THE PROFESSIONAL

EDGE

ISSUE 142, JANUARY-FEBRUARY 2013

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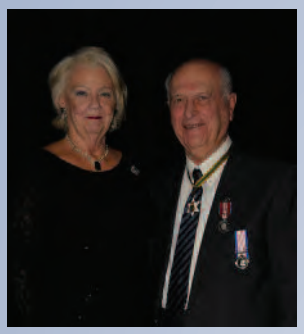
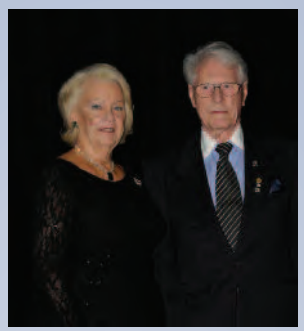
APEGS Launches "We See More" Awareness Campaign

President's Report

In this month's edition of *The Professional Edge,* we celebrate achievements of our membership and our professions. Our members have made significant contributions to our communities, our province and our country, be it in the development of our infrastructure, advances in science and technology, or contributions to our communities in general.





LEFT: Her Honour the Honourable Vaughn Solomon Schofield, S.OM., S.V.M., Lieutenant Governor of Saskatchewan presents the Queen Elizabeth II Diamond Jubilee Medal to Dr. Karim W. Nasser, P.Eng.

RIGHT: Her Honour the Honourable Vaughn Solomon Schofield, S.OM., S.V.M., Lieutenant Governor of Saskatchewan presents the Queen Elizabeth II Diamond Jubilee Medal to Pieter Van Vliet, P.Eng., FEC.

Saskatchewan is also known as one of the leading locations for volunteerism in the world, whether it comes from support for charitable organizations, support of community hosted events, or contributions to our professional associations. Many of our members have received recognition for their professional and volunteer contributions.

Recently, two of our members were recognized for their contributions, through the award of the Queen Elizabeth II Diamond Jubilee Medals: Pieter van Vliet, P.Eng., FEC and Karim W. Nasser, P.Eng.

As noted in the citation for Pieter's nomination, "Pieter van Vliet is a Past Chairman of the Regina Engineering Society, Past President of the Association of Professional Engineers of Saskatchewan, the Canadian Council of Professional Engineers and the Engineering Institute of Canada. He is currently the Saskatchewan Director of the Canadian Society for Senior Engineers. Van Vliet has received the Engineers Canada Professional Service Award and the Brian Eckel Distinguished Service Award."

Congratulations, Pieter, on your distinguished career. Thank you on behalf of all residents of Saskatchewan for your many contributions.

"Renowned educator, Dr. Karim Nasser, P.Eng., Professor Emeritus of Engineering at the University of Saskatchewan, has established a fund at the U of S for financially disadvantaged students and donated $12 million to both scholarships and facilities. Nasser has received the

President's Report cont'd.

APEGS Brian Eckel Distinguished Service Award, the APEGS Outstanding Achievement Award and The Saskatchewan Order of Merit."

Dr. Nasser has had a distinguished career in education and research. Thank you Dr. Nasser, for your contributions to technical knowledge, to the community and to the university.

Congratulations to both Dr. Karim Nasser and Pieter van Vliet.

These are just two examples of the many achievements by Saskatchewan engineers and geoscientists who have been recognized this year. The other accomplishments are too numerous to mention. I just want to say congratulations and thank you to all engineers and geoscientists in this great province for the work you do both professionally and through volunteer activities. It is an honour to be elected by you to be president of this association.

On a final note, I want to congratulate our very own Executive Director and Registrar, Dennis Paddock, P.Eng., FEC, FCSSE, FCAE. I, and many of my predecessors as president of APEGS, have had the honour and privilege of working closely with Dennis. As we travel the country representing APEGS at Association and Engineers Canada meetings, we are well taken care of by Dennis and his wife Wendy. All of our sister associations acknowledge the significant leadership contributions made by Dennis.

This year, Dennis was recognized for his many accomplishments and contributions through fellowships bestowed by the Canadian Academy of Engineers and the Canadian Society for Senior Engineers. Most recently, Dennis has been recognized through his nomination by the Premier of Saskatchewan to be the recipient of the Queen Elizabeth II Diamond Jubilee Medal.

Congratulations, Dennis. This is an honour that is well deserved.

Leon Botham, P.Eng.
President

A Gallery of 2012 Engineering and Geoscience Projects

Usually, our job at *The Professional Edge* is telling Saskatchewan engineering and geoscience stories to APEGS members. This month, we're turning the tables. We invited APEGS members to send us pictures and descriptions of their proudest achievements from 2012.

We want to thank the contributors to this special feature. For those of you who didn't contribute this year, we will be doing this again next year, so keep your cameras handy to capture your 2013 engineering or geoscience success stories.

K+S Potash Canada

The Legacy Project

The Company:

K+S Potash Canada is part of K+S Group, one of the world's leading suppliers of fertilizers and the world's leading salt producer, with over a century of mining experience.

The Achievement:

K+S Potash Canada made Saskatchewan history in 2012 by breaking ground on the first new potash mine in over 40 years. The Legacy Project is a greenfield project aimed at building a solution mine near Moose Jaw. In the first two expansion phases of the new potash site, K+S has promised to invest a total of $3.25 billion. The company projects that the first volumes will be available at the end of 2015 and the 2-million-tonne mark achieved in 2017. This will be followed by the gradual expansion of production capacity to 2.86 million tonnes a year in 2023. In a third expansion phase, a total output of a maximum 4 million tonnes would be possible about 10 years later.

The Team:

The Saskatchewan K+S team includes over a dozen APEGS members and members-in-training from across a range of disciplines.

Government of Saskatchewan

The St. Louis Bridge

Photo courtesy Ministry of Highways

Summer pumping well installation at the site of the Ministry of Highway's St. Louis Bridge project.

The Institution:

The Saskatchewan Ministry of Highways and Infrastructure manages Saskatchewan's 26 288 km of highways, 785 bridges, 400 large culverts, 12 ferries, and 17 northern airports. This includes maintenance and operation of these infrastructure assets. As well, the ministry develops highways policies and long-term planning and undertakes budgeting, programming, forecasting and financial reporting, as well as quality management systems, for the province's infrastructure assets.

The Achievement:

The Ministry of Highways and Infrastructure is in the process of constructing a new bridge over the South Saskatchewan River near St. Louis. The St. Louis Bridge project has been multifaceted, involving many different engineering, environmental, archaeological and geotechnical aspects.

Highlights of the project included:

- Discovering a heritage site and completing an archaeological dig
- Involving local First Nations groups to bless the site
- Engineering the bridge around complex geological features such as an artesian aquifer, two landslides, and other unsuitable materials
- Monitoring and mitigating environmental issues such as the discovery of "species of special concern" within the construction limits
- Constructing approximately 13 km of new highway alignment
- Constructing two new access roads into local communities
- Constructing a 300 m long steel girder bridge with concrete decking
- Constructing three piers on spread/strip footings (instead of conventional piles)

The Team:

The St. Louis Bridge project has drawn on the expertise of many APEGS members from many companies and agencies, including:

- Saskatchewan Ministry of Highways and Infrastructure
- AECOM Canada Ltd. – Construction Supervision
- AMEC Environment & Infrastructure – Roadway Design
- Genivar Inc. – Construction Supervision
- SNC-Lavalin Environment (Formerly MDH Engineered Solutions) – Geotechnical Services and Construction Supervision
- Canada North Environmental Services – Environmental Monitoring

Photo courtesy Ministry of Highways

South embankment of the bridge project.

SAL Engineering Ltd.

Dundurn Rural Water Utility Phase III Potable Waterline Project

Photo courtesy SAL Engineering Ltd.

The Company:

SAL Engineering Ltd. is a consulting engineering and project management firm that has been providing services to clients throughout Saskatchewan for over 32 years. In that time, SAL Engineering Ltd. has completed over $300 million of municipal and transportation engineering projects for communities both large and small. SAL is based in Saskatoon and currently has 11 employees.

The Achievement:

The Dundurn Rural Water Utility (DRWU) Phase III Potable Waterline was constructed to provide potable water to the residents of the RM of Corman Park, the RM of Dundurn, the RM of Rosedale, the Town of Dundurn, the Town of Hanley, and the Blackstrap Provincial Park.

The water source for this system is a SaskWater potable waterline, which is supplied with treated water by the City of Saskatoon. The rural water distribution system starts just south of the City of Saskatoon and ends approximately 4 km north of the Village of Kenaston. It provides consistent and reliable potable water to rural residents east of the South Saskatchewan River and south of the City of Saskatoon.

The project entailed the construction of approximately 310 km of waterline, ranging from 25 mm diameter HDPE pipe to 300 mm diameter HDPE pipe, as well as five water booster stations. In total, there were approximately 650 services installed, making this the largest rural water distribution system that our firm has designed to date.

The Team:

The SAL Engineering team that worked on this project included Don Poon, P.Eng., Doug Pope, P.Eng., Quintin Tuchscherer, Tristan Ziegler, Simon Lalonde and a number of engineering interns and summer students.

Photo courtesy SAL Engineering Ltd.

Photo courtesy SAL Engineering Ltd.

SASKATCHEWAN RESEARCH COUNCIL

Mineral Processing Pilot Plant

Photo courtesy Saskatchewan Research Council

SRC Process Engineer Jack Zang, P.Eng. demonstrates how a piece of equipment will be used for multi-stage mineral flotation.

The Institution:

The Saskatchewan Research Council (SRC) is Saskatchewan's leading provider of applied research and development as well as technology commercialization.

With over 400 employees, $63 million in annual revenue and 64 years of R&D experience, SRC provides services and products to its 1,900 clients around the world.

The Achievement:

With help from federal and provincial funding, SRC developed a new, $2.2 million mineral processing pilot plant in Saskatoon. The pilot plant will support Saskatchewan and Canadian companies involved in processing minerals such as potash, gold, base metals, diamonds, coal, oil sand, oil shale and, especially, rare earth minerals.

The pilot plant enables SRC to support mineral industry and mill operators with a broader range of services including:

- applied research, development, process design, scale-up, and pilot-scale demonstration;
- new and improved processes for the extraction of valuable metals and minerals;
- new and improved processes for sorting diamonds; and
- technologies for future potential underground mills for uranium, potash and other minerals.

Taken together, the pilot plant and SRC's existing mineral processing expertise, laboratory and testing facilities will ensure Saskatchewan has leading-edge support capabilities to develop mineral deposits in the most efficient way, while minimizing environmental impacts.

The Team:

The Mineral Processing Pilot Plant team includes Bryan Schreiner, P.Geo., Jack Zhang, P.Eng., Jinhe Shu, Engineer-in-Training, Augustine Adeoye, Engineer-in-Training and De Ming (Dennis) Wang.

Water Plant Upgrades

Photo courtesy City of Weyburn

Plant 100 of the Weyburn water treatment facility.

The Institution:

The City of Weyburn Engineering Department provides engineering support for 10,000 residents. The department's wide-ranging duties include management of all municipal road, water and sewer systems as well as maintaining public parks, carrying out building inspections and overseeing property development.

The Achievement:

In 2012, many communities across the province were faced with precautionary drinking water advisories (PDWA, also known as boil-water advisories) from the provincial Ministry of the Environment. Weyburn faced the special challenge of dealing with two PDWAs in one year. Initially, the cause was thought to be related to the extensive flooding in the area in 2011. However, an in-depth engineering study by ATAP Consulting and Associated Engineering revealed that there were also infrastructure issues.

The city responded with a rapid and aggressive modernization plan for its water treatment plant that included:

- Replacement of under-drain filter system.
- Adoption of an effective preventative maintenance plan.
- A thorough reservoir cleanout and flushing of entire distribution system.
- A new turbidity meter to measure particle levels in the water.
- A new flusher/flocculator system which assists in removing particles from water
- A new chlorine feed and analyzer system.
- Installation of ultra-violet light system to assess water purity.
- Massive overhaul and maintenance of existing systems.
- Installing state-of-the-art supervisory control and data acquisition computer controls for the filter system.

The Team:

Rene Richards, P.Eng., Director of Engineering for the City of Weyburn, is proud to supervise a skilled team of technicians from the water treatment plant who not only implemented the recommendations of the ATAP report but went above and beyond in developing further improvements.

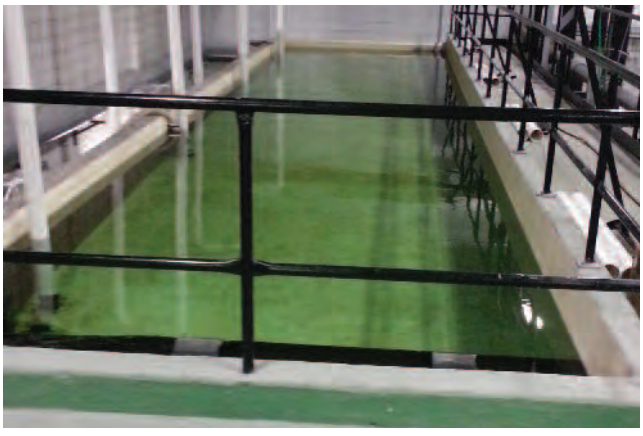


Photo courtesy City of Weyburn

Filter compartment after vent pipe modifications.

Member Profile

This month *The Professional Edge* chats with Mark Sheetka, P.Geo., senior geoscientist with BHP Billiton in Saskatoon.

Tell us about your personal and professional background.

I was born and raised in Saskatoon. I attended the U of S twice – once in the 1990s when I got a psychology degree and then again in the 2000s when I went back to study geology.

What led you to go back to university a second time?

At the time, I was working as an underground production worker for Agrium. Their senior management made the suggestion that I move out of the underground production and into the more technical aspects of the business. They paid my way through to study geology.

You sort of had geoscience thrust on you?

Yes, you could say that it found me rather than me finding it. I had the sense that the company had their eye on me because of my previous university education, which showed them that I had the capability to achieve a geology degree if I had the chance. Initially, I was being groomed for a supervisory position in the production line but I wasn't that interested in a pure supervisory role. Through my drilling and borer operating experience I had learned quite a bit about the rock and developed an interest in things like stratigraphy. Having a prior university education showed them I had the capability to achieve if given a chance.

Was it tough going through university a second time?

It was definitely challenging, considering that the second time around I had a family – my wife Sheri and two young sons Alex and Jon – and I was trying to work at the same time. I did the degree part-time as much as possible while continuing to work full-time most of the way through it.

Has your psychology degree been useful for you?

Absolutely. It has provided me with all sorts of insights that have paid off in helping me deal with people from all backgrounds, from the production floor right up to the boardroom. It has helped me to understand others' points of view and to put forward my own.

What do you feel has been your single greatest accomplishment as a geoscientist?

One of my identified strengths is communication – being able to translate geology for people from the production line floor to the boardroom. I've been able to put this to use in writing policies and procedures that are detailed enough to satisfy the guys at the top but understandable and useful for the guys down in the mine.

What are your interests outside of work?

Anything to do with outdoors: hunting, fishing, ATVs and camping.

Have you ever met anyone famous?

I once ran into former CTV anchor Lloyd Robertson in Pearson International Airport in Toronto. I had a chance to talk to him briefly.

What is your favourite animal and why?

Probably a shark. I love the water and, as a shark, you're definitely the top of the food chain.

Who has had the greatest influence on your life and career?

For my life, I definitely have to say my parents. They gave me my work ethic. They always encouraged me that if something is worth doing it's worth doing well.

In terms of my career, two guys stand out. Dave Mackintosh, P.Geo. was my mentor throughout my time at Agrium and was the chief geologist while I was on the production line. Also, former Agrium manager Lawrence Berthelet, P.Eng. from the management side taught me how to speak honestly and stand up for your beliefs through adversity.

Royal Honours for APEGS Members

Three APEGS members have been honoured with the Queen Elizabeth II Diamond Jubilee Medal.

This commemorative medal was created to mark the 2012 celebrations of the 60th anniversary of Her Majesty Queen Elizabeth II's accession to the Throne as Queen of Canada. The Queen Elizabeth II Diamond Jubilee Medal is a tangible way for Canada to honour Her Majesty for her service to this country. At the same time, it serves to honour significant contributions and achievements by Canadians.

Her Honour the Honourable Vaughn Solomon Schofield, S.OM., S.V.M., Lieutenant Governor of Saskatchewan presents the Queen Elizabeth II Diamond Jubilee Medal to Dr. Karim W. Nasser, P.Eng.

Her Honour the Honourable Vaughn Solomon Schofield, S.OM., S.V.M., Lieutenant Governor of Saskatchewan presents the Queen Elizabeth II Diamond Jubilee Medal to Pieter Van Vliet, P.Eng., FEC

Stephen K. MacDonnell, P.Eng. also received the Queen Elizabeth II Diamond Jubilee Medal for community service at another celebration.

COUNCIL NOTES

November 23, 2012
Delta Bessborough, Saskatoon, SK

15 of 19 Councillors present

- Stephanie Price, P.Eng., Manager of Qualifications at Engineers Canada, presented a report to Council on the competency-based experience reporting pilot project. The pilot project was conducted with PEO and APEGS. There were 17 participants (members-in-training) and 12 trained assessors. The project objectives included a fair and transparent assessment in an equitable, consistent and efficient way. The process was looking to improve efficiency and eliminate redundancies.
- Council was advised that the Image and Identity Board appointed Jaylyn Obrigewitsch, Engineer-In-Training to the Connection and Involvement Committee for a three-year term.
- The 2013 AM Planning Committee has selected "Lives and Careers – A Balanced Approach" as the conference theme for the 2013 APEGS annual meeting and conference to be held in Regina May 3 and 4.
- Council was briefed on the Geoscientists Canada admissions support tools project which received funding from Human Resources and Skills Development Canada to carry out a series of interrelated initiatives in the area of admissions support.
- Council was advised that Geoscientists Canada has instituted a new national fellowship program. The Geoscientists Canada Fellowship – to recognize individual professional geoscientists and others who have given noteworthy service to the profession.
- Council approved the Association's 2013 draft budget.
- Council concurred with four new elements of the Canadian Framework for Licensure: fairness in registration practices, competencies and requirements – Engineer-in-Training, competencies and requirements – Limited Engineering Licence and Competencies and Requirements – Professional Engineering Licence.
- The next APEGS Council meeting is scheduled for February 7 and 8, 2013 in Regina.

MLA Reception

APEGS held its 12th annual MLA Reception on Wednesday, November 28, 2012.

The reception provides an opportunity for MLAs to meet informally with members of APEGS Council, APEGS Past Presidents and committee chairs to discuss a variety of issues related to the engineering and geoscience professions.

TOP: APEGS President Leon Botham, P.Eng. presided over a short program which included greetings from the Honourable Don McMorris, Minister of Highways and Infrastructure and Minister Responsible for Saskatchewan Telecommunications, Saskatchewan Transportation Company, Information Services Corporation and the Saskatchewan Gaming Corporation, and Cathy Sproule, MLA for Saskatoon Nutana, representing the New Democratic Party. APEGS would like to thank the MLAs for attending this event and the volunteers for helping to make the event a success.

CENTRE: The Honourable Don McMorris, Minister of Highways and Infrastructure and Minister responsible for *The Engineering and Geoscience Professions Act*, brings greetings.

BOTTOM: Cathy Sproule, MLA for Saskatoon Nutana, brought greetings on behalf of the Official Opposition.

Dillon Consulting Limited supports women in engineering with new undergraduate scholarship

The Canadian Engineering Memorial Foundation (CEMF) is proud to announce that Dillon Consulting Limited has partnered with the foundation to support and promote Canadian women in engineering.

A new annual $5,000 scholarship will be provided by Dillon for a woman enrolled in an accredited engineering undergraduate program in any field of engineering study.

The scholarship also comes with a possible summer job opportunity at one of the many Dillon locations across Canada.

Along with the 10 other CEMF-managed scholarships, the Dillon Undergraduate Engineering Scholarship will be provided to a woman who is a leader in her community, a dedicated volunteer and a strong ambassador for the engineering profession. Academic achievement is not part of the criteria.

CEMF has been providing scholarships, networking and promotional opportunities to women in engineering for 23 years, and was established in memory of the 14 women killed at École Polytechnique on December 6, 1989.

Dillon Consulting Limited is a Canadian consulting company specializing in planning, engineering, environmental sciences and management with over 750 employees worldwide.

Criteria and guidelines in English and French can be found at www.cemf.ca.

RCE Saskatchewan Receives International Honours

The Saskatchewan Regional Centre of Expertise on Education for Sustainable Development (RCE Saskatchewan) received a Certificate of Honour from the Global RCE Service Centre of the United Nations University Institute of Advanced Studies at the Seventh Global RCE Conference in Tongyeong, Republic of Korea.

RCE Saskatchewan was one of 31 projects worldwide that were honoured at the conference for "… Education for Sustainable Development (ESD) projects, initiatives and activities that have translated existing local knowledge into concrete sustainability change practices, and empowered individuals and communities to make sustainable choices for the future."

RCE Saskatchewan's award honoured the organization's local ESD recognition program which has been running since 2008.

APEGS is a proud sponsor and supporter of RCE Saskatchewan. The organization seeks to transform education for sustainability in our region by serving as a hub for activity, linking community members and supporting growth and opportunity for increasing and promoting education for sustainable development.

A P E G S

Association of Professional Engineers & Geoscientists of Saskatchewan

83rd Annual Meeting

May 2-4, 2013
Hotel Saskatchewan, Regina

Lives and Careers
A Balanced Approach

APEGS 83rd Annual Meeting

Lives and Careers / A Balanced Approach

Event Schedule

Thursday May 2

Welcome Event . . . . . 6:00 pm - 10:00 pm

Friday May 3

Buffet Breakfast. . . . . 7:30 am - 9:00 am
Professional Development Streams. . . . . 8:30 am - 12:00 pm
Professional Development Streams. . . . . 2:30 pm - 4:05 pm
Tours . . . . . 9:30 am - 11:30 am
Tours . . . . . 2:30 pm - 4:30 pm
Professional Development Luncheon . . . . . 12:15 pm - 2:15 pm
Past Presidents' / Council Meeting . . . . . 2:30 pm - 4:00 pm
Past Presidents' Dinner (by invitation). . . . . 5:00 pm - 8:00 pm
Presidents' Reception. . . . . 8:00 pm - 11:00 pm

Saturday May 4

Buffet Breakfast. . . . . 7:30 am - 9:00 am
Annual Meeting Registration. . . . . 8:30 am - 9:00 am
Annual Meeting . . . . . 9:00 am - 12:30 pm
Youth Science Day. . . . . 9:00 am - 4:00 pm
Partners' Program. . . . . 10:00 am - 3:00 pm
Recognition Luncheon . . . . . 12:30 pm - 2:30 pm
Committee Meetings. . . . . 2:30 pm - 4:30 pm
Awards Reception. . . . . 6:00 pm - 7:00 pm
Awards Banquet . . . . . 6:00 pm - 10:00 pm
Hospitality Suite . . . . . 10:00 pm

Business Meeting

Saturday May 4

The 83rd Annual Meeting of the Association will be called to order at 9:00 am. Members must register between 8:30 and 9:00 am to obtain a voting card. The agenda will include:

- Minutes of the last Annual Meeting
- Business arising out of the minutes
- Reports of committees
- Audited financial report
- New business
- Report of the scrutineers

Social Events

Thursday May 2

- Welcome Event
- Come and Go Reception

Friday May 3

- Buffet Breakfast
- Professional Development Luncheon
  This luncheon will feature a keynote address from award winning science fiction writer Robert J. Sawyer
- President's Reception
  This reception in honour of APEGS Past Presidents is a wonderful opportunity to gather and socialize.

Saturday May 4

- Buffet Breakfast
- Partners' Program
  Activities and networking for companions of the business meeting attendees.

Recognition Luncheon

This luncheon will acknowledge our new professional and life members and recognize the many volunteers who contribute their time and talents to the Association.

Awards Banquet

Saturday evening we celebrate members whose outstanding achievements and contributions have earned them the recognition and respect of their peers.

Lives and Careers / A Balanced Approach

Professional Development Streams

Friday May 3

The theme for this year's conference is "Lives and Careers - A Balanced Approach." The professional development day will offer multiple track sessions throughout the day with a diverse range of topics, from tips on golf etiquette to financial planning for retirement. The professional development luncheon will feature a keynote address from Canadian science fiction writer Robert J. Sawyer.

Below are just a few of the speakers who will be presenting at the professional development day this year.

Robert J. Sawyer

Science Fiction Writer and Futurist

Robert J. Sawyer is a science fiction writer and futurist living in Toronto. He has been called "a writer of boundless confidence and bold scientific extrapolation" by *The New York Times* and "just about the best science-fiction writer out there" by *The Denver Rocky Mountain News*. *New Scientist* calls his work "scientifically plausible, fictionally intriguing, and ethically important," *The Montreal Gazette* says he's "Canada's answer to Michael Crichton," and Maclean's declares, "By any reckoning, Sawyer is one of the most successful Canadian authors ever." The ABC television series *FlashForward*, starring Joseph Fiennes and John Cho, was based on his novel of the same name. His 22 bestselling novels have been translated into 20 languages. Rob is one of only eight authors in history to win the world's three top science-fiction awards for best novel of the year:

- the World Science Fiction Society's Hugo Award (which he won in 2003 for Hominids),
- the Science Fiction and Fantasy Writers of America's Nebula Award (which he won in 1996 for The Terminal Experiment), and
- the John W. Campbell Memorial Award (which he won in 2006 for Mindscan).

Rob was the only writer invited to sit on the Canadian Federal Department of Justice's advisory panel for genetics laws, and he recently was invited by DARPA—the US Defense Advanced Research Projects Agency—to consult on its "*100 Year Starship*" project. His other consulting clients have included Kodak, Motorola, NASA, Computer Associates, and Gartner. Rob has made over 300 TV appearances (including MSNBC's Rivera Live with Geraldo Rivera and CTV's Canada A.M.) and given over 300 radio interviews (including NPR's Talk of the Nation "*Science Friday*" and CBC's *Sounds Like Canada*). He is a frequent commentator on science stories for CBC Newsworld and BBC Radio, and often appears as a futurist on Discovery Channel Canada. His nonfiction has appeared in *Archaeology, Sky & Telescope, Canadian Business, The Globe and Mail, Maclean's, Report on Business Magazine, The Ottawa Citizen*, and *The Toronto Star*. He wrote the guest editorial for the robotics issue of the world's top scientific journal, Science, and one of his stories was published in Nature: International Weekly Journal of Science. Rob has previously spoken at such venues as the Library of Congress, the National Library of Canada, the Canadian Embassy in Tokyo, TEDxManitoba, and Darwin College, Cambridge, and he has given keynotes and talks for such organizations as Google, Sanofi-Aventis, CLEAR (the Council on Licensure, Enforcement, and Regulation), Professional Engineers Ontario, the Alberta Land Surveyors' Association, Lockheed Martin, the New America Foundation, the Federation of State Medical Boards, Turkey's Garanti Bank; and Ceridian.

Rob Sawyer lives in Toronto. For more information, visit his website at sfwriter.com.

Lisa Moretto RGI International, Inc.

Communication Skills Part I and II

Too much time and money is wasted today because information is not effectively communicated. We spend our resources crafting the message or trying to decipher it. In this practical, interactive session, you will learn techniques on how to write more effective and focused communications. Specifically, Lisa will address:

- organizing the writing task,
- identifying primary information and directing readers' attention to it,
- arranging facts for maximum impact,
- writing action-getting letters and emails,
- writing direct and concise messages, and
- sharpening personal writing style to create a strong, effective presence.

In today's business environment, we cannot afford to underestimate the power of the written word.

Often a firm's leaders are promoted from within and although they have the technical knowledge to excel, they lack an understanding of the importance of interacting with clients and team members. This session also provides an overview of successful interpersonal communication skills including oral, written, and non-verbal communication skills and the impact they have on our interactions. Lisa will also address active listening and questioning skills.

Lisa is the President of RGI International, Inc. with offices in Winnipeg, MB and Rochester, NY. She has 19 years experience teaching business and technical communication courses for government agencies, private corporations, consulting firms and professional societies. Her courses consistently receive positive reviews. She is an engaging and interactive presenter and a frequent invited speaker at international conferences.

She has experience as an Information Developer for IBM in the US and as a Learning Products Engineer for Hewlett-Packard in the UK. Lisa holds a BS in Technical Communication from Clarkson University,

Lives and Careers / A Balanced Approach

Potsdam, New York, and an MS in User Interface Design from the London (England) Guildhall University.

She has co-authored four books with Ron Blicq: Get to the Point!, Guidelines for Report Writing, and Technically Write! with Prentice Hall, and Writing Reports to Get Results with the IEEE Press. Lisa is an adjunct professor at the Rochester Institute for Technology, where she teaches Technical Writing, Business Communication, and Effective Technical Communication. She is the Immediate Past President of the Rochester Engineering Society and contributes a monthly article to the RES Magazine. She is an active member of the Society for Technical Communication and the IEEE Professional Communication Society.

She has presented to various industries and organizations throughout Manitoba including Manitoba Hydro, Cangene, Richardson International, Health Canada, Cargill, APEGM, MTS/Allstream, and several engineering firms including Genivar, KGS Acres, and Tetra Tech/Wardrop

Patricia Katz, MCE CHRP Optimus Consulting

Take A Break & Get A Grip

Today's super-sized demands and supersonic pace can take a heavy toll. Overloading drains energy, saps productivity, cripples capacity, and poisons relationships. Rightloading™ engages minds, encourages hearts, energizes bodies, and builds spirit. Strike the right balance and you reduce the impact of overload and overwhelm.

This session will help you build a more satisfying life and work experience for yourself and others by balancing that relentless press for performance with strategic pauses for renewal. Adopt a rhythm of renewal and make stronger choices about how you:

- Carry the load (re-energizing as you go)
- Define the load (banishing discretionary burdens)
- Control the load (creating more manageable expectations)
- Celebrate the load (tuning in to what's going well and remembering why it matters).
- Press pause…think again – for sanity, satisfaction and success.

In over two decades as a speaker and consultant, Patricia Katz of Optimus Consulting has inspired tens of thousands of people to accomplish what matters most in ways that bring more peace of mind. By reducing the impact of overload and overwhelm in the workplace, Pat helps organizations and their leaders generate stronger results while creating a more satisfying work and life experience for all.

Pat is bestselling author of five books who also writes Pause, a weekly online newsletter enjoyed by over 5,000 subscribers. As a productivity and balance strategist, she is a frequent media guest expert on issues of wellness, balance, stress, and time.

Pat holds a master's degree in Continuing Education and a CHRP designation as a Certified Human Resource Professional. She was recently inducted into the Canadian Speaking Hall of Fame.

Paul Harmel CIBC Wood Gundy

Strategies for a Successful Retirement Plan

Paul's career in financial services began more than 20 years ago in the venture capital business. The experience gained analyzing private equity provided a strong base to transition to retail counsel in 1992 with ScotiaMcleod.

In 2001, Paul moved his practice to Merrill Lynch Canada Inc, and in 2002 the Merrill Lynch retail assets were acquired by CIBC World Markets.

Paul continues to work for CIBC Wood Gundy as Investment Advisor.

For two decades Paul has been providing financial advice to high net worth families throughout Canada and abroad. His approach is to follow a financial planning model that, once created, forms the basis of an asset allocation strategy. Preservation of capital and predictable performance consistent with each client's financial plan and life goals is what he strives to achieve.

Jeanne Martinson

Leading a Diverse Workforce

Jeanne Martinson is a best-selling Canadian author on the topics of diversity and leadership. She holds a diploma in Organizational Behaviour from Heriot-Watt University in the UK as well as a graduate degree in Leadership from Royal Roads University in BC. Jeanne is the author of five books, her most recent being Generation Y and the New Work Ethic.

The workplace is changing rapidly in Canada as we source new citizens from across the globe. This diversity can be a wonderful thing, and it can also be problematic. As leaders and organizations, we can benefit from the many perspectives and backgrounds of our team members to move our organizations forward. However, these differences can trigger misunderstanding, low morale, toxic work groups and employee turnover. Good policy is not enough to mitigate these challenges. We need to learn to shift how we perceive and work with others. We have a choice to allow diversity-based conflict to spiral down to dysfunction or to take charge, gain awareness and develop understanding.

Contact

A P E G S
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Tel: (306) 525.9547 Toll Free: 1.800.500.9547
Email apegs@apegs.sk.ca
Register online: www.apegs.sk.ca

Report on the Professional Practice Exam - 2012

PATTI KINDRED, P.ENG., FEC, DIRECTOR OF EDUCATION AND COMPLIANCE

The Professional Practice Exam was written by 314 candidates in 2012, a decrease of 11 examinees over 2011.

The table below details exam results:

EXAM DATE	MAY 26, 2012	OCTOBER 27, 2012
NUMBER CANDIDATES	171	143
HIGHEST MARK (%)	92%	93.5%
AVERAGE MARK (%)	74.64%	77.43%
NUMBER FAILURES *	6	5

** The grade required to pass the exam is 65%.*

Registration, seminar and exam dates for Spring and Fall 2013:

Spring 2013 Exam

- Thursday, March 14, 2013 - registration deadline for spring exam and seminar AND deadline for submission of post-bachelors work experience report (if none submitted previously)
- Friday, March 22, 2013 - Last day to cancel seminar or exam (reapplication would be required)
- Friday and Saturday, April 27/28, 2013 - Law and Ethics Seminar (Saskatoon)
- Saturday, June 1, 2013, - Professional Practice Examination (Regina and Saskatoon)

Fall 2013 Exam

- Friday, August 16, 2013- registration deadline for fall exam and seminar AND deadline for submission of post-bachelors work experience report (if none submitted previously). This is also the last day to cancel seminar and/or exam if you had applied for the fall 2013 exam previously (reapplication would be required).
- Friday and Saturday, September 13/14, 2013 - Law and Ethics Seminar (Regina)
- Saturday, October 26, 2013, - Professional Practice Examination (Regina and Saskatoon)

The seminar runs from 10:00 am to 7:30 pm on Friday and 8:30 am to approximately 4:00 pm on Saturday. Complete exam information including the application and how to order textbooks can be found on the APEGS website, www.apegs.sk.ca, under Registration, Professional Practice Exam.

2012 Consulting Engineers of Saskatchewan Awards

Outstanding performance was the focus of the 2012 Consulting Engineers of Saskatchewan's (CES) Annual Awards Banquet held November 29, 2012 in Saskatoon. Five corporate member firms accepted Brian Eckel Awards for exceptional engineering projects. Youth were recognized through a Young Professional Award and a University of Saskatchewan scholarship. The evening's finale recognized lifetime achievements of an industry leader.

Lieutenant Governor of Saskatchewan Meritorious Achievement Award

The Lieutenant Governor of Saskatchewan Meritorious Achievement Award recognizes a Saskatchewan resident for the individual's outstanding achievements and contributions to the consulting engineering and consulting geoscience industry in Saskatchewan, taking into consideration the individual's service to the community.

This year's recipient of the Lieutenant Governor of Saskatchewan Meritorious Achievement Award was Don Poon, P.Eng., C.Eng., MICE, CMC, CCCA, F.ASCE.

Official picture approved by Lt. Gov. office - dsc 2633

Her Honour the Honourable Vaughn Solomon Schofield, S.OM., S.V.M., Lieutenant Governor of Saskatchewan presents Meritorious Achievement Award to Don Poon, P.Eng., C.Eng., MICE, CMC, CCCA, F.ASCE.

2012 CES Brian Eckel Awards

The CES 2012 Brian Eckel Awards focus on promoting the talent, expertise and innovation of CES member firms. The 2012 project entries included:

- **AECOM Canada Ltd.**
  City of Saskatoon Raw Water Pipeline River Crossing
- **AMEC Americas Limited**
  Milestone Prefeasibility Study
- **Associated Engineering (Sask) Ltd.**
  City of Saskatoon Raw Water Intake & Pump Station
- **MDH Engineered Solutions Corp., Member of SNC-Lavalin Group**
  Emergency Culvert Replacement Highway No. 1 - Maple Creek
- **PINTER & Associates Ltd.**
  Direct Injection Remediation of Petroleum Hydrocarbons

2012 CES Young Professional Award

The CES Young Professional Award recognizes achievements of a young professional who demonstrates excellence in: his/her field of expertise; the business of consulting engineering/geoscience; dedication to his/her consulting engineering/geoscience association and community; as well as increasing awareness of the value of young professionals in the Saskatchewan consulting engineering/geoscience industry.

This year's award was presented to Adam Boehm, Engineer-in-Training.

University of Saskatchewan Brian Eckel Memorial Scholarship Award

Each year, CES recognizes the recipient of the University of Saskatchewan Brian Eckel Memorial Scholarship. The scholarship recognizes academic performance and community volunteerism of students pursuing a Bachelor of Science in Engineering degree at the College of Engineering, University of Saskatchewan. This year's recipient was Erin Placatka.

News Beyond Our Borders

www.kootenaybiz.com

Cranbook Converts Waste Water to Irrigation System

The City of Cranbrook, located in BC's Kootenay region, has taken sustainability to a new dimension that is attracting Canada-wide attention. It has taken its treated sewage water and turned it into an irrigation product that is sprayed onto cattle grazing lands. With the result, Cranbrook has forged a thriving cattle industry and is also now looking into opportunities for providing highly treated sewage effluent as a source for irrigating high-density fibre forest lands. When the sewage treatment system had reached its capacity and could no longer comply with environmental requirements or provide for the city's future growth needs, engineering firm AECOM responded to the City of Cranbrook's request for proposals in 2009 to upgrade and expand the whole system. The project work involved improving treated wastewater quality to meet or exceed BC Ministry of Environment guidelines, building capacity to handle 25 years of growth, replacing failing infrastructure with high efficiency systems that limit environmental damage, preserving archaeological sites, and maintaining and improving the sustainability features of the system at a price point the city could afford. AECOM's efforts on the project won it APEGBC's 2012 Sustainability Award.

Source: Association of Professional Engineers and Geoscientists of British Columbia

Westminster Harbour Gets Award-Winning Overhaul

The City of New Westminster wanted to both revitalize its downtown core and reconnect the community to its waterfront. At the same time, a narrow strip of land squeezed between the

Fraser River and three active rail lines was crying out for attention. But no developer was interested in a site that was burdened with the buildup of contaminants from well over a century of pre-environmentally friendly industrial use. Harold Kullman, P.Eng., the senior project manager, ports and harbours, for WorleyParsons Canada Services, faced the daunting task of remediating the site into an urban park in just two years. Contaminants were handled through jet grouting, a construction process using a high-energy jet of fluid to break up and loosen the ground, and mix it with a thin slurry. The process is commonly used to stabilize high-rise buildings but its use to contain contaminants was innovative.

Another innovative technique was developed when timber piles kept disintegrating in the unstable soil. Instead of using gravel as fill, the team decided to use polystyrene, which is much more expensive but useful when poor soil conditions can't bear the weight. The project was selected for APEGBC's 2012 Environmental Award.

Source: Association of Professional Engineers and Geoscientists of British Columbia

Energy Modelling Can Be Simplistic

Energy modelling is becoming a standard part of building design according to Brian Tysoe, P.Eng., national manager of energy modelling and building simulation services with MCW Consultants. Tysoe spoke at Construct Canada in Toronto on November 29 in a session entitled "Beyond Compliance: Energy Modelling and Building Simulation."

LEED and building code changes are driving the need to have energy modelling, Tysoe said. However, he has reservations about whether much of the modelling is actually reducing energy use, since most of it is done just for compliance purposes and there is little or no official follow-up to see whether a building lives up to the models.

Energy models became mandatory in 2010 for approval of buildings in Toronto under its Green Building Standard. Since January this year, the Ontario Building Code has introduced energy requirements.

The question, though, said Tysoe, is to ask what the energy modelling is really being used for. "In my opinion it is used largely for compliance," he said. There are no official checks and balances to ensure that the energy model coincides with the building's actual performance.

On one hand, energy models today can be too simplistic, Tysoe suggested. On the other hand, energy modelling at the site development stage can be very useful.

Source: Canadian Consulting Engineer

Looking to the Day when Windows are Power Generators

According to a nano-energy expert, in the future the glass walls on our buildings could be generating the energy we need to run those buildings, while eBoxes would enable us to transmit that power wirelessly from building to building and beyond.

Justin Hall-Tipping is the chief executive officer of Nanoholdings, a US-based company of entrepreneurs and scientists who work in partnership with university researchers around the world. They develop new technologies that they believe will help solve our global problems of overconsumption and depletion of resources.

A nano-device could be affixed to a window to convert light into energy. At night it can do the same with infrared light. Hall-Tipping succeeded in creating a small working prototype which cost $3 million to build.

As for storing energy on site, Hall-Tipping suggests the eBox, a device that can store, manage and transmit electrons wirelessly. A prototype has been running for over two years. The device would be small enough to be stored in a home and would allow you to store power smartly at off-peak hours.

Source: Canadian Consulting Engineer

Work Begins On New Infrastructure Standards for North

The Standards Council of Canada (SCC) announced that work is set to begin on the development of four new standards, supporting the adaptation of northern infrastructure to a changing climate, under the Northern Infrastructure Standardization Initiative (NISI).

Following a competitive bid process, SCC selected CSA Group to spearhead the formation and management of technical committees that will develop standards in the following four areas:

- Community drainage and climate change in northern Canada;
- Thermosyphon-supported foundations for new buildings (thermosyphon is a method of passive heat exchange based on natural convection, which circulates liquid without the necessity of a mechanical pump;)
- Risk management of snow loads on northern buildings; and
- Management of the effects of permafrost degradation on existing buildings

Funding for the development of the standards and capacity building activities comes from the Government of Canada's Clean Air Agenda. NISI is managed by SCC with support from Aboriginal Affairs and Northern Development Canada (AANDC). SCC has been granted $2.5 million over five years for program implementation. This initiative will contribute to the adaptation of critical codes and standards to address the effects of climate change on new infrastructure, as well as retrofits, maintenance and repairs to existing infrastructure.

Source: The Standards Council of Canada

Video Game Promotes P.Eng. Work

The Association of Professional Engineers and Geoscientists of Alberta (APEGA) is putting the final touches on a new website and video game aimed at presenting engineering as a rewarding career choice for junior high school students, particularly women and native Canadians.

Known as EnGenious, the website and game aim to teach junior high school students what engineers do. It is supported by the National Women and Aboriginal Advisory Committee, a committee formed by APEGA with members from the engineering regulators in British Columbia, Saskatchewan, Manitoba, Ontario and New Brunswick, Engineers Canada's Women in Engineering Advisory Group, and Engineers without Borders.

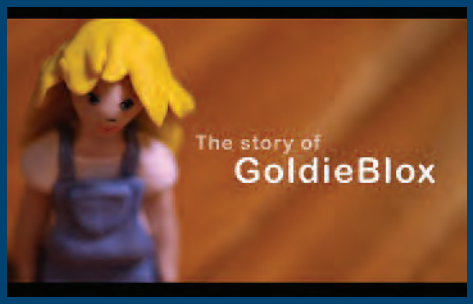
Jessica Vandenberghe, P.Eng., APEGA director of outreach and member services, says EnGenious consists of two basic elements–a video game aimed at junior high students and a website containing profiles of engineers, information about the profession, resources for teachers on outreach activities and other material allowing students to gain an appreciation for engineering as a possible career.

The video game portion features six engineering disciplines used in 10 different industries, and includes an avatar creator and other features that encourage repeat playability.

EnGenious was recently endorsed by Engineers Canada, because of its potential to promote the engineering profession on a nationwide basis. Marc Bourgeois, Engineers Canada director of communications and public affairs, notes that at a recent joint meeting of constituent association communications and outreach officials, "we agreed that this project could be easily adapted to serve all constituent associations."

Source: Professional Engineers Ontario

News From The Field



Games can boost female engineers

Shine On Yahoo Blog - Only one in 10 engineers in Canada are women. Experts have been examining numerous possible explanations for years, ranging from nature-to-nurture to neuroplasticity.

Now, one female engineer from Stanford University has come up with her own solution to the gender gap in her field — and it's a game called GoldieBlox.

Stanford engineer Debbie Sterling decided to investigate whether the fact that boys tend to play with Lego, Kinex and Erector sets and girls with dolls, princess dresses and storybooks, might be related to the fact that only 9 to 10 per cent of engineers are female.

Her theory is that while boys' toys facilitate learning spatial reasoning skills that are so important in the engineering field, girls' toys and games tend to focus more on human relations, emotions and stories.

With this in mind, Sterling decided to design a building-focused toy set specifically for girls.

GoldiBlox centres around the narrative of a girl inventor who loves to build.

Though there is evidence and evolutionary theory to support the idea that men and women are predisposed to certain tasks, there is also evidence that any gaps in natural ability can be compensated with training.

Other research shows that playing video games helps girls catch up when it comes to spatial skills.

Saskatchewan, Alberta battle for workers

Saskatoon StarPhoenix - Saskatchewan and Alberta – now the economic heavyweights of Canada – are locked in a knock-'em-down, drag-'em-out battle for much needed workers.

After years of bleeding its best and brightest to other provinces, Saskatchewan is attracting new residents by the thousands each month.

Saskatchewan is the second-fastest growing province in Canada, Statistics Canada demographer Julien Berard-Chagnon said, attracting migrants from Ontario, British Columbia and the Maritimes.

From 1972 to 2007, Alberta was attracting workers from Saskatchewan at a net rate of as many as 10,000 people per year. Saskatchewan finally got the upper hand from 2007 to 2010, when Albertans began coming to the Land of Living Skies for work.

Now the demographic tug-of-war has become a virtual stalemate.

Alex Miller, 30, left Saskatchewan after graduating from the University of Saskatchewan with an engineering degree in 2004. He caught on with an oil and gas company in Calgary before starting Innovative Residential, a home development company focused on affordable housing.

When the economy picked up in 2007, Miller and his business partner took the opportunity to return and Innovative Residential has thrived since, drawing praise from city hall and the chamber of commerce for finding creative ways to build and market affordable housing.

UNIVERSITIES AND RESEARCH

CSA and IPAC-CO_2 Research Inc. announce standard

Marketwire - CSA Group and IPAC-CO_2 Research Inc. announced the world's first binational standard for geologic storage of carbon dioxide.

The CSA standard is a binational Canada-USA consensus standard, developed with a technical committee of more than 30 professionals representing industry, regulators, researchers and NGOs from both sides of the border. The genesis of the standard was a seed document developed by IPAC-CO_2 based on their research. It is intended that the new standard will also be used as a basis for the international CCS standards through the International Organization for Standardization (ISO).

The standard provides essential guidelines for regulators, industry and others around the world involved with scientific and commercial CCS projects. It establishes requirements and recommendations for the geological storage of carbon dioxide to help promote environmentally safe and long-term containment of carbon dioxide – in a way that minimizes risks to the environment and human health.

There are eight large-scale CCS projects internationally, storing

about 23 million tonnes of CO_2 each year. A top priority for CCS research is the confirmation that geologic CO_2 storage is safe, reliable and an environmentally beneficial practice for the long term.

Partnership yields energy-saving technologies

Lab Product News - A partnership between the University of Saskatchewan College of Engineering and Saskatoon-based Venmar CES Inc. has yielded new heat exchanger technology that promises to cut building heating and cooling costs by up to 80 per cent.

On display recently at the engineering lab where the research was done, the prototype of the new Venmar CES device will "revolutionize how we heat and cool buildings worldwide," says Maury Wawryk, vice-president and general manager of Venmar CES Inc. in Saskatoon.

Venmar CES Inc. has its roots in U of S research in the 1970s, with the first low-cost, plastic air-to-air heat exchanger for use in houses or livestock operations to increase energy efficiency. Developed by U of S engineering researcher Robert Besant, P.Eng., this technology was commercialized and led to a long history of research collaboration between the college and its industrial partners.

Today Besant and fellow mechanical engineering professor Carey Simonson work together with Venmar CES on federal NSERC collaborative research and development grants totaling $1.5 million to date. Two patents have been filed based on this collaborative research.

Potash Corp. pledges $35-million for food security institute

The Globe and Mail - Potash Corp of Saskatchewan Inc. has pledged $35-million to help fund the creation of a new food security institute with the University of Saskatchewan and the provincial government.

The institute will be dedicated to research around making agriculture and food systems more efficient, and underscores the conviction that feeding the world's growing population will put ever-increasing strain on a shrinking base of arable lands.

Global food security is becoming among the leading concerns as populations grow and become wealthier and develop richer diets.

Saskatchewan is home to more than 40 per cent of Canada's agricultural land, exporting more than half of the world's canola meal and one third of canola oil. It is the world's top exporter of lentils, dried peas and flax.

The Global Institute for Food Security will have initial funding of $50-million, including some $15-million from the province of Saskatchewan over the next seven years.

The institute will be based at the University of Saskatchewan in Saskatoon, already a world leader in agriculture and food-systems research. Some 345 commercial crop varieties have been developed at the university, whose innovations include rust-resistant wheat developed by transferring genes from wild grasses.

The institute will take a strategic approach to the food supply system, breeding for higher yield, improved nutrition and better processing traits.

Cisco helps Canada's mining research

Zacks.com - Cisco Systems has signed an agreement with the University of Saskatchewan to set up a Research Chair in Mining Solutions. The Research Chair will primarily support, promote and lead research, development and technical innovation at the university through real-time mining-based projects in Canada.

Cisco will invest $2 million over a decade for the Research Chair. The focus of the Chair will be to promote the importance of research and academic programs for the mining industry by finding solutions to its daily challenges.

Cisco will provide the required expertise in advanced technologies and strategies that is intended to drive innovation in the sector. In return it will build valuable domain expertise that would help its growth.

The partnership is expected to lead to enhanced knowledge, stronger relationships with industry and government partners and improved efficiency in the mining sector in Canada.

Booming resource sector influences students' choices

Regina Leader-Post - Saskatchewan's booming economy is leading more high school and post-secondary students to look toward skilled trades and professions in the natural resources sector.

Since 2007, apprenticeships in the province have increased by 58 per cent. The number of high school graduates taking part in the Saskatchewan Youth Apprenticeship Program, though, has jumped by 71 per cent.

Industry assistance led to SIAST introducing a two-year diploma in mining engineering technology this year. It was so popular, half of the applicants were turned away.

Don Morgan, advanced education minister, also points to the University of Saskatchewan's mining engineering options and the new Food Security Institute, and the fact the University of Regina is considering a master's-level program in mining and the environment.

"We're doing everything we can to try and focus the young people in the province on the areas where they're going to have the best opportunities to work and participate in the growing economy," he said.

There are more courses related to natural resources, which have become more appealing to students. Stephen Bend, P.Geo., a professor in the university's geology department, says enrolment in geology courses has climbed steadily each year.

"In terms of geoscience programs, we're one of the largest in Canada now," he said, adding 90 per cent of graduates are getting jobs in the field. But, he says, most students will end up "following their passions."

Fahrenheit 2013: U of S yanks over a million books

The Sheaf - More than 1 million hard-copy books are set to be removed from U of S libraries in the coming years.

The move is part of the university's long-term plan to become efficient in the digital age.

The removal of the 1.1 million books will begin with the Veterinary Medicine Library in September 2013, followed by the Engineering Library in 2014. Both the Law Library and the Education and Music Library will be gutted at an undetermined later date.

According to the official planning document, the number of books that students have been taking out has dropped 42 per cent in the past decade.

Books that are moved into the high-density storage facility will be available for students to read upon request in a provided location.

Associate Dean of the U of S Library Ken Ladd co-author of the planning document, told the *StarPhoenix* that most universities are revamping their libraries with a shift towards a more digital book collection.

MINING

Ottawa seeks input on proposed mine

Canadian Press - Federal regulators want to hear from the public about a plan to build a $2.4-billion potash mine on Aboriginal land north of Regina.

The joint proposal is being put forward by Encanto Resources Ltd. and the Muskowekwan First Nation under the name First Potash Ventures.

The Canadian Environmental Assessment Agency says it must decide if a formal review of the mine is needed.

Encanto Potash Corp. said it expects the agency will call for a full environmental assessment and is confident it would meet federal and Saskatchewan government regulatory requirements.

Documents filed with the federal government say the project would produce up to 2.8 million tonnes of potash a year for up to 50 years.

The First Nation would be paid potash royalties of up to $80 million per year.

The proposal says construction could begin between 2014 and 2016 and the mine would create up to 1,000 construction and 500 mining jobs. The mine could begin operating as early as mid 2017.

The proposal calls for the solution mine to use up to 200 000 m^2 of groundwater per year.

The mine near Lestock, Sask., about 100 km north of Regina, would include a processing plant and a tailings pond to deal with wastewater.

Sask launches online mineral staking

Saskatoon StarPhoenix - The Government of Saskatchewan launched the Mineral Administration Registry Saskatchewan (MARS), an online system for issuing mineral permits, claims and leases. These mineral dispositions allow the holder to explore for minerals such as uranium, diamonds, precious metals and base metals.

The MARS system uses electronic maps to define the location of mineral parcels in the surveyed and unsurveyed parts of the province. MARS will allow users to identify lands available for staking and make a request online for the issuance of new minerals dispositions.

Pamela Schwann, P.Geo., executive director of the Saskatchewan Mining Association, welcomed the new system.

"The online system allows you to acquire and manage land 24/7, 365 days a year from wherever you are in the world," Schwann said, adding there are companies and individuals from all over the world interested in exploration in the province. It also provides more accuracy.

"(Before) in northern Saskatchewan in the unsurveyed part of the province when you went to acquire ground, you'd have to physically go on the ground and put in claim posts a certain distance apart in order to acquire that mineral disposition," Schwann said. "But you had limits on when you could get out, depending on freeze-up and break-up times."

Growth in mineral exploration in 2012

Saskatoon StarPhoenix - Companies spent about $325 million on mineral exploration in the province by the end

of 2012, said Gary Delaney, P.Geo., chief geologist with the Saskatchewan Geological Survey.

Delaney presented an overview of Saskatchewan mineral exploration and development in 2012 at the 43rd Annual Saskatchewan Geological Open House being held in Saskatoon.

"Saskatchewan's mineral sector is heading into the 10th year of a major cycle of exploration, discovery and development," Delaney said.

Last year $293 million was spent on mineral exploration and in 2010 it was $321 million.

Once again, the majority of spending in 2012 is on potash and uranium projects.

Delaney said there are a number of uranium projects on the go, including Cigar Lake that is expected to come on stream in late 2013, Midwest, and Millennium and Rio Tinto continues to develop the Roughrider project in the Athabasca Basin.

The largest producing uranium mine in the world, McArthur River, is expected to produce about 18.7 million pounds of uranium while Cameco's Eagle Point mine will produce 3.7 million pounds of uranium.

There was also a lot of interest in potash.

Delaney said the outlook for mineral exploration and development is generally positive.

Fortune Minerals closes NICO refinery lands purchase

Canada Newswire - Fortune Minerals Limited announced that it closed the purchase of lands near Saskatoon, on which the company proposes to build its Saskatchewan Metals Processing Plant (SMPP) for the NICO gold-cobalt-bismuth-copper project. Rezoning of the 482-acre property is under way as the company nears completion of the permitting process in two jurisdictions. NICO is a planned vertically integrated project consisting of an open pit and underground mine and mill in the Northwest Territories and refinery in Saskatchewan where concentrates from the mill will be processed to high value metal products.

The SMPP plant is expected to employ at least 85 employees over a 20-year period based on the anticipated life of the NICO deposit. The opportunity to source materials from other projects for custom processing and the potential to participate in the metals recycling business could extend the useful life of the facility well beyond the mine life.

The 2012 NICO Front End Engineering and Design Study has determined the capital cost for the refinery at $230 million.

The decision to locate the processing plant in Saskatchewan was driven primarily by the availability of lower cost electricity and the support of the Government of Saskatchewan, which passed attractive tax legislation to encourage processing of raw materials that have been sourced from outside the province. An average of 4 650 tonnes per day of ore from the NICO deposit will be converted to 180 tonnes of bulk concentrate and shipped by truck and rail to the SMPP for processing.

INFRASTRUCTURE

Saskatoon spends $100K to study north commuter bridge

CBC News - Saskatoon is starting to spend money on a proposed north commuter bridge that could cost $86 million.

Council voted to spend $109,488 to hire a local engineering firm. It will be doing land and environmental testing on the proposed site, in the area of Marquis Drive and Central Avenue.

The north commuter bridge, which could be built by 2016, will link the Marquis Industrial area and the University Heights area.

It's supposed to serve as another arterial bridge across the South Saskatchewan River, similar in function to the existing University and Broadway bridges.

Clifton Associates Ltd. has won the contract to do the preliminary work.

Sask infrastructure concern for mayors

CJME - The mayors' caucus of the Saskatchewan Urban Municipalities Association asserted the importance of infrastructure in its meeting with provincial cabinet ministers.

The mayors asserted that roads, water and pipes are the foundation that supports growth. Without more spending, Saskatchewan will only fall further and further into the infrastructure deficit, the mayors stated.

The mayors are looking for a new funding program that provides long-term, sustainable funding that supports the development of infrastructure.

Rural roads battered by expanding industry

CJME - As Saskatchewan's oil and gas sectors continue to expand, it is roads in rural municipalities that are feeling the physical brunt of the growth spurt.

Saskatchewan Association of Rural Municipalities president David Marit said year-round truck and tanker abuse has left many rural roads battered and bruised.

Heavier and more frequent trucks have caused rural roads to deteriorate faster, he said.

SARM members met to discuss how rural communities can improve infrastructure and they're turning to the province for some help.

The group is poised to ask the province for an additional $160 million over four years as part of a rural-provincial partnership program.

Marit says funds from the province are not only necessary, but also beneficial to urban communities.

"The cities are growing because of northern development. We're both reaping some rewards but we're also reaping some problems with it."

URANIUM AND NUCLEAR

Canada, India resolve nuclear impasse

Saskatoon StarPhoenix - The federal government has announced the long-awaited finalization of a nuclear co-operation agreement with India. The Canada-India Nuclear Co-operation Agreement has been a top priority of trade missions to the area, both for the provincial and federal governments, since negotiations began in 2010.

Prior to the agreement, Saskatchewan uranium was not allowed into India, which has one of the most robust nuclear power programs in the world. An open India market could mean $650 million annually in demand for Saskatchewan uranium.

That nuclear co-operation agreement came after decades of distrust sparked by India's use of Canadian nuclear technology for a weapons test in 1974.

When the nuclear accord was reached two years ago, it appeared to easily clear the way for Canada to sell its uranium and build reactors in India. But the issue became mired in negotiations over the details. Canada insisted it wants India to provide information in the future to demonstrate that Canadian nuclear materials are used for peaceful purposes – not for further nuclear weapons proliferation.

India balked at this request, saying it wants to work through the International Atomic Energy Agency.

Under the administrative deal reached by negotiators, both countries will establish a "joint committee" to share information.

Celebrating Our Own

Poon Receives Meritorious Achievement Award

Saskatchewan engineer Don Poon has received Saskatchewan's Lieutenant-Governor's Meritorious Achievement Award.

Poon is the managing director of SAL Engineering, a Saskatchewan-based engineering firm that has completed a number of projects around the province.

Poon, a graduate from the University of Saskatchewan, is also active in Saskatoon's Chinese community and Saskatoon's adult soccer league.

The award recognizes Saskatchewan residents for their achievements in and contributions to the consulting engineering and geoscience industry in the province.

Source: Saskatoon StarPhoenix

Jason Mewis an Inspiration

Canadian Consulting Engineer magazine recognized APEGS member Jason Mewis, P.Eng. as one of its "Seven Inspiring Engineers" featured in its December 2012 issue.

At age 39, Jason Mewis, P.Eng. is president of his own consulting engineering company, ENGCOMP, in Saskatoon. He is also chair-elect (2012-2013) of the Association of Consulting Engineering Companies-Canada (ACEC).

Mewis started ENGCOMP in 2004 when he was only 31, coming from a large international engineering company. Today ENGCOMP has approximately 40 employees. Echoing Mewis's experience, the company specializes in the heavy industry sector in western Canada, doing multi-disciplinary engineering and project management. It is also developing a niche practice in project risk analysis and risk management, areas that Mewis finds fascinating because they are business-oriented.

Source: Canadian Consulting Engineer

Get Ready … To See More!

APEGS Launches *"We See More"* Awareness Campaign

Every year, APEGS launches a province-wide awareness campaign to coincide with Engineering and Geoscience Week in Saskatchewan as well as National Engineering Month.

APEGS members will be familiar with a number of our past campaigns that have included billboards, newspaper ads and radio spots.

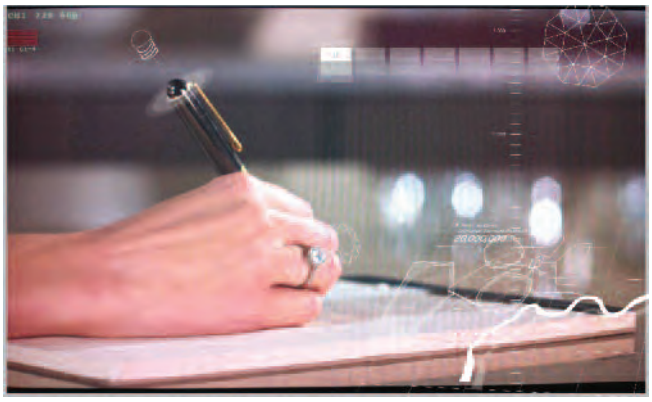
This year, the APEGS Communications and Public Relations Committee decided to kick our efforts up a notch. In consultation with our contractors, Martin Charlton Communications and the Phoenix Advertising Group, we have designed a bold new campaign aimed at making members of the general public more aware than ever of impact our professions have on their day-to-day lives.

The "We See More" campaign is the most aggressive advertising campaign in APEGS history. It was inspired by successful advertising campaigns undertaken by the Ordre des ingénieurs du Quebec and by other professional associations. Our goal is to ingrain in the public's mind the invaluable role our professions play in public safety, prosperity and comfort.

The three-year campaign features a 30-second TV commercial that will also run on Internet promotional spots. The ad shows an average businesswoman going about her day-to-day business, accompanied by animated pop-ups showing the effect of engineering and geoscience work on the world around her.

Above and below: Rough drafts of "We See More" ads. Technical details will be verified in successive drafts.

The campaign will also feature outdoor advertising, including billboards showing X-ray views of the engineering and geoscience features of the surrounding buildings and landscape.



Technical details of the ads have been developed in consultation with APEGS members on the Communications and Public Relations (CPR) Committee as well as experts in specific fields.

The first round of TV and Internet ads will play throughout March. A second round will play through September. The twice-a-year cycle is scheduled to continue until 2015. Regular polling will be conducted to determine the effectiveness of the ads and make refinements.

The CPR Committee welcomes members' feedback on the campaign. Please contact the CPR liaison, Chris Wimmer, P.Eng., at cwimmer@apegs.sk.ca with any comments.

Can you afford the cost of being critically ill?

Medical advances are making critical illness more survivable — but less affordable. Here's how to ease the financial burden so you can focus on what's important: your health.

"Most people buy life insurance first. But before you die, chances are you're going to get sick first."

82%	Adult Canadians who have been exposed to cancer, either personally or through a close friend or family member[2]
75%	Stroke sufferers who are left with an impairment or disability[3]
10 minutes	There is one stroke every 10 minutes in Canada[3]
7 minutes	There is one heart attack every 7 minutes in Canada[3]

"Canadians are more confident about physically surviving a critical illness than financially surviving it."

- The **5-year survival rate** for all cancers is 62%[1]
- The **survival rates** for heart disease and stroke both went up 33%[4]
- The **#1 concern** for those affected by cancer is getting government benefits to compensate for treatment costs and lost wages[2]
- The average cost of a **single course of treatment** with newer cancer drugs is $65,000[5]

"Being able to put aside financial concerns is reason enough to get a critical illness plan."

Overcome government limitations. The strained public health care system has limited funding, resulting in soaring drug costs and waiting lists for treatment

Supplement employer health plans. Many employer health plans are leaner than ever before, leaving the policyholder with more out-of-pocket responsibility

Overcome loss of income. The critically ill usually have to take time off work for treatment and recovery. Their spouse may have to do the same to care for them

Cover unanticipated costs. Co-pays, deductibles, prescriptions, medical supplies, childcare, housecleaning, transportation, meals and other costs add up

[1] Canadian Cancer Statistics, 2012.
[2] Weighing Quality of Life in Cancer, Colorectal Cancer Association of Canada, March/April 2011.
[3] Heart & Stroke Foundation Statistics.
[4] Statistics Canada, Leading Causes of Death, 2009. Released July 2012.
[5] Canadian Cancer Society, Majority of Canadians Worried about Cost of Cancer Drugs, September 2010.

Engineers Canada-sponsored Critical Illness Plan

As an engineer, geoscientist or technology professional, you can apply for coverage ranging from $25,000 to $1 million.

You will qualify to receive the entire benefit amount upon diagnosis of one of up to 18 common covered conditions, including life threatening cancer, heart attack or stroke.

Plus, the plan also offers the following:

- **100% return of premiums** if you die from any cause and have not received payment of the Critical Illness benefit;
- **Savings on premiums** for coverage of $125,000 or more;
- **Health Service Navigator®** gives free access to world-class medical second opinions and medical coordination services for you and your family, even if you're not making a claim;
- **Your choice of Essential or Enhanced coverage** for protection from 6 or 18 common life-threatening conditions respectively.

This professional membership benefit is also available to your spouse.

Learn more today — before rates increase on your next birthday.

LEARN MORE AND APPLY FOR:

Engineers Canada-sponsored Critical Illness Plan

www.manulife.com/APEGS/CI

1-877-598-2273

(Monday-Friday, 8 a.m. to 8 p.m. ET)

Sponsored by:

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Engineers Canada is the business name of the Canadian Council of Professional Engineers

APEGS
Association of Professional Engineers & Geoscientists of Saskatchewan

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For your future®

Calendar of Events

Anxiety: Practical Intervention Strategies
Crisis and Trauma Resource Institute Inc.
February 21, 2013, Saskatoon, SK
www.ctrinstitute.com/skpw.html

Depression: Practical Intervention Strategies
Crisis and Trauma Resource Institute Inc.
February 22, 2013, Saskatoon, SK
www.ctrinstitute.com/skpw.html

BUILDEX
February 13 - 14, 2013, Vancouver, BC
www.buildexvancouver.com/

Mould Management and Abatement
March 13, 2013, Winnipeg, MB
www.pinchin.com/iaq/courses/mould-management-abatement

Iron Ring Ceremony for Kipling Camp #25
March 16, 2013, Regina, SK
Contact David deMontigny at 337-2277 or david.demontigny@uregina.ca.

Connecting Water Resources 2013
March 18 - 21, 2013, Ottawa, ON
new.cwn-rce.ca/events/conferences/connecting-water-resources-2013

De-escalating Potentially Violent Situations™
Crisis and Trauma Resource Institute Inc.
March 21, 2013, Saskatoon, SK
www.ctrinstitute.com/skpw.html

Crisis Response Planning
Crisis and Trauma Resource Institute Inc.
March 22, 2013, Saskatoon, SK
www.ctrinstitute.com/skpw.html

Responsibility in Concrete Construction
April 14 - 18, 2013, Minneapolis, MN
www.concrete.org/EVENTS/ev_upcoming_conventions.htm

CIM Convention 2013
Canadian Institute of Mining, Metallurgy and Petroleum
May 2 - 4, 2013, Toronto, ON
web.cim.org/toronto2013

APEGS Annual Meeting
May 3, 2013, Regina, SK

CSCE 21st Canadian Hydrotechnical Conference
May 14 - 17, 2013, Banff, Alberta
registration.cgi-pco.com/CSCEhydrotechnicalconference/index.html

2013 Joint Scientific Congress of the CMOS, CGU and CWRA
Canadian Meteorological and Oceanographic Society
Canadian Water Resources Association
Canadian Geophysical Union
May 26 - 30, 2013, Saskatoon, SK
www.cmos.ca/congress2013

Engineering for Global Sustainability
May 27-29, 2013, Montreal QC
www.cctc2013.ca

CSCE Annual Conference
May 29 - June 1, 2013, Montreal, QC
www.csce2013.ca/

Canada Green Building Council National Conference & Expo 2013
June 4 - 6, 2013, Vancouver, BC
www.cagbc.org

World Mining Congress and Expo
August 11 - 15, 2013, Montreal, QC
www.wmc-expo2013.org

Canadian Design-Build Institute Conference
October 16 - 18, 2013, Saskatoon, SK
www.cdbi.org/events

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