as well as evaluating Ardley and Mannville coals.

BIOGRAPHIES

Olwen Wirth, Manager of Geology at MGV Energy Inc. has 20 years of oil and gas experience. She has a B.Sc. in Geology from the University of Alberta. For the past 4 years she has focused on CBM exploration and development in Western Canada. She began her career as a wellsite geologist, subsequently worked at the Alberta Department of Energy as a reservoir geologist and has worked with various companies in the oil and gas industry in Calgary during the past 6 years.

Melany Hysert is a geologist with MGV Energy Inc., and has worked on coalbed methane projects in the Alberta Plains for the past four years. She graduated from the University of Waterloo, in 1997 with a B.Sc. in Earth Science. Her student work terms and contract positions prior to joining MGV Energy Inc., were at Energy, Mines and Resources Canada; Canmet; Gulf Canada Resources, and PanCanadian Energy.

OCTOBER LUNCHEON

Indications for effective petroleum systems in Bowser and Sustut basins, north-central British Columbia

SPEAKER
K.G. Osadetz*
L. D. Stasiuk
N. S. F. Wilson
Geological Survey of Canada: Calgary
3303 33 St. NW
Calgary, AB, Canada, T2L 2A7
C. A. Evenchick
Geological Survey of Canada: Pacific
101-605 Robson St.
Vancouver, BC, Canada, V6B 5J3
F. Ferri
Resource Geology, New Ventures Branch,
Ministry of Energy and Mines
PO Box 9323, 6th Floor, 1810 Blanshard St.,
Victoria, BC, Canada, V8W 9N3

11:30 am
Tuesday, October 21, 2003

TELUS CONVENTION CENTRE
CALGARY, ALBERTA

Please note:
The cut-off date for ticket sales is 1:00 pm, Wednesday, October 15th.
Ticket price is $28.00 + GST.

Recent field work in the Bowser and Sustut basins has found 'live" oil in a breeched Skeena Fold Belt antiform in Jurassic Bowser Lake Group sedimentary rocks of the Intermontane Belt, British Columbia. This oil occurs as oil stains and petroleum fluid inclusions that are generally less than 45 degrees API. Condensate may also be present in some petroleum fluid inclusions. The intergranular porosity of the sample is filled by a pervasive cement that lacks petroleum fluid inclusions, and which probably post-dates the breeching of the structure. Elsewhere, outcropping Bowser Lake Group sediments have preserved intergranular porosity and reservoir potential. Other, anecdotal, evidence suggests that natural gas may be seeping from sub-Bowser Lake Group rocks on the shore of Tatogga Lake, in the same general region. This provides direct evidence that there is at least one effective petroleum system in the Bowser and Sustut basins of the Intermontane Belt. The crude oils extracted from these samples have molecular compositions (terpane and sterane biomarkers) that indicate a source in Paleozoic marine carbonate rocks deposited in a meso-haline to hypersaline environment. The source of these oils likely lies in (Devonian to Permian) Stikine Assemblage Paleozoic carbonate strata that underlie Upper Triassic Stuhini Group and Lower to Middle Jurassic Hazelton Group successions on which the Middle to Upper Jurassic Bowser Lake and Upper

* Denotes speaker

Cretaceous Sustut successions were deposited. These observations, based on new organic petrographic data are much more optimistic for oil and gas generation and preservation. However, they illustrate large lateral and stratigraphic variations in thermal maturity that affect petroleum systems and potential reservoirs in ways neither well described or clearly understood. As a result of these new observations, there is a pressing need to revise existing petroleum assessments to capture the impact of reduced risks in plays in both Bowser Lake and Sustut groups and to expand the set of plays to consider the newly recognized potential of underlying successions. There is also a pressing need to act on this new and favourable evidence that an accessible, potential frontier petroleum province, the size of a European country lies effectively unexplored and undeveloped.

BIOGRAPHY

Kirk G. Osadetz is manager of NRCan's research program into the fuel potential of natural gas hydrates and is the leader of an Energy Research and Development project into the development of improved methods of undiscovered petroleum resource assessment. He contributes to National Energy Board studies of Canadian Energy Supply and the Canadian Gas Potential Committee's studies of undiscovered natural gas resources.

BASIN ANALYSIS DIVISION

Sequence Stratigraphy of Petroleum Plays: Concepts and Applications

SPEAKER
Octavian Catuneanu
Department of Earth and Atmospheric Sciences, University of Alberta

Noon
Tuesday, September 2, 2003

Encana Amphitheatre
2nd Floor, east end of the
Calgary Tower Complex
1st St. and 9th Avenue S.E.
Calgary, Alberta

Sequence stratigraphy provides the framework to understand the distribution of petroleum plays in the rock record, and is successfully applied as an exploration tool that allows predictions of lateral facies development within a sedimentary basin. The method of sequence stratigraphic analysis involves integration of outcrop, well, and seismic data, and represents an interdisciplinary approach that fills in the gap between sedimentology, basin analysis, and geophysics.

The timing of all sequence stratigraphic surfaces and systems tracts is defined relative to a curve that describes a full cycle of sea level, relative sea level, or base level changes, depending on the model that is being employed. This theoretical curve is generally presented as a generic sinusoid, with an unspecified position within the basin. The generic nature of this reference curve originates from the early seismic and sequence stratigraphic models of the late 1970s to late 1980s, which were based on the assumption that eustasy is the main driving force behind sequence formation at all levels of stratigraphic cyclicity. Since eustasy is global in nature, there was no need to specify where that reference curve is positioned within the basin under analysis. Subsequent realization in the 1990s, based on much earlier work, that tectonism is as important as eustasy in controlling stratigraphic cyclicity, led to the replacement of the eustatic curve with other reference curves, of relative sea level (eustasy + tectonism) or base level (relative sea level + energy of the depositional environment) changes. The shortcoming of these conceptual advances was that the new reference curves were still regarded as generic, with an unspecified position within the basin, despite the fact that subsidence is invariably differential along both dip and strike. Changing subsidence rates imply that any point within the basin is characterized by its own curve of relative sea level/base level fluctuations, so no one curve is representative for an entire basin. This fact requires us to specify where exactly along each dip-oriented section the reference curve of base level changes is taken. The curve that sequence stratigraphic models are centered around is the one that describes changes in accommodation at the shoreline. The interplay between sedimentation and this curve of base level changes controls the transgressive and regressive shifts of the shoreline, and implicitly the timing of all systems tracts and bounding surfaces.

Surfaces that can serve at least in part as systems tract or sequence boundaries are sequence stratigraphic surfaces. Seven such surfaces can be defined in relation to the reference curve of base level changes. The characteristics of each sequence stratigraphic surface are exemplified using well log, outcrop, and seismic data. Systems tracts are packages of strata composed of age-equivalent depositional systems, and correspond to specific stages of shoreline shifts – normal regressive, forced regressive, and transgressive. Each systems tract offers unique exploration opportunities with the reservoirs associated to particular depositional environments and their distribution within the basin.

INFORMATION
Please note that there has been a venue change. BASS Division talks are free. Please bring your lunch. For further information about the division, joining our mailing list, a list of upcoming talks, or if you wish to present a talk or lead a field trip, please contact either Steve Donaldson at 403-645-5534, email: Steve.Donaldson@encana.com or Mark Caplan at 403-691-3843, email: Mark.Caplan@shell.ca or visit our web page at www.cspg.org/basin_analysis.html.

EMERGING PETROLEUM RESOURCES DIVISION

Unconventional Resources in Canada over the Next Decade

SPEAKERS
Mike Gatens
MGV Energy and CSUG
Rick Richardson
Alberta Geological Survey

Noon
Wednesday, September 10, 2003

ConocoPhillips Auditorium
(+30 level – west side of building)
401-9th Ave SW (Gulf Canada Square)
Calgary, Alberta

Over the next decade, Canada can expect to produce more future petroleum resources from unconventional play types. More companies operating in Canada are turning their attention to resources such as coalbed methane, tight gas, bitumen, and gas and oil shales. Other resources, such as gas hydrates, are being studied by industry and research organizations. But what can we really expect in the next 10 years? How much

production will be from unconventional resources and, geographically in Canada, where are these expect to come from?

Join the Emerging Petroleum Resources Division for its first lunchtime session for the 2003-2004 season. The session will be a panel discussion featuring three panelists. Each panelist will present their outlook in a 15-minute presentation, and then they'll be open discussion for 30 minutes. We look forward to a lively discussion, so please join us on September 10.

INFORMATION

All luncheon talks are free – please bring your own lunch. If you would like more information about future EPRD activities, please join our e-mail distribution list by sending a messages with the title "EPRD list" to caddelem@bp.com.

HYDROGEOLOGY DIVISION

Hydrology applications of fault-network identification in northern Alberta from gravity and magnetic data

SPEAKER
Henry Lyatsky
Lyatsky Geoscience Research & Consulting Ltd.

12:00 Noon
Tuesday, September 23, 2003

Encana Amphitheatre
2nd Floor, east end of the
Calgary Tower Complex
1st St. and 9th Avenue S.E.
Calgary, Alberta

Important for hydrocarbon exploration, fractures and faults are greatly understudied, but nonetheless crucial, conduits for formation fluids. Fault-directed flow affected salt dissolution; formation and destruction of primary and secondary reservoirs; oil migration, accumulation, and escape; and thermal conditions in the sedimentary cover.

Previously undetected fault networks in northern Alberta were delineated by detailed processing of very inexpensive, public-domain GSC gravity and magnetic data to highlight subtle lineaments. Even where the faults may be sub-resolution seismically, they are commonly expressed as gradient zones, alignments of separate anomalies, linear breaks in the anomaly pattern, etc.

Two fundamentally different types of crystalline-basement structure are known in the Alberta Basin:

(1) Archean and Early Proterozoic (Hudsonian and older) ductile orogenic structures, and

(2) Middle Proterozoic to Recent cratonic structures.

The latter are usually brittle, steep faults, which variously follow or cut across the older orgenic grain. Brittle block-bounding faults, far more than ancient ductile structures, had a controlling influence on the Alberta Basin's evolution.

In the search for steep, brittle faults, many large magnetic and gravity anomalies are undesirable, as they represent mostly the ductile, healed, ancient orogenic-basement structures. These undesirable anomalies obscure the desirable subtle features. Subtlety of fault-related lineaments necessitates careful processing of potential-field data and extensive experimentation with a wide variety of anomaly-enhancement and image-display techniques.

The most geologically meaningful derivative gravity and magnetic maps (chiefly gradient maps, vertical and side-lit shadowgrams, amplitude-gain maps), which highlighted the lineaments best, were selected for interpretation. Lineaments which could represent faults were picked by hand to generate numerous "stick maps", for each derivative map separately. These stick maps were compared with the known surface and subsurface geology as well as topographic features. The result was a considerable improvement in the delineation of the northern Alberta fault networks.

INFORMATION
The luncheon talks are free and open to the public. Please bring your lunch. Refreshments are provided by Norwest Laboratories and Encana. For further information, or to present a talk, please contact Stephen Grasby at (403) 292-7111 or sgrasby@gsc.nrcan.gc.ca.

PALAEONTOLOGY DIVISION

Alberta Palaeontological Society Open House and Fossil Clinic

7:30 PM
Friday, September 26, 2003

Mount Royal College, Room B108
4825 Richard Road SW
Calgary, Alberta

The Alberta Palaeontological Society welcomes CSPG members, families, and the general public to their September Open House and Fossil Clinic. APS members will have specimens on display and resident experts will be on hand to help identify fossils that are brought in to the clinic.

INFORMATION
This event is jointly presented by the Alberta Palaeontological Society, Mount Royal College, and the CSPG Paleontology Division. For details or to present a talk in the future please contact APS Program Director Philip Benham at 403-691-3343 or programs@albertapaleo.org . Visit the APS website for confirmation of event times and upcoming speakers: http://www.albertapaleo.org/ minute updates.

Implications on Source Rock Accumulation from Ichnology in the Ordovician Yeoman Formation, Southeastern Saskatchewan

SPEAKER
Rozalia Pak
University of Alberta / Shell Canada

12:00 Noon
Monday September 15, 2003

Encana Amphitheatre
2nd Floor, east end of the
Calgary Tower Complex
1st St. and 9th Avenue S.E.
Calgary, Alberta

The Ordovician microfossil, *Gloeocapsomorpha prisca Zalessky* 1917 has produced valuable hydrocarbon source rocks (kukersites) from around the world. To date, no agreement has been made concerning the life habit of this organism, and the accumulation of beds rich in *G. prisca*. The more popular view is that *G. prisca* was a non-photosynthetic, prokaryotic, benthic algal mat; others believe it was a photosynthetic, eukaryotic, planktonic, possibly prokaryotic organism, which bloomed episodically throughout the Ordovician. Differing evidence and conclusions may be explained because evidence suggests that the alga was preserved at various stages in its lifecycle, i.e., it could be either planktonic or benthic. In an examination of the trace fossils of the Upper Ordovician Yeoman Formation of southeastern Saskatchewan, close relationships were observed between the dispersed organic matter or macerals (kerogen) and the biogenic sedimentary structures. The macerals in these sediments are dominantly composed of the algal microfossil, *G. prisca* alginite. Depending on whether *G. prisca* grew as algal laminae on the seafloor, or accumulated from a planktonic bloom in the water column, they would have been consumed and processed differently by burrowing infauna. This is especially apparent when comparing how these macerals are distributed in filter- and deposit-feeding burrows. Fluctuations in the abundance of *G. prisca* are related to fluctuating feeding habits represented by the trace fossils. Based on the distribution of *G. prisca* alginite within the trace fossils of the Yeoman Formation, a planktonic nature for this microfossil better explains the accumulation of kukersite beds rich in *G. prisca* in southeastern Saskatchewan.

INFORMATION
Talks are free – don't forget to bring your lunch!

For more information about this talk, or about presenting a talk, please call Scott Leroux at (403) 645-2419, (email: Scott.Leroux@EnCana.com).

ONLINE INDEX AVAILABLE AT WWW.CSPG.ORG

The Keyword–Author-NTS Area Index to all CSPG publications will soon be available online at the CSPG website, www.cspg.org.

This online index contains references to all CSPG publications, as well as those of the predecessor Alberta Society of Petroleum Geologists, and the Saskatchewan Geologic Society and the Edmonton Geologic Society. Approximately 4,500 publications are listed, including all Bulletin and Journal papers, Memoirs, Guidebooks, Convention abstracts, Devonian Symposia, Williston Basin guidebooks, etc. – going back to 1931.

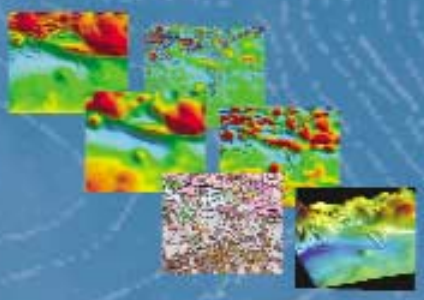
Individual publications can be retrieved by searching for keywords – defined as subjects discussed at considerable length – and which include geologic ages (e.g., Cretaceous, Lower), formations (e.g., Cardium Fm or Slave Point Fm), areas (e.g., Calgary area, Dunvegan area), or subjects such as hydrodynamics, source rocks, or petrophysics. References to publications can also be retrieved geographically by NTS areas, as well as by province.

The strongest feature of this online index is the list of available keywords that can be searched, and the number of times each keyword is listed. Retrievals can be combined (e.g., Give me a list of all CSPG papers which refer to the Viking Fm and hydrodynamics) by separating the keywords by commas (i.e., Viking Fm, hydrodynamics). Since authors' names have commas separating the last name from the initials, authors can be retrieved by placing quotation marks around the author (e.g., "Fox, F G").

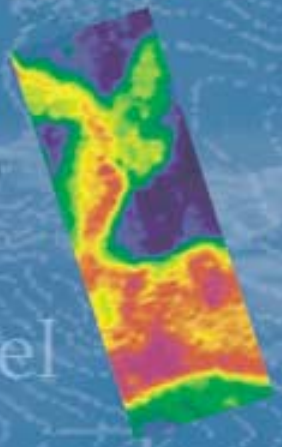
Some minor spelling errors may still be present in the Index. If you encounter any of these, please send an e-mail to index@cspg.org describing the error. Note that some stratigraphic units are listed as either Fm (formation) or Gp (group), since the original references discussed one or the other. The Index Committee members who prepared this index did not assume the task of correcting geologic errors or later stratigraphic updates.

Retrieval of these references is the easy part. Much more difficult will be finding the actual paper since many CSPG publications are out-of-print. Publications currently for sale are listed in the online catalog, located under "Publications" at www.cspg.org. Finding older or out-of-print CSPG publications is up to the user. Potential sources of out-of-print CSPG publications include university libraries, the Geological Survey of Canada libraries in Ottawa and Calgary, the Gallagher library at University of Calgary, or thru a sympathetic and dedicated librarian. CSPG Bulletin papers will eventually be available online, through a partnership with AAPG Datapages. (Please watch your Reservoir for more information.)

FUGRO AIRBORNE SURVEYS FLYING WORLDWIDE



shallow gas



paleochannel

high resolution aeromagnetics

EM

petroleum

oil sands

pipeline detection

Calgary, Alberta
tel: +1 403 777 9280

Houston, Texas
tel: +1 713 369 6123

www.fugroairborne.com www.fugro.com

GEOMODELING

Geomodeling Technology Corp. (GTC) is a world leader in providing seismic attribute interpretation and 3D reservoir modeling software to the oil industry.

Our R&D partners and clients include major international oil companies such as Shell International, ExxonMobil, Total, Statoil, Norsk Hydro, Agip Petroleum, BG International, and a fast growing Calgary client base.

Dr. Renjun Wen (President and CEO) founded GTC in November of 1996, after he had obtained his PhD degree in Petroleum Geology from the Norwegian University of Science & Technology.

Dr. Wen is pleased to take this opportunity to introduce Geomodeling Technology Corp.'s Sales and Support staff in Calgary.

Mr. Ted Grove, Vice President, of Sales & Marketing

Mr. John Totino
Account Manager

Ms Melissa Burdan
Technical Support Specialist

Mr. Jason Kong
Quality Control Manager

Mr. Les Dabek
Technical Support
& Education Manager

Geomodeling Technology Corp. has its headquarters in Calgary and regional offices in Beijing, China, Stavanger, Norway and Houston, Texas. Our products and services provide visualization, integrated attribute analysis, interpretation and advanced modeling of reservoir heterogeneity.

For more information regarding Geomodeling Technology Corp. Call (403) 262-9172.

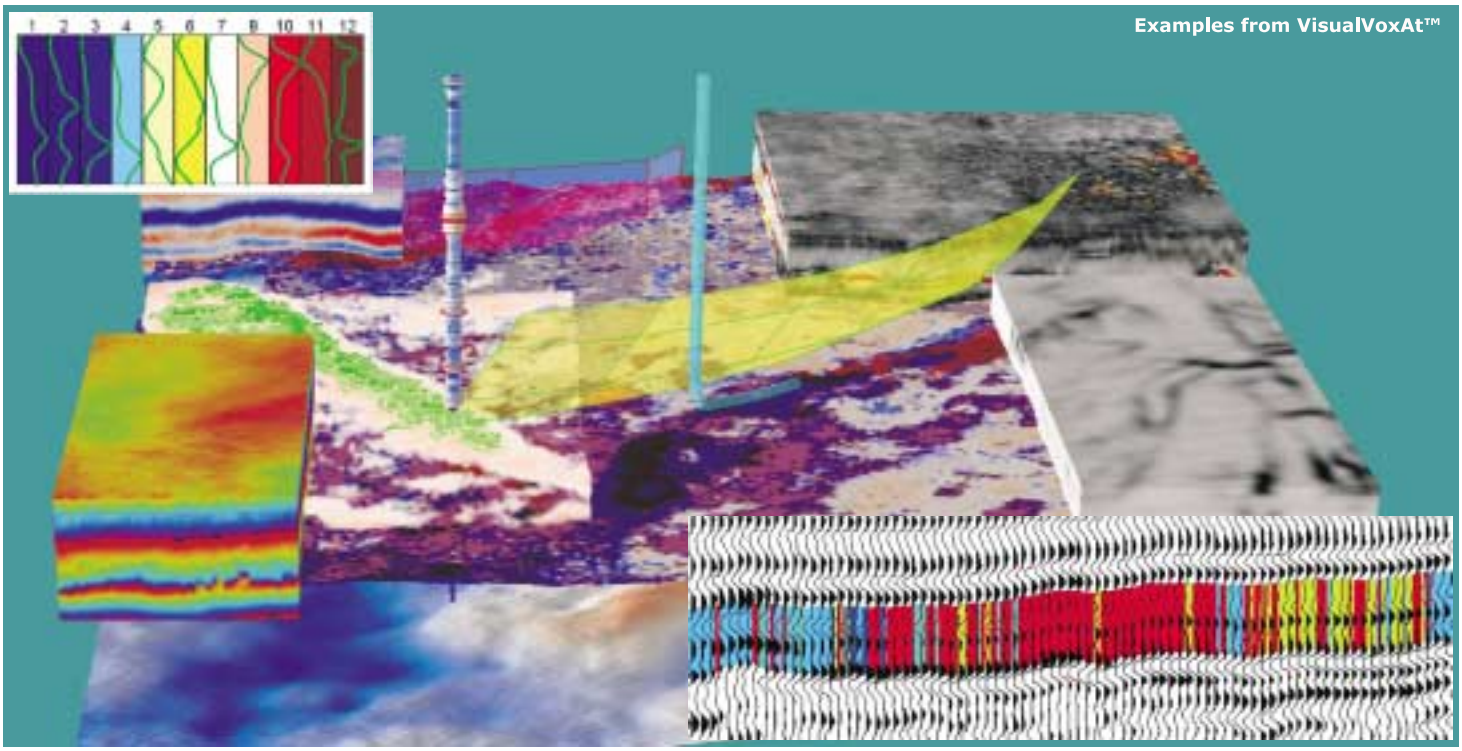
Geomodeling Technology Corp. Suite 230, 633-6th Avenue S.W., Calgary, Alberta, Canada T2P 2Y5
Tel: 403-262-9172 • Fax: 403-262-9171 • Email: Info@geomodeling.com • www.geomodeling.com

SPE Booth #1555

GEOMODELING

SEG Booth #611

Providing solutions for fully integrated seismic attribute analysis interpretation, visualization and geological modeling.



VisualVoxAt™

- Horizon & fault interpretation.
- Interactive attribute generation (volume, horizon, interval & Strata-Cube™).
- 2D & 3D visualization (multi-volumes, horizons, well-logs, reservoir grids, basemaps, & Strata-Cubes™).
- Time-depth conversion.
- Attribute calibration.
- Seismic facies classification using neural networks and waveform correlation.
- Geobody detection.
- Well-design.
- Microsoft standard user interface.
- Import/Export industrial standard file formats

SBED™

- Bridging the scale gap between geology, geophysics & reservoir engineering.
- A revolutionary geological reservoir modeling tool.
- The major objective is to solve the "cross-scale" problem between cores, well-log, seismic images & well test data.

Geomodeling Technology Corp. Suite 230, 633-6th Avenue S.W., Calgary, Alberta, Canada T2P 2Y5
Tel: 403-262-9172 • Fax: 403-262-9171 • Email: Info@geomodeling.com • www.geomodeling.com

THE VOLUNTEER MANAGEMENT COMMITTEE

I'd like to take this opportunity to comment on the new Volunteer Management Committee. As the Services Director, I have a greater understanding and appreciation of the over 400 dedicated volunteers to some 60 committees within the CSPG organization. It is this participation and commitment by our members that have made the CSPG one of Canada's most successful non-profit professional societies. The scope of its activities, within the industry and the community, has been a hallmark of the Society from its inception, and form the foundation of its mandate today. The level of commitment demonstrated by our members requires a similar commitment from the CSPG to manage and recognize the efforts of our numerous volunteers. This will be a key component and responsibility for the new Volunteer Management Committee.

So what does this mean for our Society's volunteers? This committee will be providing a crucial liaison between volunteers and the various volunteer opportunities available within our society as well as maintaining a long-term tracking system of our numerous volunteers, in conjunction with committee chairs, for volunteer recognition awards. The Volunteer Management Committee will also assist the CSPG Past-President in identifying qualified candidates for the CSPG executive slate each year, a job that previously fell solely to the past-president.

As a volunteer who has served on several of the society's committees over the last eight years, I welcome the addition of the Volunteer Management Committee.

Lisa Sack
Services Director
2003 CSPG Executive

After serving as Services Director in 2002, I am very excited to be involved as Chair, with one of the newest strategic incentives of the CSPG: The Volunteer Management Committee. With movement of the Volunteer Coordinator position, which traditionally acted under the Membership Committee, into the structure of this new committee, we are now taking a proactive role in recruiting and tracking the Society's volunteers. Our mandate is to provide members with meaningful volunteer opportunities and reward them for their service to the Society.

The Volunteer Management Committee, acting on its own, under the guidance of the CSPG Executive (Services Director), will accomplish this mandate through having liaisons with all CSPG committees and the Executive. Recruiting will be achieved through marketing and advertising ventures, special events, and the "Volunteer Source" link to be incorporated into the CSPG website. Recognition of volunteers will be improved with implementation of a database to track volunteer efforts.

We want to provide a steady supply of volunteers and volunteer opportunities to the membership. We will place new members wishing to volunteer as well as provide a role change to those currently volunteering who want a change of "scenery". We will try to match skills of volunteers with the role they will play in a committee and ensure that guidance and mentoring is given as needed. We will put emphasis on providing people with a fun and satisfying experience with recognition by the CSPG for their valuable efforts.

I cannot emphasize enough the power that YOU have as a volunteer to "recharge" the foundation upon which the CSPG has achieved the success it has. There really is strength in numbers. Volunteer today!

Karen Webster
Committee Chair
Volunteer Management Committee

Volunteers are essential to the services and programs that the CSPG membership enjoys on an annual and day-to-day basis. Without volunteers, the CSPG and other non-profit organizations would not exist.

A volunteer is an individual who freely donates personal time or services. Currently, the CSPG has over 400 of these wonderful people and we need to increase this number to maintain and, more importantly, improve society services in accordance to the shifting needs of our membership.

Why be a volunteer? Because there are BENEFITS:

- Make new friends and networks.
- There are a variety of positions available.
- It's personally rewarding, satisfying, and FUN!
- Sharing your skills and talents does make a difference.
- Gain commendable work-related skills and experience.
- The Society will recognize your efforts.

Jump in and get involved! Everyone benefits.

Karen Greengrass
Marketing and Communications
Volunteer Management Committee

CSPG VOLUNTEER COORDINATOR

If you are looking for a volunteer opportunity within the CSPG, Blythe will be happy to help you find your volunteer niche.

She can also provide information about any of the Society's numerous committees if you require it.

Blythe will also assist with finding replacements for current committee volunteers who need a change and help them to find different volunteer opportunities in the Society, if desired.

Blythe Lowe can be reached in Calgary at 403-290-3516. Give her a call!

Jump In!

...and get involved.

The Canadian Society of Petroleum Geologists is looking for VOLUNTEERS.

If you are motivated, energetic, and want to get to know a lot of people in this industry... get involved!!

Think about it. Are you looking for a job? Is your company in need of a sales boost? Do you wish to **expand your network and stay "in the know"** with all aspects of industry? The CSPG is filled with *members* who VOLUNTEER that are from a wide range of occupations across the oil and gas sector.

Jump in - meet lots of friends - and have a great time volunteering with the CSPG.

Volunteer Today!

For more information on how to become a volunteer visit:

www.cspg.org

CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS

JACK PORTER-
VIGNETTES OF CANADIAN PETROLEUM GEOLOGY

Continued from the July/August Reservoir

The Extraordinary Odyssey of R. G. McConnell

Richard McConnell was delayed at Fort Liard for a week's duration during which period he was attempting to obtain the service of a local Nahanni native to accompany him on the remainder if his descent of the Liard River to Fort Simpson. After being successful in engaging a suitable native, he replaced his canvas boat for a bark canoe. The two departed on August 5th and arrived at Fort Simpson four days later.

In retrospect, McConnell had travelled a distance of approximately 425 miles in his descent of the Liard River from its junction with the Dease to Fort Simpson. Despite his delay at Devil's Portage and Fort Liard, McConnell's mandate to conduct a reconnaissance geological survey of this section of the river was expressly fulfilled and thoroughly conducted. He described the prolific exposures of rocks ranging in age from Proterozoic (Hadrynian) to Quaternary and collecting fossils for age determination. He also recorded the structural attitude of the outcrops, using a prismatic compass as well as utilizing his pocket aneroid barometer in determining the rate per mile-of-drop along the course of the Liard and the elevation of prominent landmarks, notably Nahanni Butte. In examining strata devoid of fossils, McConnell relied on his knowledge gained during the previous field season while engaged in the study of the Rocky Mountains east through the Bow River Pass. He discerned lithologic affinities to his Lower Paleozoic Castle Mountain group in strata exposed at Cranberry Portage as well as Portage Brûlé and deemed them to be "probably of Cambro - Silurian age." (Section Across The Rocky Mountains In The Vicinity Of The Canadian Pacific Railway, Near The Fifty-first Parallel, R. G. McConnell, 1886, p.42D. To accompany Annual Report, 1886, Part A).

While in the vicinity of Fort Halkett, RIchard McConnell made an astute physiographic observation in respect to the tectonic setting of the northern extremities of the Rocky Mountains (Muskwa Ranges). He reported: "Where the particular line of crumpling and upheaval of the earth's crust to which this range is due dies away at the Liard, another similar line begins, nearly in the same latitude, but about eighty miles farther to the east. The mountain range produced by this new line of disturbance extends northward nearly parallel to the general course of the Mackenzie to the Arctic Ocean." Apparently, he was referring to the offset expressed by the Mackenzie and Franklin Mountains. (McConnell, Part D, Annual Report, 1888-89; Report on an exploration in the Yukon and Mackenzie basins, N.W.T.).

The investigation of potentially exploitable mineral occurrences was a component of McConnell's mandate. During his descent of the Liard River, he made no report of any evidence of petroleum present in rocks or expressed as seepages. However, some three miles below the mouth of the Dease, he noted the incidence of impure lignite associated with friable sandstone and conglomerate of probable Tertiary age. At Coal River's discharge into the Liard River, he found large fragments of "float" lignite. Hoping to locate its presence in situ, he was unsuccessful after walking several miles up this tributary.

Commencing with the Sutter's Mill gold discovery in California in 1848, prospectors followed a northward succession of gold strikes in the western United States. Many of these seekers arrived in British Columbia following the discovery of gold in the Fraser River in 1857. Among these migrants were Chinese prospectors who often stayed behind longer in their efforts to glean additional placer gold from river sand bars considered marginal by their former exploiters. McConnell narrates that at Little Canyon, some 20 miles below the Liard's confluence with the Dease River, the former becomes turbulent along a one-half mile stretch during its restricted passage through the canyon. He reports that this was the site where a number of Chinese drowned while navigating this particular section of the liard River. No doubt these unfortunate victims were gold seekers!

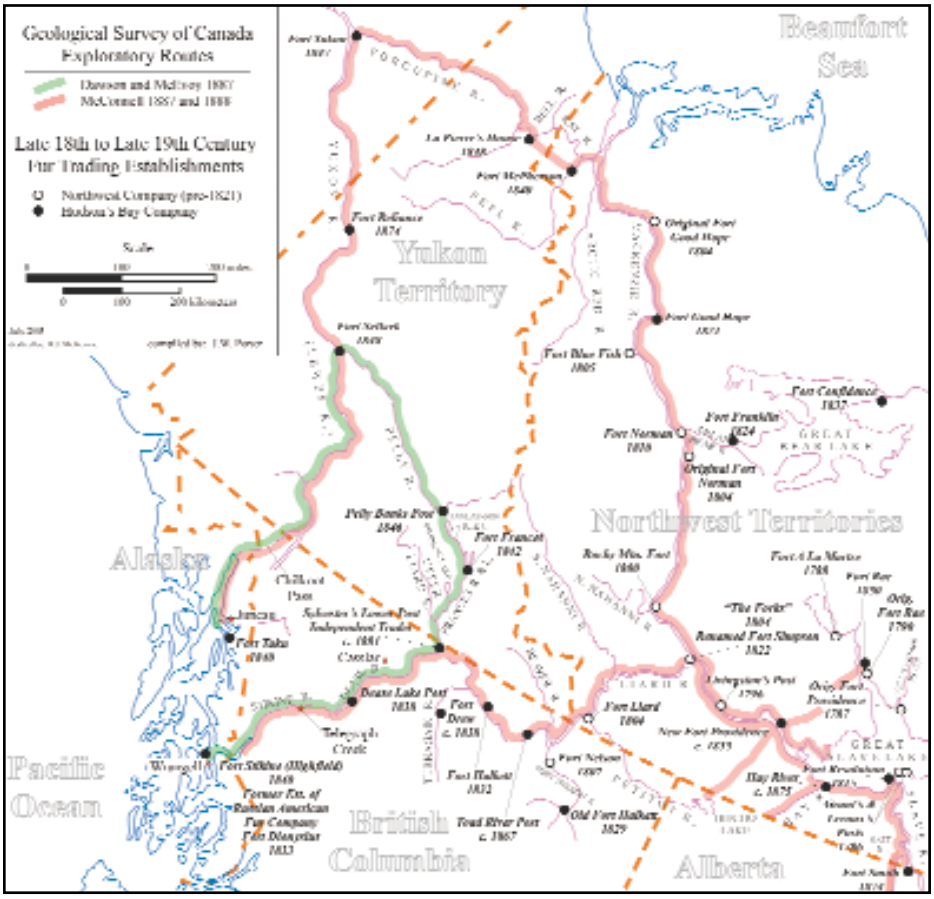


Figure 1. Drainage Basins of the Mackenzie and Yukon Rivers.

In 1872, prospectors McCullock and Thibert, who together ascended the Liard from Fort Simpson in 1871 - 1872, made a rich placer gold discovery on the same river between Devil's Portage and the mouth of the Dease. This sparked a rush of placer miners to work the auriferous sand bars along the course of the Liard, as well as the Dease River. Cassiar became the centre of activity in the ensuing decade. At the same time of McConnell's descent of the Liard, the miners had long since abandoned the area after having extracted most of the gold from the richer bars. He observed worked auriferous bars at the junction of Rabbit River with the Liard as well as at "McCullough's bar" (McCullock), where placer gold in paying quantities was first discovered. The foregoing localities are 20 and six miles, respectively, above Fort Halkett. McConnell reported the presence of "colours" in sand bars he sampled by panning at the mouth of the Nelson River.

Apart from Sylvester's Lower Post and Fort Liard, McConnell found no other active trading posts along this interval of the Liard River. In passing Smith River, he was unable to detect any remains of the former second Fort Halkett, built by the Hudson's Bay Company in 1832 and abandoned in 1865. Farther downstream, at the junction of Toad River on the Liard's south bank, he viewed the abandoned, yet still standing, buildings of Toad River Post. It had been a small post, erected by the Hudson's Bay Company a short period after the abandonment of their second Fort Halkett. Strategically, the Toad River represents a navigational demarcation between the manageable portion of the lower Liard and the river's unyielding upstream counterpart. (Karamanski, Theodore J., 1953, Fur Trade and Exploration - Opening the Far Northwest 1821 - 1852, Univ. of British Columbia Press, p. 97)

Beyond McConnell's route, some 25 miles above the discharge of the Fort Nelson River (formerly East Branch of the Liard), the North West company had constructed their Fort Nelson trading post in 1807. It had been the Nor'Westers attempt to exploit the fur potential of the environs of the East Branch, but tragically, it was short lived. A disaster culminated from a series of grievances on the part of the natives owing to the severity of the winter, low fur yields, impending starvation, and the paucity of ammunition. Their plight was exacerbated by Alexander Henry, the post's overseer, whose autocratic treatment left no room for compromise. This volatile situation resulted in a massacre of the post's inhabitants during the winter of 1812-1813. Henry and two of his men were lured into a trap, beyond the confines of the post, where they were murdered by the offended natives. Proceeding to the post, Henry's wife and children were slaughtered and the post ransacked. (Ibid., p. 17,18)

This catastrophe was brought to the attention of Roderick McKenzie, a former bourgeois of the North West Company and a cousin of Alexander Mackenzie, in a letter from George Keith of the same company, dated January 15, 1814. The second paragraph of his letter reads:

"Last winter, we were in a manner struck motionless by the dreadful and altogether unexpected massacre at Fort Nelson in this department. Sorry I am to add that the late Mr. Alexander Henry, with four men, some women and children suffered an untimely and barbarous fate, all having been most cruelly murdered by a strong party of Natives of that Post. No one never entertained the most distant prospects of such an atrocious catastrophe, particularly in the quarter." (1889-1890, L. R. Masson; Les Bourgeois De La Compagnie Du Nord - Ouest, rptd. 1960 by Antiquarian Press, New York, vol. II, p. 125)

To be continued . . .

2003 CSPG / CSEG CONVENTION PARTNERS in a new ENVIRONMENT EVENT OVERVIEW

ADIOS PARTNERS.

The 2003 CSPG / CSEG Convention is now history, and the Organizing Committee would like to take a few minutes of everybody's time while memory is still fresh to provide some perspective on our observations.

CSPG is a "Not for Profit" society that relies heavily on volunteer commitment to run any program. This convention was no exception, and I'd like to extend my appreciation to the tireless Organizing Committee and all our volunteers.

As "PARTNERS in a New ENVIRONMENT", we had an opportunity to continue with the tried and true, but also to add something new. By all measures the meeting was a great success, with a few minor hiccups.

ATTENDANCE

Over 4,300 people attended the convention, with 3,100 technical delegates, 900 exhibitors, and 300 student and other category participants. Attendance at that level is typical of conventions that are held jointly with CSEG, as shown in Figure 1.

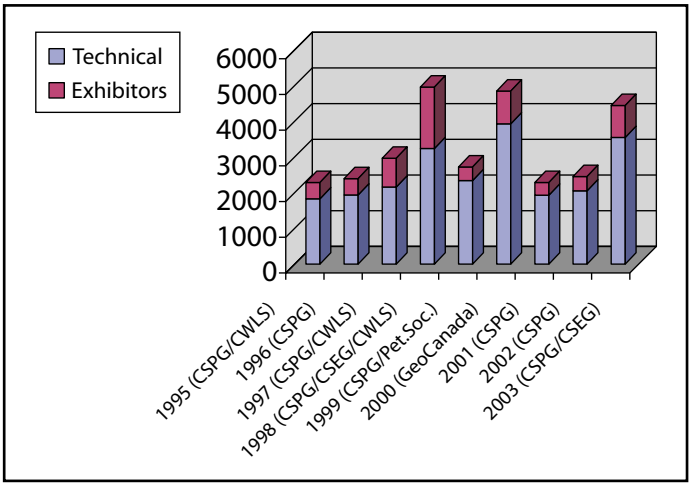


Figure 1. Attendance.

FINANCE

Historically there has been a poor understanding of where the convention derives its revenues, where costs are incurred, and what is done with any "Profits". The annual convention funds approximately half of the Society's operating budget and is the major event of the year. Although the CSPG is a "Not for Profit" institution, that does not mean it cannot make profits: it simply means that profits cannot be paid out to the membership. Profits may be earned, retained, and used for advancing the mandate and programs of the Society.

Registration produced about half the total revenue (Figure 2), with the balance comprising 20% from Exhibits, 10% from Sponsorship, and 10% from Short Courses and Field Trips. Sponsorship revenue was split almost evenly between Exploration and Production Companies, and Service Companies. Registration is weighted heavily toward Exploration and Production Companies, and Exhibits are drawn largely from Service Companies.

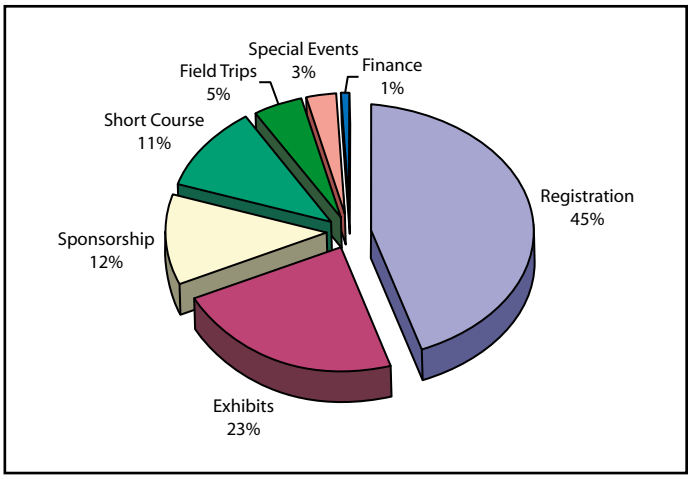


Figure 2. Revenue.

Costs are also fairly simple to divide out. The largest expense for the Convention is… food and beverage! Facility rental, services such as A/V and security, and delegate materials are each approximately 10%. Administration expenses, mainly paid staff at the CSPG office and onsite during the event, is less than 10% of total cost and is intended to improve service to Exhibitors, Sponsors, and Registrants while reducing the volunteer time required.

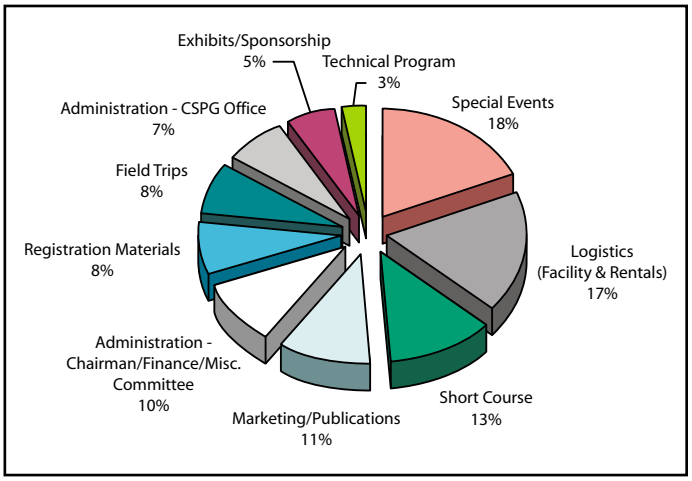


Figure 3. Expenses

AND OUR PERSONAL FAVORITE: OPPORTUNITIES FOR IMPROVEMENT

Lineups at Registration – Many readers will have experienced the two-hour lineup on Monday morning. Causes included system and software problems as well as a conscious decision to limit onsite staffing. However, onsite registration staff was double the number of

 Continued on Page 28 . . .

UNIVERSITY OF CALGARY

DEPARTMENT OF GEOLOGY & GEOPHYSICS

RESEARCH SHOWCASE & OPEN HOUSE

Friday, September 26, 2003

Earth Sciences Building, University of Calgary Campus

Current Multidisciplinary Research in Geosciences

Poster presentations all day

Invited Speaker: Dr. John H. Doveton

Senior Scientist, Petrophysics & Mathematical Geology
Kansas Geological Survey

7:00 pm, Tom Oliver Lecture Theatre, Earth Science 162

Reception

To follow Dr. Doveton's lecture at 8:00 p.m.
in the Gallagher Library of Geology and Geophysics

GEOLOGICAL FIELD TRIPS

Saturday, September 27, 2003

Presented by the
Department of Geology & Geophysics
and the
Tom Oliver Memorial Committee

Further details at: www.geo.ucalgary.ca

***Please RSVP by September 23, 2003 to*:**
Tel: 403-220-5841 Fax: 403-284-0074
Email: department@geo.ucalgary.ca

Continued from Page 26 . . .

the prior year, reflecting the Organizing Committee's expectation that the joint convention would draw larger numbers.

The CSPG has a policy of "encouraging" early registration. We advertise the deadlines, we send Chairmen to beg and plead from the podium at luncheons, and we provide financial incentives. Approximately 90% of the membership takes advantage of Advance Registration or Early Registration. We received virtually *no negative feedback* from those members.

Due to the financial significance of the Convention, early projection of attendance is vital for planning and allowance of late tuning of costs. Food cost is #1 and is directly proportional to attendance, which demands a few days' notice for major changes. As a result, the CSPG will continue to have a policy of encouraging Early Registration, unless there is significant pressure from the membership to do otherwise.

Security and conduct issues – Unfortunately, when hosting parties you always have some individuals that create trouble for the whole group. This year's convention was no exception, and both the Icebreaker and Core Meltdown had significant issues of conduct that bordered on misdemeanor charges, which resulted in formal grievances. The individuals responsible rarely have accountability for their actions, instead that falls to the Organizing Committee and the Executive of the Society. Given the ongoing evolution of the *Law* in matters pertaining to functions that serve alcohol, Organizing Committees and Executives of the Society are increasingly aware of their legal liabilities. Consequently, unless more security is in force, and the Membership at Large takes some role in steering behavior towards acceptable conduct, we run the risk of eliminating many of the social events that we have come to know and love. Those of us who have been getting our corners knocked off for a few decades may be viewed as hypocritical for complaining about behavior of others, but there were always saner influences around to tell us to "cool it" when appropriate.

Costs for registration – There were some questions this year about the cost of Onsite Registration regarding the absence of an unemployed rate, and how costs were set in general. As noted above, CSPG encourages Early Registration and the cost was held flat with prior years. Unemployed members have the same opportunity as others to avail themselves of that $200 discount. Discounted attendance is provided for Retired members if documented with the Society office, and full-time Student members. They are our history and our future respectively, and those rates reflect our thanks for past contributions and our hopes for future contributions to our mandate.

Volunteer vs. staff – Organizing an event of this size is a huge task. In today's work environment many employees feel uncomfortable making a time commitment over an 18-month period. Organizing Committees have been able to pull volunteers from a larger segment of the membership by providing paid staff resources to level out the work load, supply advice, and field day-to-day calls.

All of our Organizing Committee has expressed that we would not have been able to participate without the dedicated support of Lori Humphrey-Clements, Tim Howard, and all office staff who pitched in when needed.

For those of you who haven't worked on a convention since our "all volunteer" days, I encourage you to join in on a future event, and continue on our theme of "PARTNERS in a New ENVIRONMENT".

WAYNE FOO
2003 CSPG GENERAL CO-CHAIR

THANK YOU VOLUNTEERS!

In addition to the dedicated volunteers that served on the 2003 CSPG / CSEG Organizing Committee and the Session Chairs who honored our Technical Program - this event required time and energy from over 100 volunteers. We'd like to express our thanks to the following people who were essential to the success of this year's convention.

George Ardies
Jennette Baker
Laurine Behmer
Daniel Benoit
Karen Bradshaw
Colleen Bridge
Chuck Buckley
Paul Bushell
Imran Chaudhary
Jack Chen
Burdine Chmilar
Jesse Clark
Steve Cliff
Patti Crellin
Kelty Cusack
Kristin Czyz
Emmanuel Daudu
Mike Davies
Han Deliang
Karen Donham
Susan Duczynski
Craig Dunn
Greg Dyble
Mike Eddy
Moe El Hashemi
Lori Ennis
Richard Evanson
Steven Fisher
Jordanna Fraser
Louise Fortier
Graeme Gibson
Rehanna Ghany
Grace Ghazar
William Ghazar
James Gilmore
Lori Gonis
John Gordon
Neil Guenter
Rachid Hached
Jason Hines
Tamara Holmes
Rob Huck
Jeff Jia
Karl Jors
Dave Kisilevsky
Olga Kostenko
Peter Kouremenos
Iryna Koval
Jurgen Kraus
Aaron LeBlanc
Sid Leggett
Alastair Linn
Tim Loehr
Stephen Lowe
Bingli Lu
Mark Lukwinski
Layton Magnusson
Pierre Marchand
Lyall Marshall
Sarah Marshall
Dianne Martin
Vern Mathison
Derrick McClure
Richard McCreary
Brian McKinstry
Laura McIlveen
Shelley McNeil
Michael Mee
Kevin Meyer
Lori Meyer
Stuart Mitchel
Janet Morrissey
Scott Mussbacher
Marilyn Neary
Rachel Newrick
Vincent Onwuka
Wasim Paracha
Melissa Peterson
Dino Petrakos
Bob Phelps
Dave Phung
Seward Pn
Dustin Ressler
Cindy Risdale
Asma Saleem
Chaminda Sandanayake
Michelle Saquet
Rumu Sen
Kevin Sinnott
Nadya Slemko
Teodor Stafie
Rick Stahl
Debora Stinn
Suzanne Taheri
Kurt Thorner
Virginia Trapnell
Aditya Tyagi
Kendal Umscheild
Ken Waunch
Karen Webster
Sandy Willott
Davin Wine
Robin Wolbaum
Peter Wuntke
Jessica Yng

Thank you from the 2003 CSPG / CSEG Organizing Committee

LOOKING OUT FOR YOU

In the animal world, interdependence is often essential for survival. Trust is also an essential component of Sigma's successful business relationships. For 36 years, we have been looking out for our clients' best interests by becoming technical leaders in seismic data delivery.

Sigma exercises leading edge technology in offering clients their free web-based browser SigMAP, a virtual approach to identifying and ordering Quality Inspections of seismic data.

www.sigmaex.com offers real time Quality Inspections of Sigma library data using full SEG-Y images.

SIGMA - Leaders in

- DATA BROKERAGE
- DATA MANAGEMENT
- SEISMIC SURVEYS

SIGMA
EXPLORATIONS INC.

200, 630 - 6th Avenue SW
Calgary, Alberta Canada T2P 0S8
Tel: (403) 264 7865
Fax: (403) 264 7705
E-mail: sigma@sigmaex.com
www.sigmaex.com

2003 CSPG / CSEG CONVENTION PARTNERS in a new ENVIRONEMNT TECHNICAL PROGRAM AWARDS

A full technical program was well participated and received by delegates. Congratulations to all award winners and thank you to the judges.

BEST GEOLOGICAL PAPER

Michael Johnson and Robert W. Dalrymple

Negative accommodation and its influence on reservoir geometry and quality: The Lower Cretaceous Cadomin Formation of the Deep Basin Area, AB

HONORABLE MENTION GEOLOGICAL PAPER I

Ken Ratcliffe, Amanda M. Wright, D.S. Wray, Brian A. Zaitlin, Dan Potocki, A. Morton, and C. Hallsworth

Alternative correlation methods in low accommodation fluvial setting: an example from the (Lower Cretaceous) Basal Quartz, Southern Alberta

HONORABLE MENTION GEOLOGICAL PAPER II

David Selby and Robert A. Creaser

Absolute dating of bitumen – Application of the 187Re-1870s isotope system: The first results from the Polaris Mississippi Valley – type Zn-Pb deposit, Nunavut, Canada

Figure 1. Best Geological Paper
(L to R): **Michael Johnson**, presented by M. Clement, M. Cooper

BEST GEOPHYSICAL PAPER

Dave Timko , Kristy Howe and Richard Spiteri

Seismic calibration to gamma ray logs.

HONORABLE MENTION GEOPHYSICAL PAPER

Jon Downton and Laurence Lines

High Resolution AVO

Figure 2. Best Geophysical Paper
(L to R): **Kristy Howe, Dave Timko**, M Clement, **Richard Spiteri**, Mark Cooper

BEST INTEGRATED PAPER

Barry Hebner and Mike Doty

Discovery of a Pembina Nisku Oil Pool: A Case History of a Nisku Shelf Edge Play

HONORABLE MENTION INTEGRATED PAPER

J. Helen Isaac and Donald C. Lawton

Benefits of Integrated Seismic and Gravity Exploration: An Example from Norman

Figure 3. Best Integrated Paper
(L to R): **Mike Doty, Barry Hebner**, M Clement, Mark Cooper

Wells, NWT

BEST STUDENT PAPER ANDREW BAILLE AWARD

Michele Asgar-Deen

A case study of barite as a stratigraphic tool: an indicator of pauses in sedimentation?

HONORABLE MENTION STUDENT I

Michael A. Cooley, Raymond A. Price, John M. Dixon, and T.Kurtis Kyser

Structural Geology of the Southern Livingstone Range Anticlinorium and the Architecture of the Centre Peak Anticline; A Paleo-Hydrocarbon Reservoir

HONORABLE MENTION STUDENT II

C. L. M. Armeneau and R. J. Spencer

Fluid movement during propagation of the Rundle thrust

Figure 4. Best Student Paper
(L to R): **Michele Asgar-Deen**, presented by Mark Cooper, Mike Clement, and Graeme Bloy (CSPG Educational Trust Fund).

BEST GEOLOGICAL POSTER

Glen S. Stockmal

Inferred Exposure of a "Pop-Up" Structure in the Outer Foothills, Crowsnest Pass Area, Alberta

HONORABLE MENTION I

Langhorne B. Smith, Courtney M. Lugert, and Richard E. Nyahay

Integrated Characterization of Hydrothermal Dolomite Reservoirs in Trenton-Black River Carbonates of New York

HONORABLE MENTION II

Cornel Olariu, Janok P. Bhattacharya, and Liviu Giosan

Architecture of Delta Front Deposits, More Complex than Basinward-Dipping Clinoforms

BEST GEOPHYSICAL POSTER

Satinder Chopra and Doug Pruden

Multi-Attribute Seismic Analysis on AVO derived parameters – a case study

HONORABLE MENTION I

Yongyi Li, Huiming Guan and Jon Downton

AVO in Structured Areas

HONORABLE MENTION II

Z. Li, W. Qian, B. Milkereit, E. Adam, and T. Bohlen

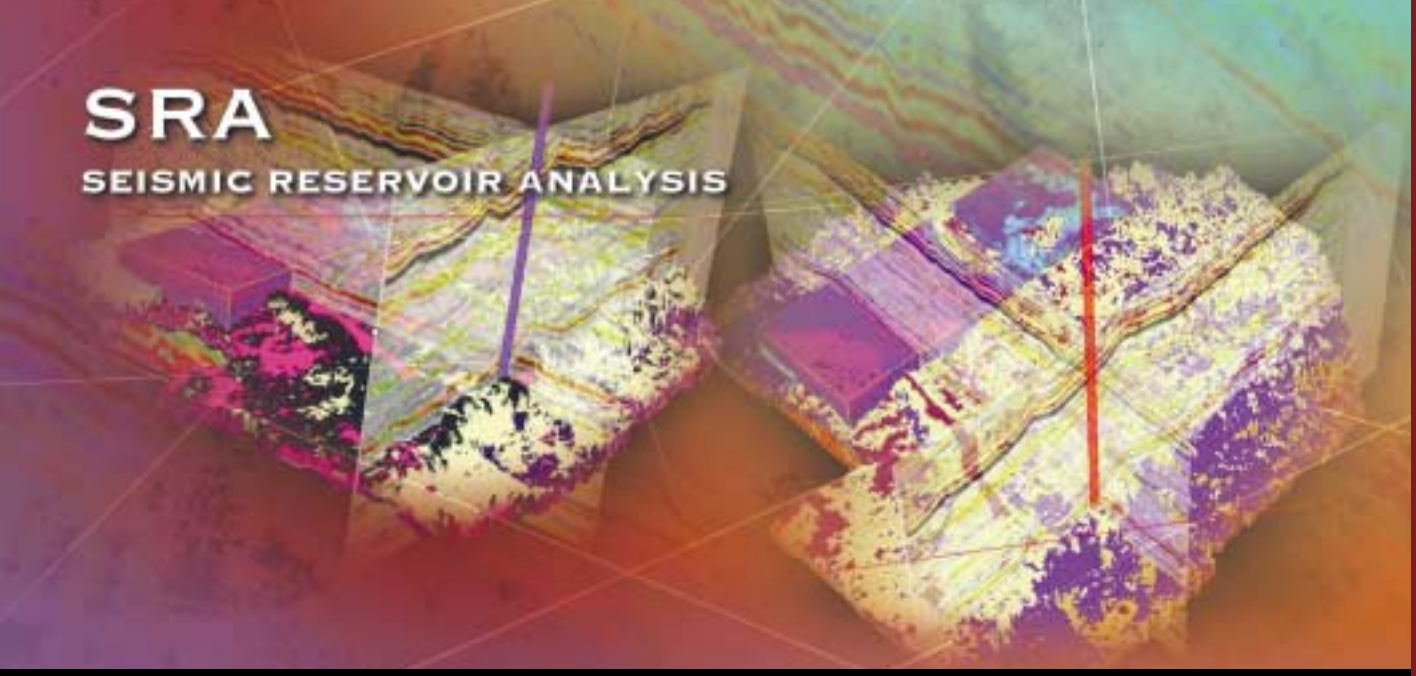
AVO Analysis with Multi-Offset VSP Data

BEST INTEGRATED POSTER

David Deline and John Dixon

Seismic Interpretation and Physical Analog Modelling of a Sub-Surface Lateral Ramp in the Southern Canadian Rockies (Crowsnest

Continued on Page 32 . . .



SEISMIC RESERVOIR ANALYSIS

GEO•X CAN HELP SLOW YOUR DECLINING PRODUCTION IN OLDER RESERVOIRS AND IDENTIFY NEW EXPLORATION TARGETS. HOW? BY USING SRA TO TAKE YOUR SEISMIC BEYOND MAPPING STRUCTURES, INTO DEFINING LITHOLOGY AND PORE FLUIDS.

GEO•X SYSTEMS LTD.
SRA Group

Production in many basins has peaked, and reserves are declining.

Our SRA group can help you enhance recovery and optimize production by integrating seismic and wireline data.

Using new technologies, we can:

- Integrate 2D and 3D seismic data with wells
- Extract rock properties from integrated volumes
- Discriminate between reservoir fluids
- Track fluid migration
- Show bypassed zones

Using our SRA services, you get:

- A better understanding of the reservoir
- More cost-effective exploration
- An opportunity to exploit bypassed zones
- Greater drilling success

Together, we can optimize production of your reservoirs and find new drilling targets.

To discuss your SRA requirements, please contact Ciprian Mihai at 298-5664 or cmihai@geo-x.com.

Established in 1971, Geo•X Systems is Canada's leading seismic processing company. Advanced technology, strong R&D and a staff of expert geoscientists ensure reliability and results.

EXPERIENCE & TECHNOLOGY BRING RELIABLE RESULTS

500, 440 - 2nd Avenue S.W., Calgary, Alberta, Canada T2P 5E9 Phone (403) 298-5600 Fax (403) 264-1057 Email: info@geo-x.com Website: www.geoxsystems.com

Continued from Page 30 . . .

Figure 5. Best Geophysical Poster
(L to R): **Satinder Chopra**, presented by Mike Clement, Mark Cooper

Figure 6. Best Integrated Poster
(L to R): **David Deline**, presented by Mike Clement, Mark Cooper

Pass Area, S.W. Alberta)

BEST STUDENT POSTER ANDREW BAILLE AWARD

Pavlo Cholach and Douglas R. Schmitt
Intrinsic anisotropy of shales

HONORABLE MENTION I

Jeff K. Beckett and John C. Bancroft
Event detection in prestack migration using matched filters

HONORABLE MENTION II

Steven J. Hinds and Deborah Spratt
Seismic Structure and Stratigraphy, Balanced Cross-Sections, and Tectonic History of the eastern Trutch-Halfway River (94B, G) map areas, northeastern BC

HONORABLE MENTION III

Daniela Vlad and Karlis Muehlenbachs
Formation Compartmentalization Using Isotopic Fingerprints of Mudgases and Multilog Quantification

BEST CORE PRESENTATION AND BEST STUDENT CORE PRESENTATION

Micheal Hearn
Wave and River-Dominated Deltaic Deposits in the Lower Cretaceous (Neocomian) Kamik Formation in the Parsons Lake Gas Field, Mackenzie Delta Region, Northwest Territories

BEST INTEGRATED CORE PRESENTATION

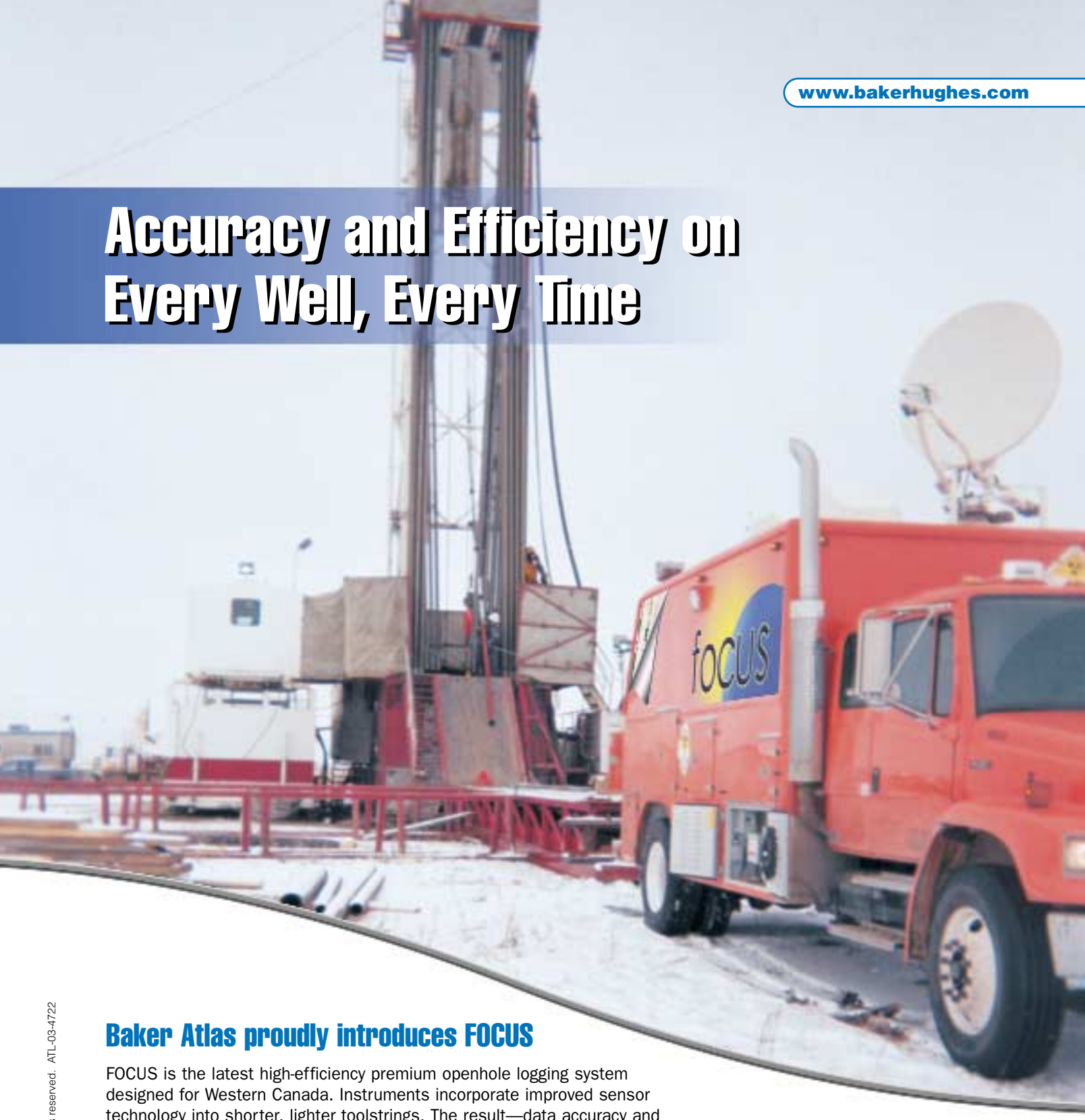
Lisa A. Griffith, Debbie White, Tina Chow and Megan Jubb
Good to the last drop – Countess Upper Mannville 'D' Oil Pool, southern Alberta, Canada

Figure 7. Best Core, Best Student Core
(L to R): **Michael Hern**, presented by Mike Clement, Mark Cooper

Technical Program Awards (Presented on June 6th, 2003 at the Core Meltdown (AEUB Core Research Centre) – photos by Penny Colton (CSEG camera).

www.bakerhughes.com

Accuracy and Efficiency on Every Well, Every Time



Baker Atlas proudly introduces FOCUS

FOCUS is the latest high-efficiency premium openhole logging system designed for Western Canada. Instruments incorporate improved sensor technology into shorter, lighter toolstrings. The result—data accuracy and precision while logging at speeds up to twice as fast as conventional tools. Faster rig up and rig down reduces time at the wellsite and total cost of operations. FOCUS is customer-friendly—you can access your data with 24-hour viewing whenever and wherever via Baker Atlas' Total RECALL℠ leading you to more efficient decisions.

Shorter tools. Faster logging speed. The highest data accuracy and state-of-the-art data delivery. Less time on the well. Faster decision-making. Lower total cost of operations.

Experience FOCUS.

www.bakeratlasdirect.com

Calgary (403) 537-3400
Grande Prairie (780) 539-3505
Nisku (780) 955-3033
Brooks (403) 632-2736
Red Deer (403) 347-1152

BAKER HUGHES

Baker Atlas

I.C.E. 2004 – INNOVATION, COLLABORATION AND EXPLOITATION
CSPG – CHOA – CWLS JOINT CONVENTION

It seems that we just finished attending this year's CSPG joint convention and a successful endeavour it was, largely thanks to the efforts of Wayne Foo (CSPG), Jim Stenhouse (CSEG), and their talented group of volunteers. Time flies, however, and it is time to start planning for our next convention. From May 31 to June 4, 2004, the CSPG along with the Canadian Heavy Oil Association (CHOA) and the Canadian Well Logging Society (CWLS), will sponsor the 2004 convention – I.C.E. 2004. This event will be at the Round Up Centre, Stampede Park, with the Core Conference at the AEUB Core Research Centre.

Along with the usual diverse program, this year's conference will include a symposium concentrating on the geology of heavy oil sands. We feel this is an appropriate time for a conference of this nature with the recent realization that our heavy oil resources put Alberta into the category of truly oil-rich nations. FirstEnergy Capital noted that later in 2003, Alberta's production of synthetic oil made from heavy oil sands will surpass conventional oil production, which is a sure sign where many geologists will be employed in the coming years.

With deference to our general theme of Innovation, Collaboration and Exploitation, the conference organizers hope to highlight new developments in the heavy oil and conventional oil industries. These have evolved largely as a result of the innovation of geologists and their collaboration with various multi-disciplinary teams in order to exploit our vast resources.

Planning for the various technical and social events is now well underway. Richard Evoy (CSPG), Grant Spencer (CWLS), and K.C. Yeung (CHOA) have "roughed-in" the framework of what promises to be an outstanding technical program. Our Special Events Chairman Paul Piovoso is tasked with organizing the Ice Breaker, Luncheons, and Core Wrap-up Party, events that have become synonymous with the yearly convention. You should be shortly receiving the first circular for I.C.E. 2004 that will outline what we have planned in much greater detail. The call for abstracts will follow closely on the heels of the first circular, which will afford you the opportunity to participate in what will be, without doubt, a memorable technical program.

Having been involved in the planning of many of our conventions, I think it can never be emphasized too much that this is largely a volunteer planned and executed event. As a consequence we are always in need of additional volunteers. If you are feeling the desire to give something back to the Society, please don't hesitate to contact one of the organizers and we will put your talents to use.

Looking forward to seeing you in 2004!

Ian W. Moffat, CSPG Co-Chairman I.C.E. 2004

Contacts:

Ian W. Moffat (CSPG Co-Chairman)
237-1699 imoffat@talisman-energy.com

Ken Faurschou (CWLS Co-Chairman)
509-4073 kfarschou@calgary.oilfield.slb.com

Daryl Wightman (CHOA Co-Chairman)
645-8279 daryl.Wightman@encana.com

2003 HONORARY ADDRESS: EARTHQUAKES AND TIDAL WAVES: WHEN THE EARTH MOVES

The CSPG Educational Trust Fund, CSEG, and APEGGA are excited to present **'Earthquakes and Tidal Waves: *When the Earth Moves*'** as the 2003 Honorary Address.

This year, we have two very exciting speakers; **Dr. Eddie Bernard, Ph.D.**, is the Director of the Pacific Marine Environmental Laboratory of the National Oceanic and Atmospheric Administration (NOAA) in Seattle. Among many accolades, he is a noted oceanographer and an expert on tsunamis. **Dr. Garry Rogers, Ph.D.,** is a Research Scientist at the Geological Survey of Canada (GSC) and is a renowned lecturer and expert on earthquakes in western Canada. Together, they will present the fascinating tsunami phenomenon – everything from the earthquakes that trigger them, to the destruction that they cause.

The main Address will be given Wednesday, October 29th at the Jubilee Auditorium. Tickets are on sale through Ticketmaster (777-0000 or www.ticketmaster.ca). Be sure to look for the poster insert in your October Reservoir for additional information and in the near future, visit either www.cspg.org or www.cseg.ca for details.

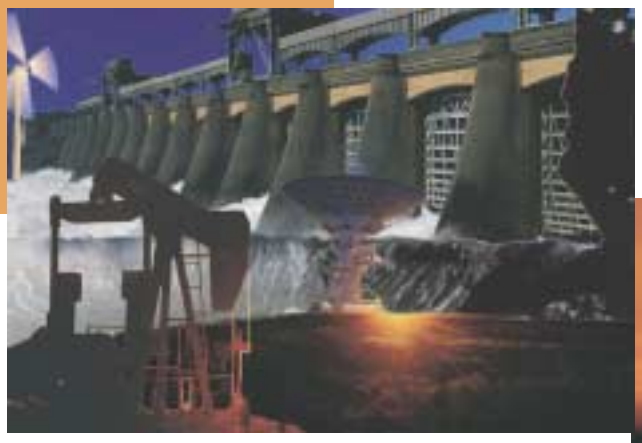
In addition to the evening presentation, the CSEG, CSPG, and APEGGA, together with numerous corporate sponsors, are putting on an afternoon performance for 2,000-3,000 school children. Students from both Public and Catholic schools will be invited to attend the afternoon show at no cost to them. At a time when education budgets are being cut and field trips are at a minimum, the corporate world is able to contribute to the responsibility of extra-curricular education and we are glad to be able to share Dr. Bernard's and Dr. Rogers' knowledge with students.

For more information on this year's Honorary Address **'Earthquakes and Tidal Waves: *When the Earth Moves*'**, please contact the following people:

For general information contact either Brett Wrathall (bwrathall@krangenergy.com) or Laraine Kish (lkish@ultimatrust.com). For sponsorship opportunities, contact Kim MacLean (kim.maclean@cspg.org, 264-5610 ext 205).

See you in October!!

Shaping your World



Alberta's engineers, geologists and geophysicists turn ideas into reality, impacting our everyday life. They are involved in telecommunications, transportation, oil and gas, petrochemicals and a host of other industries.

These professionals, licensed with the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA), are working to build a better tomorrow.

APEGGA

The Association of Professional Engineers, Geologists and Geophysicists of Alberta

Edmonton Office:
1500 Scotia Place
10060 Jasper Ave
Edmonton AB T5J 4A2
(780) 426-3990

www.apegga.org
email@apegga.org
1-800-661-7020

Calgary Office:
2200 Scotia Centre
700 2nd St SW
Calgary AB T2P 2W1
(403) 262-7714

APEGGA NOTICE OF APPOINTMENT

APEGGA
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

The Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) is pleased to announce that Penny Colton, P.Geoph., has been appointed to the position of Manager of Geoscience Affairs effective June 16, 2003. Penny will be located in the Calgary office in Scotia Centre and will report to the Director of Internal Affairs.

Ms. Colton has 20 years experience as a geophysicist in the oil & gas and mineral exploration industries in Canada. She is active in a variety of geoscience-related organizations, including the CSPG and CSEG (where she has acted in such functions as Advertising Manager and Treasurer). She is currently on the CSEG Executive Committee as Director of Educational Services. She has been a professional member of APEGGA since 1984. Contact Penny Colton at (403) 262-7714. Email pcolton@apegga.org.

ROCK SHOP

PETROLEUM INDUSTRY COURSES

technology • seismic • rocks • maps • formations • land • sediments • history • sea • fossils • environment

"The Sawback Range comprised of vertically dipping Rundle/Banff/Palliser section."
Photo: Bill Ayrton

WHO SHOULD ATTEND

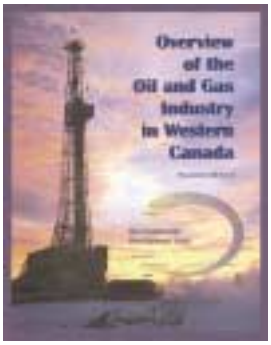
New geologists, engineers, geophysicists and landmen, as well as summer students entering the industry for the first time will find the courses a very beneficial introduction to the petroleum industry. These courses will be extremely useful to nonprofessional and support staff in the oil and gas industry, as well as accountants, lawyers, brokerage and financial personnel working primarily alongside the oil and gas industry.

TO REGISTER

To request a brochure, to register, or to obtain additional information regarding in-house and upcoming courses contact:

Ayrton Exploration Consulting Ltd.
Tel: (403) 262-5440
Email: ayrtonex@telusplanet.net

Or visit our website:
www.ayrtonexploration.com



OVERVIEW OF THE OIL & GAS INDUSTRY IN WESTERN CANADA

Date: October 15 & 16, 2003
Cost: $856 incl. GST
Instructor: Bill Ayrton

Effective for personnel just joining the oil patch, or for financial, accounting, and information systems personnel.

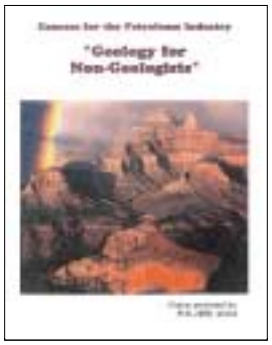
- Learn about the many facets of the industry.
- Oil finding, land acquisition, drilling, seismic, well completion, jargon and terminology.

GEOLOGY FOR NON-GEOLOGISTS

Date: October 28 & 29, 2003
Cost: $856 incl. GST
Instructor: Bill Ayrton

Effective for geological technicians or secretaries, or for those who just want a better understanding of geology to appreciate the world around us.

- Learn about earth structure, geologic time-scale and processes, Western Canada geology, and interesting nearby locations.
- Participate in a rock identification exercise, contouring project and a mini-field trip in downtown Calgary.



GEOLOGY OF THE WESTERN CANADIAN SEDIMENTARY BASIN

Date: November 18, 19, & 20, 2003
Cost: $1284 incl. GST
Instructor: Bill Ayrton

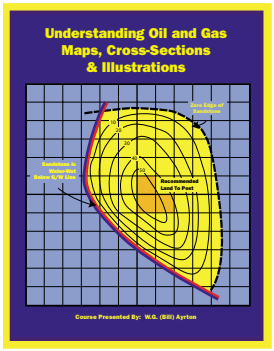
Ideal for those who wish to improve their geological understanding of where and how we look for oil and gas fields in Western Canada.

- To visualize what Western Canada looked like throughout the stages of history, for example, the position of the sea versus land, what sediments were deposited, and what type of life that existed and evolved.
- To review the importance of each major stratigraphic unit, i.e. Devonian, Mississippian, Cretaceous, etc.
- Discuss the geological and seismic expression of typical oil and gas fields in each unit.

New Course

UNDERSTANDING OIL & GAS MAPS, CROSS-SECTIONS & ILLUSTRATIONS

Date: December 2 & 3, 2003
Cost: $856 incl. GST
Instructor: Bill Ayrton



Since we show our ideas, our prospects, our oil and gas fields, etc., primarily on maps and cross-sections, this course is important to those working in the oil and gas industry who prepare, use or review this information. Exploration technicians, technical staff new to the oil patch, the management and financial personnel who evaluate our "show and tells" and recommendations will find this useful. We will:

- Review concepts incorporated into maps and cross-sections.
- Examine different types of maps and cross-sections used to identify oil and gas traps and the significance of each.
- Complete hands-on mapping exercises.

geoLOGIC systems ltd.
200, 635 - 6 Avenue SW
Calgary, Alberta, CANADA T2P 0T5
Tel 403 262-1992 Fax 403 262-1987
sales@geologic.com www.geologic.com

Don't take our word, take theirs!

87% of our clients believe that geoLOGIC works in partnership with them to meet their business needs.

89% of our clients believe that geoLOGIC quickly resolves any problems they may encounter.

93% of our clients believe that geoLOGIC stands behind the agreements we make.

Do you feel this way about your current data & software provider?

If not, let us show you why 81% of our customers recommend geoLOGIC.

Find out why everyone's talking about geoSCOUT!

Market Research Survey carried out by Environics West. Results based on responses of 7 or higher on a 10-point scale

What kind of model do you need?

FASTER...

Irap RMS provides results when you need them

In South America, a reservoir model was built AND initialised in the flow simulator in one day

- Accurate reservoir descriptions
- Well trajectories that maximise drainage and minimise drilling costs
- Recovery strategies to maximise production
- Incisive economic analysis
- Effective communication across your company

For more information contact:

Calgary tel: +1 403 265 3727 **Houston tel: +1 713 482 6400**

email: neil.mckone@houston.roxar.com or visit www.roxar.com

roxar software solutions