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ENGENUITY

THE SOURCE OF ENGINEERING AND GEOSCIENCE NEWS IN NEW BRUNSWICK
LA SOURCE D'INFORMATION EN INGÉNIERIE ET GÉOSCIENCE DU NOUVEAU-BRUNSWICK

AWARDS DINNER — October 16, 2008

Fredericton team takes top spot
at 2008 Atlantic Engineering
Hockey Tournament



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Engineers Canada Fellowship Awards Dinner

(L to R): Cst. Peter Vail; Gaétan Lefebvre, P.Eng.; Chantal Guay, P.Eng.; Tanya Horgan, P.Eng./P.Geo.; Johanna Hildebrand; Eldo Hildebrand, P.Eng.; Donna Crandall; Dave Crandall, P.Eng.; Marie Lemay, P.Eng.; Sgt. Gilles Blinn.
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Association des **ingénieurs** et **géoscientifiques** du Nouveau-Brunswick

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PRESIDENT'S MESSAGE

Tanya Horgan, P.Eng./P.Geo.

I am halfway through my term as president of APEGNB and I'm still loving it. I have met amazing people from across Canada and hope to sustain these ties and friendships well into the future. (Some of those whom I have met may be interested to know that I got engaged on my birthday in June!)

During my travels, I've learned that even though our country may be large, and that membership in the professions varies from province to province, the issues for engineers and geoscientists remain the same. We need to ensure people are engaged in their profession and feel inspired to spread the word that engineering and geoscience are rewarding, exciting and highly respected careers.

To give you an overview of just how exciting our professions are, here is an overview of some of the events I've been privileged to attend:

UNB Iron Ring Ceremony—April 7

As a University of New Brunswick alumna myself, it was wonderful to see the number of graduates about to enter our profession during UNB's Iron Ring Ceremony. This was the largest graduating class in the history of UNB Fredericton. I don't know if the room could have held any more people. It is refreshing to see the eager young graduates ready to make their contributions to society. I was also happy to see the number of international graduates the university attracts. Way to go New Brunswick! With the increasing need for a highly skilled workforce, it's reassuring to know that international engineering graduates will be helping to grow our national economy.

Université de Moncton Engineering Banquet—March 28

It was a pleasure to be invited to the Université de Moncton's annual Engineering Banquet. The obvious respect and camaraderie between the professors and students was palpable. What a great way to celebrate a time in your life you will never forget.

14th Annual Atlantic Engineering Hockey Tournament—April 11-13

I was proud to be on the ice of the Willy O'Ree Place with the Mayor of Fredericton to drop the opening puck of this year's tournament. Congratulations to APEGNB's Fredericton Branch for organizing such a successful event. **Bill Lamey**, P.Eng., and his committee secured many generous corporate sponsors (the samosas were sooo yummy) and attracted a great turnout of teams including the Stantec Iron Ringers, the Fredericton Hercules Pylons and the Fredericton Fireballs.

APEGGA Annual Meeting- April 17-19, 2008

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

yet another exceptional annual meeting featuring the prestigious Summit Awards Gala. The professional development sessions were well attended and diverse. For the first time in its history, APEGGA introduced electronic balloting which, unfortunately, did not result in enough votes to ratify the issues before the membership. Their council has created a task force to determine how to move forward with MIT voting rights and the creation of a new designation for geoscientists. Despite the fact that APEGGA has 10 times the members that APEGNB does, it was interesting to note that our Association's annual meeting typically attracts twice as many delegates as Alberta's.

CENB (now ACEC—New Brunswick) Annual Meeting—April 23

During the Consulting Engineers of New Brunswick's annual meeting in Saint John this year, their name was officially changed to Association of Canadian Engineering Companies of New Brunswick. Their new acronym is ACEC-New Brunswick. Congratulations to the new president, **Lee MacWilliams**, P.Eng. I've enjoyed working with their past president, **Chris Haines**, P.Eng., on a number of common issues and look forward to an equally productive relationship with Lee.

Engineers Canada Fellowship Awards—May 16

APEGNB presented the country's first Engineers Canada Fellowship Awards at a gala event at the Delta Fredericton on May 16. This was a first-class event (was there any doubt?) and I must say that our executive director **Andrew McLeod**, our director of communications, **Melissa Mertz** and our director of administration, **Rachael Christenson**, outdid themselves. You know you are going to have a successful event when folks start showing up 10 minutes early for the reception and you have to push them into the dining room because everybody is having too much fun catching up with friends and peers. I had the pleasure and honour of presenting this year's awards to these well deserved individuals. I laughed and enjoyed myself immensely. To those who made me laugh

out loud while presenting your award (and you know who you are) I say thank you. I had so much fun and many hugs to everyone!

Engineers Canada Meeting in Quebec—May 22-24

What a lovely way to celebrate an annual meeting when you combine it with the 400th anniversary of Québec City. APEGNB is well represented at the national level with our Engineers Canada Director, **Brent Smith**, P.Eng., serving on the Board and past president, **David Crandall**, P.Eng., and communications director, **Melissa Mertz**, serving on the advisory committee for the upcoming national advertising campaign.

David and Melissa have played a crucial role in helping to develop a new advertising campaign designed to raise the profile of engineering among employers and parents. The ads are set to launch in mid-fall and are part of a multi-year, sustainable campaign that eventually will reach other target groups such as university students, government decision makers and engineers themselves. New Brunswick anticipates adapting the national creative for our provincial media.

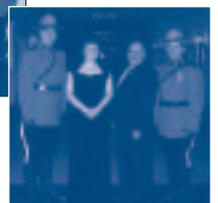
NBSCETT Dinner—June 4

Every year, the executive committees of APEGNB and the New Brunswick Society of Certified Engineering Technicians and Technologists gather over dinner to discuss issues of common concern. This year, NBSCETT hosted the dinner at the Crowne Plaza in Fredericton and I was happy to participate.

PEG-NL Annual Meeting- June 12-13

Since I am also a member of the Professional Engineers and Geoscientists of Newfoundland and Labrador, I was pleased to be able to contribute personally to their annual meeting held in St. John's. Due to the geographically dispersed membership base, attendance was limited but it was rewarding to see just how hard that Association is working on behalf of the professions. Of course, the Newfoundland hospitality was legendary and I had a wonderful time.

The next few months are shaping up to be busy ones for the Association as our 2009 elections get underway and preparations for the 2009 Annual Meeting in Fredericton ramp up. I encourage everyone to exercise their right to vote and support their Association's forward momentum!



MÉSSAGE DE LA PRÉSIDENTE

Tanya Horgan, ing./géosc.

J'en suis à mi-parcours de mon mandat à la présidence de l'AIGNB, et j'adore toujours cela. J'ai rencontré des personnes extraordinaires partout au Canada, et j'espère entretenir ces relations et ces amitiés très longtemps. (Certaines des personnes que j'ai rencontrées seront peut-être contentes d'apprendre que je me suis fiancée en juin!)

Au cours de mes voyages, j'ai compris que, bien que notre pays soit grand et que les rangs de nos professions varient d'une province à l'autre, les enjeux pour les ingénieurs et les géoscientifiques restent les mêmes. Il faut nous assurer que les gens sont mobilisés face à leur profession et qu'ils sont inspirés à propager le message que le génie et les sciences de la terre sont des domaines gratifiants et intéressants, et qu'ils donnent lieu à des carrières très honorables.

Pour vous permettre d'entrevoir à quel point nos professions sont intéressantes, voici un aperçu de quelques-uns des événements auxquels j'ai eu le privilège d'assister :

Cérémonie d'engagement de l'ingénieur à UNB – le 7 avril

En tant qu'ancienne de l'Université du Nouveau-Brunswick, j'ai été de ravie de constater le nombre de diplômés sur le point de se joindre à notre profession lors du rite d'engagement de l'ingénieur à UNB. Il s'agit du plus imposant groupe de diplômés de l'histoire de UNB à Fredericton. Je crois que la salle n'aurait pu accueillir une personne de plus. C'est rafraîchissant de voir de jeunes diplômés enthousiastes prêts à fournir leur apport à la société. Il est tout aussi réjouissant de constater le nombre de diplômés internationaux que l'université attire. Félicitations Nouveau-Brunswick! Avec le besoin grandissant d'une main-d'œuvre très qualifiée, il est rassurant de savoir que des diplômés en génie provenant d'autres pays viendront aider à la croissance de notre économie nationale.

Banquet de la faculté d'ingénierie de l'Université de Moncton – le 28 mars

Ce fut un plaisir que d'être invitée au banquet annuel de la faculté d'ingénierie de l'Université de Moncton. On pouvait palper le respect et la camaraderie manifestes entre les professeurs et les étudiants. Quelle magnifique manière de célébrer un moment de sa vie que l'on n'oubliera jamais.

14^e Tournoi annuel de hockey des ingénieurs de l'Atlantique – du 11 au 13 avril

J'étais fière de me retrouver au centre de la patinoire de Place Willy O'Ree avec le maire de Fredericton pour faire la mise au jeu signalant l'ouverture du tournoi de cette année. Félicitations à la section de l'AIGNB de Fredericton pour l'organisation d'un événement si bien réussi! **Bill Lamey**, ing., et son comité ont réussi à obtenir des commandites auprès de plusieurs entreprises généreuses (les samoosas étaient si exquis), et à recruter une belle brochette d'équipes, dont les *Iron Ringers* de Stantec, ainsi que les *Hercules Pylons* et les *Fireballs* de Fredericton.

Assemblée annuelle de l'APEGGA – du 17 au 19 avril 2008

L'association des ingénieurs, géoscientifiques et géophysiciens de l'Alberta (*Association of Professional*

Engineers, Geologists and Geophysicists of Alberta ; APEGGA) a tenu une autre assemblée annuelle remarquable, où l'on a notamment pu assister au prestigieux gala des Summit Awards. Les séances de perfectionnement professionnel étaient diversifiées et ont été bien fréquentées. Pour la première fois de son histoire, l'APEGGA a introduit le recours au bulletin de vote électronique, ce qui, malheureusement, n'a pas suscité un nombre suffisant de votes pour résoudre les questions présentées aux membres. Le conseil de l'association a créé un groupe de travail pour établir comment aller de l'avant en matière de droit de vote des membres stagiaires, et pour créer une nouvelle désignation propre aux géoscientifiques. Malgré le fait que l'APEGGA compte dix fois plus de membres que l'AIGNB, il est intéressant de signaler que l'assemblée annuelle de notre association attire habituellement deux fois plus de délégués que celle de l'Alberta.

Assemblée annuelle de l'ICNB (désormais l'AFIC-Nouveau-Brunswick) – le 23 avril

Lors de l'assemblée annuelle des Ingénieurs-conseils du Nouveau-Brunswick à Saint John cette année, le nom de l'association a officiellement été changé à l'Association des firmes d'ingénierie canadiennes du Nouveau-Brunswick. Son nouvel acronyme est AFIC-Nouveau-Brunswick. Nos félicitations au nouveau président, **Lee MacWilliams**, ing. J'ai apprécié travailler avec le président-sortant de cette association, **Chris Haines**, ing., sur un certain nombre d'enjeux communs, et je prévois une relation tout aussi fructueuse avec Lee.

Titres de Fellow d'Ingénieurs Canada – le 16 mai

L'AIGNB a décerné les premiers titres de Fellow conférés au pays par Ingénieurs Canada lors d'un gala au Delta de Fredericton le 16 mai. Ce fut un événement impeccable (y avait-il des doutes?), et je dois dire que notre directeur général, **Andrew McLeod**, notre directrice des communications, **Melissa Mertz**, et notre directrice de l'administration, **Rachael Christenson**, se sont surpassés! On sait qu'un événement connaîtra un succès quand les gens commencent à arriver à la réception dix minutes à l'avance, et qu'il faut les pousser dans la salle à dîner parce que chaque personne a trop de plaisir à prendre des nouvelles de ses amis et de ses collègues. J'ai eu le plaisir et l'honneur de décerner les titres de cette année à ces personnes exemplaires. J'ai ri et je me suis beaucoup

amusée. À ceux qui m'ont tant fait rire, alors que je leur remettais leur titre (ils savent qui ils sont), je dis merci. J'ai eu tant de plaisir, et câlins à tout le monde!

Réunion d'Ingénieurs Canada à Québec – du 22 au 24 mai

Quelle splendide manière de célébrer une assemblée annuelle que de la marier au 400^e anniversaire de la ville de Québec. L'AIGNB est bien représentée au niveau national grâce à son représentant au conseil d'administration d'Ingénieurs Canada, **Brent Smith**, ing., à son ancien président, **David Crandall**, ing., et à notre directrice des communications, **Melissa Mertz**, qui siège au comité consultatif de la prochaine campagne publicitaire nationale.

David et Melissa ont joué un rôle crucial en aidant à l'élaboration d'une nouvelle campagne publicitaire destinée à rehausser l'image du génie chez les employeurs et les parents. On prévoit que les annonces seront lancées au milieu de l'automne dans le cadre d'une campagne pluriannuelle durable qui s'adressera éventuellement à d'autres groupes cibles tels que les étudiants universitaires, les décideurs gouvernementaux et les ingénieurs eux-mêmes. Le Nouveau-Brunswick prévoit adapter la conception nationale pour les médias de notre province.

Déjeuner de STTAG-NB – le 4 juin

Chaque année, le comité de direction de l'AIGNB et celui de la Société des techniciens et des technologues agréés du génie du Nouveau-Brunswick (STTAG-NB) se réunissent pour déjeuner en discutant des préoccupations qu'ils ont en commun. Cette année, STTAG-NB a tenu le déjeuner au Crowne Plaza à Fredericton, et je suis heureuse d'y avoir pris part.

Assemblée annuelle de PEG-NL – les 12 et 13 juin

Comme je suis aussi membre de l'association des ingénieurs et géoscientifiques de Terre-Neuve-et-Labrador (*Professional Engineers and Geoscientists of Newfoundland and Labrador*; PEGNL), il m'a fait plaisir de pouvoir contribuer personnellement à son assemblée annuelle qui a eu lieu à St. John's. Étant donné la dispersion géographique des membres, le nombre de participants était réduit, mais il a été gratifiant de constater à quel point cette association œuvre au nom des professions. Évidemment, l'hospitalité terre-neuvienne a été conforme à la légende, et j'y ai passé un très bon moment.

Les prochains mois s'annoncent achalandés au plan de l'association, alors que nos élections de 2009 s'amorcent et que les préparatifs de l'assemblée générale annuelle de 2009 à Fredericton se font pressants. Je vous incite tous à exercer votre droit de vote et à soutenir l'élan de votre association!



TOUCHIE ENGINEERING AWARDED MAJOR WATER SUPPLY INFRASTRUCTURE CONTRACT IN MONCTON

Submitted by *John Gallant, P.Eng., Project Manager—Touchie Engineering*



Touchie Engineering has a history of successful work on large, construction projects in the Moncton area, such as the *Moncton Water Treatment Plant*, and the *Turtle Creek Dam Spillway Gates*, as well as complex work for the Greater Moncton Sewerage Collection and Treatment System.

"Over the last six years, Touchie Engineering has completed much of the related work for the City of Moncton, including the recent *Moncton Water Supply Review* and the *Tower Road Dam Environmental Impact Assessment Registration*, both of which addressed a number of environmental and stakeholder issues, and have provided the

This project will provide the residents of the tri-communities with an adequate supply of drinking water for the next 50 years.

foundation for the current estimated \$20 million construction project." says **John Gallant**, P.Eng., Touchie Engineering's project manager. "As engineers of advanced water infrastructure, we are proud of our continued involvement in a project that will provide the residents of the tri-communities with an adequate supply of drinking water for the next 50 years."

Touchie Engineering has been engaged in the practice of civil, municipal and environment consulting engineering in New Brunswick since 1980. As a division of R.V. Anderson Associates Limited of Toronto, Ontario, Touchie Engineering is a multi-disciplined team providing environmental and infrastructure expertise for technologies related to: water, wastewater, stormwater management, municipal infrastructure, transportation and urban development.



The City of Moncton has selected Touchie Engineering, a division of R.V. Anderson Associates Limited, to design and provide construction engineering services for the new Tower Road Dam and Reservoir in Turtle Creek, N.B.

The project is being undertaken to ensure that the City of Moncton has an adequate supply of water to meet its current and future development needs. The works include construction of a dam, spillway, bridge, and reservoir, as well as a plan for a future pumping station, forcemain and control gates. The proposed dam will be located at Tower Road in the Turtle Creek watershed, approximately five kilometres upstream from the existing Turtle Creek dam, which currently acts as the City's primary storage facility for its water supply system.

The Tower Road Dam and Reservoir will provide necessary water storage capacity for the tri-communities of Moncton, Dieppe and Riverview, and is expected to be developed in two stages, by adding the control gates at a future date to increase

the storage from an initial 10.0 million cubic metres to 16.5 million cubic metres. Construction of the works under the current contract is expected to commence in the spring of 2010, with completion slated for the summer of 2012. Design and construction services will be carried out with Touchie's long time project partners - Gemtec Limited, AMEC Environmental, and Hughes Surveys.

"We are pleased to have the opportunity to work with the City of Moncton on this essential infrastructure project for the citizens of Greater Moncton", says **Ken Morrison**, P.Eng., president of R.V. Anderson Associates Limited. "This project allows us to deliver on our firm's strategy to provide engineering services for sustainable infrastructure development, for the public sector and the citizens it serves."

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MEMBER SCHOLARSHIP OFFER:

The University of Fredericton is offering APEGNB members a stipend in the amount of \$7500 applied to their tuition. The tuition amount, less the stipend for the EMBA program is \$17,000. This stipend is available to members for the September 2008 and January 2009 intakes. Contact us for further information.

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FREDERICTON BRANCH FREDERICTON TEAM TAKES TOP SPOT AT 2008 ATLANTIC ENGINEERING HOCKEY TOURNAMENT

Submitted by Bill Lamey, P.Eng.

The 2008 AEH tournament was a great success.

Fourteen teams and 200 participants from across Atlantic Canada arrived in Fredericton April 11 to 13 for a fun weekend of competition.

Our thanks to the City of Fredericton who sponsored the gift bags. Event organizers were happy to host the majority of the games at the new Willie O'Ree Place sports complex. City of Fredericton mayor **Brad Woodside** even dropped the ceremonial puck to officially begin the tournament.



OFFICIAL PUCK DROPPING CEREMONY. (L to R) **Jeff Martin**, P.Eng.; **Tanya Horgan**, P.Eng./P. Geo., President APEGNB; **Mayor Brad Woodside**; **Tammy Paradis**, P.Eng. Chair, APEGNB Fredericton; **Travis Bergin**, P.Eng.

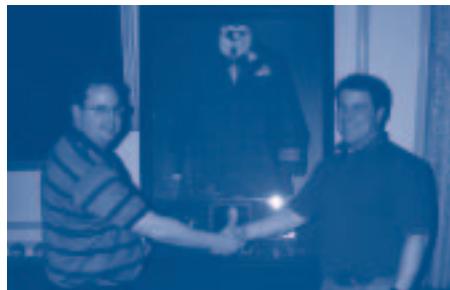
There was an all day event (hosted by Harris and Roome Fredericton) which featured the "Rejuvenation Station"—an area equipped with all that the body needs to keep going. As many of the teams would have played two games on Friday, it was important to keep everyone in good shape. In addition, this station was stocked with 500 locally supplied samosas—which were quickly devoured.

After a day on the ice, Liteco/LiteTec sponsored a hospitality suite at the Crowne Plaza / Lord Beaverbrook hotel. This suite was a huge hit and a great place to relax and network. Our thanks to the Liteco/LiteTec guys for the suite, and also the "main attraction". They supplied many giveaways including a full size cutout of bkd, and also an official framed Don Cherry jacket signed by the man himself.

Congratulations to the Hercules Pylons from Fredericton—champions of the 14th Annual Atlantic Engineering Hockey Tournament (AEHT) hosted by APEGNB Fredericton!



AEHT CHAMPIONS, THE HERCULES PYLONS: **Travis Bergin**, P.Eng.; **Graham Clark**, MIT; **John Hogan**, MIT; **Tim Kilfoil**, MIT; **Peter Maynard**, MIT; **Patrick Mazerolle**, MIT; **Tyler O'Rourke**, MIT; **Jeff Porter**, P.Eng.; **Jeff Russell**, P.Eng.; **Mark Stiles**; **Shaun Stiles**, P.Eng.; **Danny Stymiest**, P.Eng.; **Peter Stymiest**, MIT; **Steve Frechette**.



*Awarding of the Grand Door Prize by **Mike Hutchings** (Liteco / LiteTec) (left) to Moncton participant **Serge Doucet**, P.Eng., at the tournament gala Saturday night.*

The tournament itself was a lot of fun—but not without some controversy. After the round robin games, Cape Breton was in 1st place, followed by Saint John, and then a six-way tie for 3rd and 4th place. Using the tournament tie breaking rules, Acadie Bathurst gained 3rd place with lower penalty minutes (all teams had similar +/- for the tournament). With the penalty minutes, Potential Energy and the Hercules Pylons tied for 4th position. A coin

toss was held and the Hercules Pylons took the final spot. Special mention to Halifax Red, Newfoundland and Moncton as well who were also in contention for that 4th spot.

The Saturday night gala in the ballroom of the Crowne Plaza/Lord Beaverbrook hotel, generously hosted by Stantec, featured a great buffet and entertainment by **Frank Taylor** (aka "The Flying Scotsman") and his wife **Jane**. The event was well attended and featured a "celebrity" guest or two.

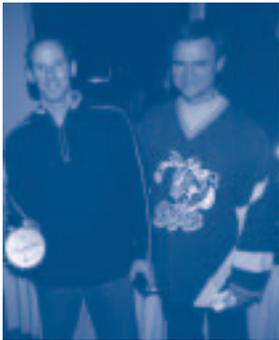


***Don Cherry** at the Saturday gala event surrounded by some of his adoring fans.*

Don Belliveau, P.Eng., vice-president of Stantec, made the official presentation of the tournament trophies during the gala. This included the tournament trophy to the Hercules Pylons, the individual player trophies and the Tournament MVP award. With the tournament "in the books" and



PRESENTATION OF THE TOURNAMENT TROPHY TO TEAM REPRESENTATIVE Travis Bergin, P.Eng (aka the Running Yeti) from Don Belliveau (Stantec).
(L to R): **Bill Lamey**, P.Eng., AEHT committee member; **Travis Bergin**, P.Eng.; **Don Belliveau**, P.Eng., VP Stantec.; and **Jeff Russell**, P.Eng.



PRESENTATION OF THE TOURNAMENT MVP TROPHY to Hercules Pylons Goaltender Steve Frechette, by **Don Belliveau**, P.Eng., VP, Stantec.

looking forward to next year, I'd like to thank our additional sponsors Moosehead Breweries, Oval International, APEGNB and the APEGNB Fredericton Branch. Without the support of all the sponsors, the tournament would not have been the success it was.

The Branch would also like to thank the on and off ice officials for their great work. I had to laugh after a conversation with one of the referees. He ended the tourney exhausted and said to me "I thought this was going to be a bunch of old farts". We showed him. Engineers can move (when they want to).

Please thank the guys from the organizing committee for their hard work and dedication to the event. **Committee members** include:

- Kent Wiesel**, P.Eng.
- Colin Sleep**, P.Eng.
- Peter Wedge**, P.Eng.
- Travis Bergin**, P.Eng.
- Tony Hamill**, P.Eng.
- Bill Lamey**, P.Eng.
- Phil Lamey**, P.Eng.
- Frank Dolan**, P.Eng.
- Paul Callaghan**, P.Eng.

For more information, standings or to see more pictures of the tournament, please visit the website: <http://www.fyha.ca/2008EngCup>

Next year's tournament will be hosted by Cape Breton, in Sydney, Nova Scotia. It's tentatively scheduled for March 27 and 28. For information, please contact **Brian Latimer**, P.Eng., (blatimer@adisidney.ca). 

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FREDERICTON BRANCH

APEGNB FREDERICTON BRANCH STUDENT PAPER COMPETITION

*A new initiative for the 2007/2008 school year for APEGNB's Fredericton Branch was a Student Paper Competition. We solicited a maximum 750-word essay on the topic **What is the best way to keep young engineering and geoscience professionals in New Brunswick?** It was open to students of any undergraduate engineering and geoscience disciplines attending the University of New Brunswick—Fredericton (UNBF). A total of five submissions were received and were judged on the basis of creativity, content and presentation.*

The winning paper was submitted by **Owen Scott**, who graduated in May 2008 from UNBF's civil engineering program. Here is his submission (with minor text edits):

Fredericton Branch Chair, **Tammy Paradis, P.Eng.**, presents a certificate of award and cheque for \$500 to **Owen Scott**.



What can be done to keep recent engineering and geoscience graduates in New Brunswick? This question can be answered in many ways from many different angles.

Firstly though, it is important to note that almost intrinsically, there are some features of life in New Brunswick that will not appeal to every New Brunswick engineering/geoscience student, and that many of these features are impossible to change, at least in the short run.

Students come to this province from all over the world, and it is understandable that after finishing their degrees, many of them will return to their respective provinces and countries. Additionally, the current socio-economic situation in New Brunswick is not at the level of other parts of Canada (or the world); thus it is difficult, if not impossible, for New Brunswick engineering/geoscience firms to attract employees solely on the basis of salary and benefits.

However, that does not mean that each round of graduates from New Brunswick universities needs to be accompanied by a mass exodus from the province. New Brunswick is an excellent place to live, and many New Brunswick university graduates can be encouraged to stay here. One of the best ways to do this, in my opinion, is to recruit students early in their university careers.

Obtaining summer employment is a priority for many university students. Given the rising costs of attending university, earning a quality summer income can be imperative to maintaining a sound financial situation. Additionally, most career-oriented students are looking for a job in the field in which they eventually intend to work. The best way to ensure that engineering/geoscience graduates end up staying in New Brunswick is to take advantage of this desire for money and experience and employ them here early.

While from a purely financial perspective, hiring a relatively inexperienced student may not seem like the best decision for an engineering/geoscience firm, the benefits in the long run can be substantial. Hiring early allows a company to evaluate potential employees in the field, thereby assessing their long-term worth before having to offer them a contract upon graduation. It also allows companies to invest in their future employees,

build loyalty to the firm, and help students to develop professionally in a manner best suited to the firm's values and desires. More importantly however, employing students early will ensure that more graduates stay in New Brunswick.

The current number of quality summer student engineering/geoscience work opportunities in New Brunswick could be much higher. While there are some opportunities, many students end up pursuing work in western Canada or beyond. It is understandable that New Brunswick firms may not be able to compete on a salary basis with firms elsewhere in the country, but they can compete by providing opportunities that give young engineering/geoscience students a high-quality experience in the profession early in their careers.

Given that Fredericton has a relatively high number of engineering firms compared with many Canadian cities its size, surely work can be found for most summer students who desire it, including those who are in the early years of their programs. The hiring of early year engineering students should not necessarily be seen as only a short-term business decision, but also as an investment in the future availability of engineering graduates for employment in New Brunswick.

People's behaviour is not dictated in its entirety by socio-economic factors associated with salaries and benefits; people learn behaviour.

Right now many New Brunswick engineering/geoscience students are learning that in order to find high-quality employment opportunities, they need to leave New Brunswick. As such, it is not surprising that many carry this belief into their professional careers, while at the same time carrying their belongings and their skills across New Brunswick's borders and into other parts of the country/world.

If New Brunswick engineering/geoscience firms make a conscious effort to provide better employment opportunities for students, it is my belief that more engineering/geoscience graduates will be retained by the province.



APEGNB WELCOMES TWO NEW STAFF MEMBERS



PEGNB is pleased to welcome two new members to our team!

After 12 years of enthusiastic service to APEGNB's membership as a registration coordinator, **Michelle Richard** (*standing centre*) accepted a position with the federal government. Her work ethic, sense of humour and administrative skills will be missed.

UNB and UWO graduate **Kate Sisk** (seated) has assumed the role of APEGNB's registration coordinator. If you have questions about MIT registration or log books, email kate@apegnb.com

Our receptionist, **Stephanie Duguay**, is on maternity leave. **Jon Rennie** will fill in until Stephanie returns in the fall of 2009.

Best wishes to everyone as they enjoy their new jobs (and motherhood!). 



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Mahatma Gandhi

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MONCTON BRANCH

Maryse Doucet, P.Eng. – Chair

T

he Moncton Branch has certainly been busy in the last few months preparing, attending, and hosting events.

In April, the Branch entered a team in the 14th **Atlantic Engineering Hockey Tournament**, which took place in Fredericton from April 11 to 13. Our team was hoping to improve on last year's performance, a loss in the bronze medal game. We ended up tying both Saint John and Halifax White, and beating Acadie-Bathurst 2 to give us four points for the tournament. This left us in a multi-team tie for third place, where the small goal spread eliminated us from the crossovers. The tournament was very well organized and there was good balance between all the teams. Good job guys and congratulations to the Fredericton Pylons who won the tournament! Hope to see everyone again next year in Sydney, Nova Scotia.

As spring rolled in, the Moncton Branch held its **Annual General Meeting** at Boomerang's

Steakhouse on May 6, where the following people were elected for the upcoming year:

2008-2009 MONCTON BRANCH COUNCIL

- | | |
|--------------------------------------|---------------------------------|
| Chair | Maryse Doucet , P.Eng. |
| Vice Chair | David Kozak , P.Eng. |
| Past Chair | Philippe Losier , P.Eng. |
| Secretary | Geneviève McIntyre , MIT |
| Treasurer | Pierre Plourde , P.Eng. |
| Professional Development | To Be Determined |
| Social Committee | Rudina Lolja , P.Eng. |
| Social Committee | Véronique Haché , MIT |
| Communications and Website | Tina Levesque , MIT |
| Provincial Councillor | Mark Bellefleur , P.Eng. |
| Provincial Councillor | John Gallant , P.Eng. |
| Branch Councillor | Serge Doucet , P.Eng. |
| Université de Moncton Representative | To Be Determined |

On June 6, the Moncton Branch also hosted its **Annual Lobster Supper**, a real success with more than 90 people in attendance. It was a great evening, with good food, and good company.

Annual Lobster Supper at Université de Moncton on June 6.

The **Annual Golf Tournament**, another one of the Branch's signature events, will be held September 19 at the Memramcook Golf Course. So mark your calendars now, take out your clubs, and join us for this fun event! This is the perfect opportunity to meet colleagues and friends from your Branch. The details and registration form will be sent to members shortly via email, and will also be posted on the Moncton Branch web page of the APEGNB website (www.apegnb.com).

If you wish to be added on the Branch email list, please don't hesitate to contact **Tina Levesque**, MIT, at Tina.Levesque@canadapost.ca.



Souper annuel au homard à l'Université de Moncton le 6 juin.

Le **tournoi de golf**, un autre événement bien populaire auprès des membres de la section de Moncton, aura lieu de 19 septembre au terrain de golf de Memramcook. Notez dès maintenant cette date dans votre calendrier, sortez vos bâtons, et venez vous joindre à nous lors de cet événement fort intéressant! C'est l'occasion idéale de rencontrer d'autres ingénieurs de la section. Les détails du tournoi et le formulaire d'inscription seront bientôt envoyés aux membres par courriel, et seront également disponibles sur la page web de la section de Moncton du site de l'AIGNB (www.apegnb.ca). Si vous désirez ajouter votre adresse courriel à la liste de la section de Moncton, n'hésitez surtout pas à contacter **Tina Levesque** à l'adresse courriel suivante: Tina.Levesque@canadapost.ca



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Summer/Fall 2008

RAPPORT DE LA SECTION DE MONCTON

Maryse Doucet, ing. – présidente

L

e conseil de la section de Moncton a été bien occupé au cours de ces derniers mois avec les nombreuses activités qui ont eu lieu et avec la

préparation d'activités à venir.

En avril, la section de Moncton fut bien représentée avec l'équipe qui a participé au **Tournoi annuel de hockey des ingénieurs de l'Atlantique**, tournoi tenu à Frédéricton du 11 au 13 avril. Notre équipe espérait améliorer sa performance, ayant frôlé la médaille de bronze l'an dernier. Nous avons, par contre, fait deux matchs nuls contre les équipes de Saint-Jean et Halifax White puis nous avons gagné contre l'équipe d'Acadie-Bathurst 2, pour terminer avec un total de 4 points au tournoi. Ceci nous laissa en égalité avec quelques équipes pour la troisième place, mais l'écart minime entre les pointages nous a éliminé de la course. Le tournoi était très bien organisé, puis il y avait un excellent équilibre entre les équipes. Beau travail les gars, et félicitation au Pylons de Frédéricton, grand

gagnant du tournoi! On espère tous vous revoir l'an prochain à Sydney, en Nouvelle-Écosse.

À l'arrivée du printemps, le conseil de la section de Moncton a tenu son **Assemblée générale annuelle** au Boomerang's Steakhouse le 6 mai et a élu le conseil 2008-2009:

- | | |
|---|--------------------------------|
| Présidente | Maryse Doucet , Ing. |
| Vice-président | David Kozak , Ing. |
| Président sortant | Philippe Losier , Ing. |
| Secrétaire | Geneviève McIntyre , IS |
| Trésorier | Pierre Plourde , Ing. |
| Développement professionnel | À déterminer |
| Comité social | Rudina Lolja , Ing. |
| Comité social | Véronique Haché , IS |
| Communication et site web | Tina Levesque , IS |
| Conseiller provincial | Mark Bellefleur , Ing. |
| Conseiller de section | John Gallant , Ing. |
| Représentant de l'Université de Moncton | Serge Doucet , Ing. |
| | À déterminer |

Le 6 juin, la section de Moncton a également tenu son **Souper annuel au homard** – un vrai succès avec plus de 90 personnes présentes. Quelle belle soirée et quel bon repas en bonne compagnie.

SAINT JOHN BRANCH



Chad Connors, P.Eng. – Chair



gain, I would like to thank **Kim Kimball**, MIT of the Saint John Branch Committee, who put together our spring report.

Fall has arrived and the summer was spent working in the garden, lounging on the beach, and supervising construction projects. We've kept ourselves busy here in the Saint John area these past few months too with plenty of Branch events and we have no intention of slowing down now.

In May, we arranged for a **fossil tour** of Gardener Creek, guided by **Randall Miller**, P. Geo., from the New Brunswick Museum. The weather was warm; there was a free lunch; and there were plenty of fossils for the geology, archaeology, or palaeontology enthusiast to discover. The event was a success with 20 people in attendance and a huge amount of positive feedback. We're already thinking about having another tour later this fall!

In June, we hosted our annual **June Dinner**, a cruise and casino night this year. The

weather was gorgeous as we left port at 6:30 p.m. aboard the M.V. *Voyageur II* for a leisurely meal along the Saint John River. We were even able to enjoy the river scenery as there was, miraculously, no fog. The real fun started after supper with the casino that was set up on board. Guests enjoyed a bit of fun, laughter, prizes, and a bit of the rum. Prizes were donated to the casino from APEGNB, ADI, Moosehead, and other regional companies. We would like to thank **Holly Young**, P.Eng., for organizing the event and **Lisa Frazee**, P.Eng., for her auctioneering skills.

The next event was the **July Golf Tournament**. Engineers all over Saint John came to

Rockwood Park Golf Course on July 26. Teams played an 18-hole Texas scramble (some with more finesse than others) before enjoying some wonderful cooking and, of course, prizes.

We had a short summer vacation in August, but are back in full force for the fall. We have a whole list of new ideas for events and technical sessions for the coming year. In fact, planning for the **annual Christmas party** is already underway.

Join our Facebook group, Saint John Branch-APEGNB, to keep up with Saint John Branch events and news or check the Saint John Branch website at <http://saintjohn.apegnb.ca>.



Michelle Paul-Elias, P.Eng., (left) thanks **Holly Young**, P.Eng., organizer of the June Dinner Cruise and Casino Night.



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Summer/Fall 2008



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NORTHWESTERN BRANCH

Eric Ouellette, P.Eng. – Chair

E

ver since Guinness World Records notified us in April that our monster ice igloo captured the world record, Branch activities have centred around maximizing

the impact of this image-building event for the engineering profession. In addition to widespread local and regional media coverage, APEGNB's world-record igloo was featured on page 18 of the August *Readers Digest*!

Here are a few other igloo-related updates:

IGLOO VOLUNTEER PARTY

All volunteers who helped with the construction of APEGNB's world-record ice igloo or simply helped during the weekend of the APEGNB Igloo Building Competition gathered in Grand Falls on August 9 for a volunteer appreciation party.

Branch members who weren't able to participate in this year's event, but want to get involved in the upcoming 2009 event, are invited to provide us with your coordinates. Volunteers are crucial to the success of this event and branch members are especially encouraged to get involved.

To volunteer or get more information, please contact **Eric Ouellette**, P.Eng., at:

Tel: 506 473-1597
Cell: 506 475-5654
erichris@rogers.com
www.igloocompetition.ca

IGLOO COMMEMORATIVE PLAQUES:

To comply with Guinness World Records' judging criteria, we had to enlist the help of two prominent people from our area to confirm the measurements of our igloo. **Hon. Mike Allen** (MP for Tobique-Mactaquac) and **Hon. Ron Ouellette** (NB Minister of Agriculture and Aquaculture) graciously accepted our request to become the event's "measurement officials". As a token of our appreciation, each was presented with a commemorative plaque.



Hon. Ron Ouellette (right), NB Minister of Agriculture and Aquaculture, accepts his world-record commemorative plaque from Eric Ouellette, P.Eng.



APEGNB Northwestern Branch Chair, Eric Ouellette, P.Eng., (left) presents Hon. Mike Allen (MP for Tobique Mactaquac) with a world-record igloo commemorative plaque.

Minister Ouellette also took the opportunity to give the Association a certificate, signed by the Premier, congratulating us on achieving a world record. The Minister also gave us a transcript of his remarks in the legislature the day we were notified by Guinness of our world-record status.

IGLOO SCHOLARSHIPS AND CHARITIES:

As we know, the second annual igloo competition was a huge hit again this year. I am happy to report that with all this success, we will be able to again offset the costs of a university education for deserving students who will venture out into the engineering profession. Three scholarships totalling \$ 3000 will be presented later this year. A \$500 cheque will also be presented to the Fredericton Chapter of Habitat for Humanity. For information on how to apply for the scholarships, please visit the website:

www.igloocompetition.ca



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RAPPORT DE LA SECTION DU NORD-OUEST

Eric Ouellette, ing. – président



Depuis que *Guinness World Records* nous a avisés en avril que notre gigantesque iglou de glace avait obtenu le record du monde, les activités de la section ont visé à maximiser l'incidence de cet événement qui renforce l'image de la profession d'ingénieur. En plus d'une très grande visibilité dans les médias locaux et régionaux, l'iglou de l'AIGNB couronné record du monde a été mis en vedette en page 18 de l'édition du *Readers' Digest* du mois d'août!

Voici quelques autres nouvelles relatives à l'iglou.

FÊTE DES BÉNÉVOLES DE L'IGLOU

Tous les bénévoles qui ont aidé à construire l'iglou de glace de l'AIGNB qui a obtenu le record du monde, ou qui ont simplement donné un coup de main au cours de la fin de semaine du Concours de construction d'iglous de l'AIGNB, se sont réunis à Grand-Sault le 9 août pour une fête en hommage aux bénévoles.

On invite les membres de section qui n'ont pu prendre part à l'événement cette année, mais qui veulent participer à l'événement de 2009, à nous faire parvenir leurs coordonnées. Les bénévoles sont essentiels à la réussite de cet événement et nous lançons une invitation spéciale aux membres de la section pour qu'ils s'engagent.

Pour se porter bénévole ou se renseigner, veuillez communiquer avec **Éric Ouellette**, ing. :

Tél. : 506-473-1597
Cellulaire : 506-475-5654
erichris@rogers.com
www.igloocompetition.ca

PLAQUES COMMÉMORATIVES DE L'IGLOU :

Pour nous conformer aux critères de notation de *Guinness World Records*, nous avons dû recourir à l'aide de deux personnes éminentes de notre région pour confirmer les mensurations de notre iglou. L'hon. **Mike Allen** (député fédéral de Tobique-Mactaquac) et l'hon. **Ron Ouellette** (ministre de l'Agriculture et de l'Aquaculture du

N.-B.) ont gentiment répondu à notre demande d'agir à titre de « mesureurs officiels » de l'événement. En signe de reconnaissance, nous leur avons chacun présenté une plaque commémorative.



L'hon. **Ron Ouellette** (à droite), ministre de l'Agriculture et de l'Aquaculture du N.-B., reçoit sa plaque commémorative du record du monde des mains d'**Éric Ouellette**, ing.

Le ministre Ouellette en a aussi profité pour remettre à l'association un certificat signé par le premier ministre, nous félicitant d'avoir obtenu un record du monde. Le ministre nous a aussi remis la transcription de ses commentaires à l'Assemblée législative le jour où Guinness nous a annoncé la reconnaissance de notre record du monde.



Le président de la section du Nord-Ouest de l'AIGNB, **Éric Ouellette**, ing., (à gauche), présente à l'hon. **Mike Allen** (député fédéral de Tobique-Mactaquac) une plaque commémorative de l'iglou couronné record du monde.

BOURSES D'ÉTUDES ET ŒUVRES DE BIENFAISANCE DE L'IGLOU :

Comme vous le savez, le deuxième concours annuel d'iglous a encore une fois connu un succès gigantesque cette année. Nous sommes heureux d'annoncer que, grâce à ce grand succès, nous serons à nouveau en mesure de compenser les coûts liés à l'éducation universitaire d'étudiants méritoires qui se dirigeront vers la profession d'ingénieur. Trois bourses d'études totalisant 3000 \$ seront présentées plus tard cette année. Un chèque de 500 \$ sera aussi remis à la section de Fredericton d'Habitat pour l'humanité. Pour se renseigner quant à la manière de poser sa candidature aux bourses d'études, prière de consulter le site Web www.igloocompetition.ca.



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ASK THE DPA

Tom Sisk, P.Eng.

Director of Professional Affairs



If an engineer is disciplined in New Brunswick, will our sister associations enforce APEGNB's decision if that engineer moves beyond New Brunswick's borders?

A psychiatrist was barred from continuing to practice in Alberta recently because he is guilty of "unbecoming conduct". However, (the doctor) could still practice in Ontario, where he is also licensed and where the College has not determined whether they will hold a hearing. While the public is expected to trust in the infallibility of self-regulating Colleges, evidently Colleges prefer to get a second opinion about decisions made by sister Colleges. ... Nothing has changed since a similar case in New Brunswick last year. There are still no mechanisms within each province that would enable the disciplinary action of one province to apply in another, at face value, without a new investigation. And yet, if your driver's license is suspended here, it is suspended everywhere.

- Excerpts, column by Ginette Petitpas-Taylor, *Times & Transcript*, May 22, 2008.



A recent piece in a New Brunswick newspaper talked about a medical practitioner in Alberta who had been found guilty of "unbecoming conduct" and had been barred from practice in Alberta. The practitioner was also registered to practice in Ontario and the point of the article was why could he still practice in one jurisdiction while suspended in another, similarly regulated, jurisdiction?

In the case of APEGNB, if a discipline decision is handed down by our Association, it applies to the person disciplined regardless of where s/he happens to be practicing. Using a membership in an adjoining jurisdiction to give the impression of proper registration would be seen as trying to circumvent the intent of the discipline process and a host regulatory body could use the fact of outstanding discipline action in the home jurisdiction to decline registration. But, most importantly, not every discipline ruling includes suspension of the right to practice.

There are, however, some other things which can complicate the situation. We'll discuss several of them here.

First, there is the issue of jurisdiction from a legal standpoint. Because all engineering is regulated at the provincial/territorial level in Canada, each association is limited to regulating engineering/geoscience within its prescribed borders. For example, APEGNB could not independently enter Ontario with the purpose of laying charges against an engineer who resides in Ontario. In this example, the original charge would have to be related to work carried out in New Brunswick and would be pursued here. It's important to note that the investigative and disciplinary process can proceed with or without the willing cooperation of the member complained against. And, resigning from the regulatory body does not prevent the Association from pursuing the former member. The key is whether the person was licensed at the time of the alleged offence.

Secondly, while each regulatory body has a similar legal framework to work within, there are differences as to how different levels of misconduct are handled. In one jurisdiction, there might be a negotiated settlement resulting in a small fine and no suspension while in another, it may result in the suspension of the right to practice for some period of time. As well, there are some conditions that would be pursued as misconduct in one jurisdiction but which are not infractions in another.

To help ensure the protection of the public trust in the engineering profession, there is increased interest in cross-jurisdictional information exchange. More and more, each case of license suspension is reported to all regulatory bodies across Canada for the appropriate action to be taken. Similarly, there is a continuous exchange of information between the regulatory bodies to identify persons who show residence in one jurisdiction but membership in another.

As well, applicants for membership are routinely asked on application forms whether they have an outstanding discipline case against them or whether they have been disciplined in the past. The omission or falsifying of this information is grounds to reject the application. When answered in the affirmative, the Association will normally contact the member's home association to fully understand the details of the case and to determine whether the discipline action affects their ability to safely practice engineering here. While an applicant who is under discipline for incompetence in structural design would not likely be given a license to practice, one who was suspended briefly for failure to pay annual dues would probably obtain a license after some investigating by the Registrar.

An interesting case is the issue of a professional who is registered in one jurisdiction but whose clients are in several other jurisdictions. The usual Engineering Act states that the professional must be registered to provide on-site engineering services in the jurisdiction or when the work is for application in the jurisdiction. If a member from New Brunswick does such occasional work in the Yukon for example, s/he could face enforcement through the courts in the Yukon for practicing without a license, but APEY would have minimal ability to impose a discipline sanction because the person was not a member in the jurisdiction. So, once informed of the case by the Yukon, New Brunswick could charge their member with professional misconduct for failing to abide by the laws in the area in which s/he was practicing.

Having said that, the cases of a suspended member in one jurisdiction going to another to circumvent the discipline process are few and far between. Professional members are very aware of their obligations to both obey the regulations affecting their profession and to report to the appropriate authority any observed breaches of the Act or By-laws.

If you have a regulatory, enforcement or ethical question you'd like answered, e-mail APEGNB's Director of Professional Affairs.

sisk@apegnb.com

By David McNeill in Tokyo

Reprinted from The Independent Thursday, May 1, 2008

WORLD'S YOUNGEST PROFESSOR

Youthful prodigy, clarinet maestro, black-belt martial artist and budding scientist, *Alia Sabur* has astonished her parents and teachers for years with her exploits inside and outside the classroom.

Now, still almost two years shy of being able to buy her first legal drink in her home state in the United States, the New Yorker has been named the world's youngest college professor ever, breaking a record set three centuries ago by a Scottish mathematician.

Korea's Konkuk University has announced that Ms Sabur, 19, (started) teaching physics in June at the Department of Advanced Technology Fusion. The appointment, which was made a few days short of her 19th birthday on February 22, earns the doctoral student a place in the Guinness Book of World Records ahead of **Colin Maclaurin**, a physicist who became professor of mathematics at the University of Aberdeen in 1717.

Few who know her were surprised at the announcement. University graduate at 10, bachelor's degree at 14, masters at 17; Sabur has been "setting records and making history, starting with reading at eight months old", says her website (aliasabur.com). Along the way, she found time to become a concert clarinetist with the Rockland Symphony Orchestra when she was 11. She plays Mozart, but loves U2. "I went to their Vertigo concert," she says on the phone from New York. "It was awesome."

Sabur, a PhD candidate in materials science and engineering, is developing spectroscopy techniques "including nano-tube-based cellular probes" that could be used to zap tumours – a cure for cancer, in other words. At university in the US, she worked with her professor on a cure for Alzheimer's disease.

Last year, while waiting to decide her future, she took a temporary position at Southern University in New Orleans, a black institution that she felt had been neglected by the authorities after Hurricane Katrina. "It is the only university that is still operating out of trailers... the only black public college in New Orleans. I do think that is why it is not as far along as other colleges."

What's her secret? Childlike curiosity, she says. "I just wanted to know how things worked. What is science really? It's how stuff works." She thanks God, and her mom and dad – a retired engineer and a cable television reporter – for her genius. "My parents encouraged me in anything I wanted to do. We believe it is a gift from God... a combination of gift and environment."

The gift has sometimes been a burden. By five, Sabur had outgrown her primary school friends and had to bounce ahead into secondary, where she became, in effect, a misfit, too far ahead of everyone else for scheduled lessons. Colleges refused to consider her so she read in class by herself, and studied Tae-Kwon-Do, becoming a black belt at 9. At 10, she was accepted by Stony Brook University in New York, where she took her stuffed toys along to physics classes.

The Guinness announcement has sparked a deluge of e-mails from curious parents. "They want advice for their kids. I say encourage them at what they're good at." 



BANQUET D'HONNEUR DE L'AIGNB 2008 2008 APEGNB AWARDS DINNER



Nous vous invitons à être des nôtres pour rendre hommage aux nouveaux membres à vie et aux lauréats des bourses d'études et des récompenses de cette année.

Join us for an evening of celebration as we honour our newest life members and recipients of this year's scholarships and prizes.

Jeudi 16 octobre 2008

Delta Fredericton
Fredericton, (N.-B.)
Réception : 18 h
Repas : 19 h

Les parents et amis sont les bienvenus!
45 \$ par personne

Thursday, October 16, 2008

Delta Fredericton
Fredericton, NB
Reception: 6:00 pm
Dinner: 7:00 pm

Friends and Family Welcome!
\$45 per person

For dinner reservations,
please contact APEGNB
by October 10, 2008
at 506-458-8083
or e-mail rachael@apegnb.com

Réservations : AIGNB
au plus tard le 10 octobre 2008
506 458-8083
ou rachael@apegnb.com

APPLAUSE

Sherry Sparks, P.Eng., receives Women of Distinction Award



APEGNB past president, **Sherry Sparks**, P.Eng., was presented with a Women of Distinction Award (Woman in Work category) from the YWCA Moncton during their second annual awards ceremony on May 29, 2008.

The awards recognize women, who through their own initiative, ability and effort, have made exemplary career and volunteer contributions.

Dr. John Leggat, P.Eng., elected CAE President



Dr. John Leggat, P.Eng., FCAE was elected president of the Canadian Academy of Engineering (CAE) at CAE's Annual General Meeting held on June 17, 2008 in Montreal. He was

elected as a Fellow of the Academy in 2004, a member of the executive committee and the Board of Directors in 2006 and he has chaired various committees of the Academy. He is currently president-elect of the International Council of Academies of Engineering and Technological Sciences (CAETS).

Dr. Leggat is an associate consultant with CFN Consultants. Prior to joining CFN in September 2005, he was the assistant deputy minister (Science & Technology) of the Department of National Defence and CEO of Defence R&D Canada.

A native of Montreal, Dr. Leggat received his education at the Royal Military College of Canada and the University of British Columbia in the field of aeroacoustics. He is a graduate of the National Defence College.

During his career, Dr. Leggat has served in a number of appointments in Defence R&D. He has directed programs that have addressed frigate and submarine technology pertaining to noise reduction, hydromechanics, ship structures and materials; as well as defence research programs in radar systems, electronic warfare, communications and space systems. He served 33 years in the Reserve component of the Canadian Forces, retiring in 2001 in the rank of Colonel.

His contributions to science and engineering have been recognized by a number of organizations including the Canadian Acoustical Association, the Canadian Society of Mechanical Engineering, the American

Society of Mechanical Engineers, the Association of Professional Executives of the Public Service, the Engineering Institute of Canada and Professional Engineers Ontario.

The Canadian Academy of Engineering comprises many of the country's most accomplished engineers, who have expressed their dedication to the application of science and engineering principles in the interests of the country and its enterprises. Members of the Academy are nominated and elected by their peers to honorary Fellowships, in view of their distinguished achievements and career-long service to the engineering profession. Members work closely with the other national engineering associations in Canada, and with the other Canadian academies that comprise the *Council of Canadian Academies*.

Tanya Horgan, P.Eng./P.Geo., awarded Broken Paddle by Saint John Dragon Boat Races



APEGNB president, **Tanya Horgan**, P.Eng./P.Geo., was presented the Broken Paddle award August 21 on the shores of the Kennebecasis River by **Jill Logan**, special events coordinator for St Joseph's Hospital Foundation. Horgan received the award for being the "winningest coach" during the

2007 Dragon Boat Festival. Inscribed on the paddle was Tanya "Cherry Picker" Horgan. The environmental engineer for Irving Oil says, "I may have 'cherry picked' some teams but only for their spirit—not their ability to win!"

Danielle Nicholson, MIT, represents New Brunswick at Tournament of Hearts

An engineer-in-training with the New Brunswick Department of Transportation, **Danielle Nicholson**, MIT, and her provincial champion teammates were considered the "rookies" at the prestigious Scotties Tournament of Hearts held February 16 to 24 in Regina. "We were thrilled to be there," says Nicholson. "We gained a lot of good experience and can't wait to get in gear for next year." The team was sponsored by the William Priest Mortgage Team and Jean Coutu Pharmacy.



(L to R): **Sylvie Robichaud** (skip); **Danielle Nicholson**, MIT (third); **Marie Richard** (second); and **Julie Carrier** (lead).

Nancy Black, P.Eng., appointed new president of ACE-Atlantic



Nancy Black, P.Eng., became president of the Association of Canadian Ergonomists—Atlantic Region as of March 2008 with a 2-year mandate.

Ergonomics is recognized for its positive effects on productivity and health and safety in the workplace and elsewhere. Engineering design which incorporates ergonomics helps ensure product and construction success. Regional activities include promoting awareness of ergonomics, providing continuing education opportunities in ergonomics (workshops and an annual spring conference) for members and non-members, and being present at relevant regional tradeshow and conferences.

If you would like to see ACE-A present at a conference or tradeshow, or want to be included on a distribution list for upcoming regional activities open to members and non-members please contact: Nancy.Black@umoncton.ca.

Nancy is also responsible for the programmes in Industrial Engineering (orientations for Civil, Mechanical and Electrical Engineering students and the Industrial Engineering B.Eng. degree) at the Faculty of Engineering, Université de Moncton.

The regional section of this national association is comprised of both students and professionals, including some professional engineers.

Nancy Black, ing., nouvelle présidente de l'ACE – Atlantique



Nancy Black, Ing. est présidente de l'Association canadienne d'ergonomie - région Atlantique depuis mars 2008 pour une durée de deux ans. Cette organisation représente les membres, y

compris des étudiants et des professionnels, incluant des ingénieurs. L'ergonomie augmente la productivité et la santé et sécurité au travail et ailleurs. Une construction ou un produit conçu en respectant l'ergonomie est plus apte à connaître du succès. Les activités régionales visent à augmenter la connaissance d'ergonomie, à fournir des opportunités d'éducation continue (des ateliers et une conférence annuelle au printemps), et à assister aux conférences et

expositions commerciales pertinentes dans la région. Si vous aimeriez inclure l'ACE - A lors d'une conférence ou exposition commerciale ou pour vous faire inclure sur la liste de distribution pour les activités ouvertes aux membres aux non non-membres veuillez contacter Nancy.Black@umoncton.ca Nancy est également responsable des programmes de génie industriel (Orientations disponibles aux étudiants de génie civil, mécanique et électrique et Baccalauréat en génie industriel à la Faculté d'ingénierie, Université de Moncton.

NOTICE

To:
Engineers Considering Work in the US
Re:
NCEES Fundamentals Exam—
Saturday, October 25, 2008

If you're contemplating working in the United States, please be advised that APEGNB will be offering the NCEES (National Council of Examiners for Engineering & Surveying) **Fundamentals Exam**. The eight-hour exam is open to APEGNB members and UNB/UdeM engineering students. The NCEES Fundamentals Exam is the first step to becoming a licensed engineer in the U.S.

The cost is \$175 CAD (incl. Taxes). For more information, contact: **Andrew McLeod** Executive Director—APEGNB mcleod@apegnb.com Tel: 506-458-8083

APPLAUSE

UdeM honours engineers

About 150 civil engineers and industry professionals, including many graduates, attended the recent Université de Moncton engineering faculty annual banquet in Dieppe.

The event honoured **Michel G. Cormier**, P.Eng., a 1994 graduate and vice-president

of the Moncton firm of Crandall Engineering Ltd.

Guest speaker for the banquet was **Eric Poirier**, southwest New Brunswick director for Aliant.

Prizes were awarded to **Alexandre Bouchard** and **Guy L. Arseneau** for the highest academic mark and to **Marie-Christine McLaughlin** for her contributions and leadership.

UdeM students take home prizes from ACE-Atlantic

Engineering students from Université de Moncton who participated with their posters in the Annual Conference of the Association of Canadian Ergonomists – Atlantic region in Fredericton, March 27, 2008. The students in this course were enrolled in industrial, mechanical or civil engineering.

Les étudiants du cours "Conception ergonomique" ont participé avec succès au congrès régionale de l'Association canadienne d'ergonomie – Atlantique à Fredericton le 27 mars 2008. Les étudiants inscrits dans ce cours venaient des programmes de génie civil, mécanique ou industriel.



(L to R) FRONT ROW (première rangée):
Clément Prybyla,
Nicolas Thiébaud,
Pierre O'Brien

BACK ROW (dernière rangée):
Christine Pearson (2nd prize co-author – 2^e prix co-auteur),
Denys Babineau (3rd prize – 3^e prix),
Nancy Black, P.Eng./ling. (professor, Conception Ergonomique),
Marie-Christine McLaughlin (1st prize- 1^{er} prix),
Alejandra Ley Vizcarra (2nd prize co-author 2^e prix co-auteur).

été/automne 2008

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APEGNB Moncton awards Blackett Scholarship

APEGNB's Moncton Branch is pleased to announce that **Patrick Hicks**, a third-year mechanical engineering student from UNB, is this year's recipient of the V.C Blackett Engineering Scholarship. The scholarship, valued at \$1000, is given to a full-time student enrolled in an engineering program at a Maritime university in the two years prior to graduation. The recipient must be a

resident of Albert, Kent or Westmorland Counties or the Parish of Havelock. Recipients must demonstrate financial need as well as involvement in para-academic activities.

(L to R): **Philippe Losier**, P.Eng. (past Branch chair);
Maryse Doucet, P.Eng. (Branch chair);
Patrick Hicks (recipient); **Pierre Plourde**, P.Eng., (Branch treasurer).



Summer/Fall 2008

UNB geology students and professor receive CIM awards

At the 2008 Canadian Institute of Mining and Metallurgy (CIM) Conference & Exhibition in Edmonton, UNB economic geologists won two national awards. **Sean H. McClenaghan** (UNB Geology Ph.D. student), with **Prof. David Lentz**, P.Geo., (UNB Geology), and **Chris Beaumont-Smith** (Manitoba Geological Survey) won the Barlow Memorial Medal for the Best Paper in Economic Geology published by the Institute in any year.

Alex Wills, also a Ph.D. student in Geology, together with **Prof. David Lentz**, P.Geo., and **Gilles Roy** (xstratazinc), won the best student paper in the CIM Geological Society published by the Institute in any year. The citation read, "In recognition of an excellent paper entitled, Felsic Volcanic Chemostratigraphy and Multiple Iron Formation Intersections: Resolving Geometry at the Brunswick No. 6 VMS Deposit, New Brunswick".

The Barlow Medal includes a plaque for the lead author, and the student award receives a cheque for \$1000 from ACTLABS. These projects represent only a fraction of the research completed on mineral deposits in the giant zinc-lead-copper deposits in the Bathurst Mining Camp, which was supported by NB DNR-Minerals, xstratazinc, First Narrows Resources, and Blue Note Mining, with several other mineral exploration companies exploring in this area.

Engineers Canada award recipients

Canada's engineering profession celebrated its own during a gala event on Saturday, May 24, at Québec's historic Capitoile theatre.

The 2008 Engineers Canada Award recipients include six outstanding professional engineers who are working tirelessly to make the world a better place; a top engineering student who is devoted to student activities as well as humanitarian causes; an "intelligent highway"; and a Canadian organization that is a leader in international development.

"These top Canadian engineers have used their skills and experience to make positive changes in the lives of their fellow citizens over the past 30 years," says **Chantal Guay**, P.Eng., chief executive officer of Engineers Canada. "Looking at the award recipients' exceptional accomplishments, it is readily apparent that Canadian engineering excellence is benefiting communities here, and around the world," Guay asserts.

The Gold Medal Award, regarded as the profession's greatest accolade, was received by **Jacques Lamarre**, ing. An officer of the Order of Canada who is the president and chief executive officer of SNC-Lavalin Group Inc., Lamarre has contributed significantly to the promotion of Canadian engineering expertise globally.

APEGNB member, **William M. Butler**, P.Eng., was honoured with the Meritorious Service Award for Community Service. Among his many efforts, Butler has helped develop a program that assists people in developing countries establish sustainable drinking water resources and sanitation facilities.

The Meritorious Service Award for Professional Service was presented to **Digvir S. Jayas**, P.Eng. Widely recognized as one of the world's leading experts in grain storage research, Dr. Jayas is an exceptional

educator and administrator and a world-renowned researcher and presenter.

Catherine Stewart, P.Eng., received this year's Award for the Support of Women in the Engineering Profession. Having blazed trails for future engineers, Stewart is a woman of firsts. She has implemented technological advances for the mining industry, championed environmental stewardship, broke through the proverbial glass ceiling, furthered the cause of women in her field, and was an exemplary leader to the men and women she coached to follow in her footsteps.

Uttandaraman Sundararaj, P.Eng., received the Medal for Distinction in Engineering Education. A professor in the Department of Chemical and Materials Engineering at the University of Alberta, Sundararaj is an exceptional and innovative instructor. A leader who is continually improving the educational experience of undergraduate students, Sundararaj has also been recognized with the University of Alberta's highest teaching honour; the Alexander C. Rutherford Award for Undergraduate Teaching Excellence.

The **Yitzhak Rabin Cross Israel Highway** was awarded this year's National Award for an Engineering Project or Achievement. Known as "The Intelligent Highway," the Yitzhak Rabin Cross Israel Highway is Israel's biggest infrastructure project since 1964. As one of three key players leading this project, award recipient **Gabriel Soudry**, ing., was responsible for 282 subcontracts and agreements involved in the development of this ultra-modern electronic toll highway.

The Young Engineer Achievement Award was awarded to **Stella Chiu**, P.Eng. At the young age of 30 and in Canada for only eight years, Chiu is not only recognized for

her abilities as a professional engineer but for her dedication to her profession and to the community. In just a few years, she has completed several major municipal projects in British Columbia, and is now also the editor of the British Columbia Water and Waste Association's publication *Watermark*.

Jane Polak Scowcroft received the Gold Medal Student Award. Having entered the Faculty of Engineering at the University of Manitoba at the age of 16, Scowcroft is now 21 years old and is the only woman in her class studying computer engineering to graduate this year. She is a young role model demonstrating that women belong in all branches of engineering, and realizes that the future generation is vital in ensuring that positive change happens and continues.

This year, **Engineers Without Borders Canada** received a Special Recognition Award. The organization has fast become a Canadian leader in international development, reaching over 250,000 people in 2007 alone. The organization has also been a vehicle for numerous engineering students to deserve the Engineers Canada Gold Medal Student Award, including **Jane Polak Scowcroft**.

Presented annually since 1972, the Engineers Canada Awards (previously known as the Canadian Engineers' Awards) recognize outstanding engineers, teams of engineers, engineering projects and engineering students who have significantly contributed to the advancement of the engineering profession in Canada.

Engineers Canada is the business name of the Canadian Council of Professional Engineers and is the national organization of the 12 provincial and territorial associations/order that regulate the practice of engineering in Canada and license the country's more than 160,000 professional engineers.

Peter Bischoff, P.Eng., wins Gzowski Medal

Peter Bischoff, P.Eng., a civil engineering professor at the University of New Brunswick in Fredericton has been awarded the prestigious 2007 Casimir Gzowski Medal by the Canadian Society for Civil Engineering (CSCE).

This is Canada's oldest engineering award, which is given annually to the best paper on a civil engineering subject in the areas of surveying, structural engineering and heavy

construction. Dr. Bischoff's paper, "Rational Model for Calculating Deflection of Reinforced Concrete Beams and Slabs," was published in the *Canadian Journal of Civil Engineering*.

"Dr. Bischoff has developed a unique and simple approach to a problem that has existed for many years," said **David Coleman**, P.Eng., dean of engineering at UNB. "This paper represents more than

10 years of research, in developing a rational model for computing the deflection of reinforced concrete. It is a significant step forward, the existing approach has been in use in North America for well over 35 years."

Dr. Bischoff's research may be used internationally, if adopted by the Canadian Design Standard for Concrete Structures, ACI Building Code in America and by Standards Australia.

MOST CANADIAN PASSPORT HOLDERS CAN NOW BE GUARANTORS

On October 1, 2007, Passport Canada implemented a new Guarantor Policy in a continuing effort to improve accessibility to Canadian passport services. This new policy makes it easier for Canadians to find an eligible guarantor, as it allows most Canadian adult passport holders to act as a guarantor. Therefore, if you choose to sign a passport application as a guarantor, you will be signing as a passport holder. You are no longer signing because you are a member of a professional group.

PLEASE NOTE THAT AN ELIGIBLE GUARANTOR MUST:

- be a Canadian citizen 18 years of age or older;
- hold a five-year Canadian passport that is valid or has been expired for no more than one year;
- have been 16 years of age or older when he or she applied for his or her own passport;
- have known the applicant personally for at least two years.

Any family member may act as guarantor, as well as any individual residing at the applicant's address provided he or she meets these specified requirements. As a guarantor, you will now need to provide your passport number, date of issue and expiry date of the travel document when signing passport applications. The passport number is not a personal identifier. It only serves to identify the passport booklet.

Remember, signing a guarantor declaration is a voluntary act of trust. If you feel that you do not know an individual well enough to sign his or her passport application as guarantor, you are under no obligation to do so. Applicants who are not able to secure a guarantor can sign a declaration in lieu of a guarantor.

For additional information, please consult our website at www.passportcanada.gc.ca or call 1-800-567-6868.



PASSEPORT CANADA PERMET À LA PLUPART DES TITULAIRES D'UN PASSEPORT CANADIEN D'AGIR À TITRE DE RÉPONDANT

Le 1^{er} octobre 2007, Passeport Canada a mis en œuvre une Nouvelle politique sur les répondants dans le cadre de ses efforts continus en vue d'améliorer l'accès aux services de passeport canadiens. Cette nouvelle politique aidera les Canadiennes et les Canadiens à trouver un répondant ou une répondante admissible plus facilement, car elle permet à la plupart des titulaires de passeport canadiens adultes d'agir à titre de répondant. Ainsi, si vous choisissez de signer une demande de passeport à titre de répondant, vous signerez en tant que titulaire d'un passeport. Vous ne signerez plus en qualité de membre d'un groupe professionnel.

VEUILLEZ NOTER QU'UN RÉPONDANT OU UNE RÉPONDANTE ADMISSIBLE DOIT :

- être un citoyen canadien ou une citoyenne canadienne de 18 ans ou plus;
- être titulaire d'un passeport canadien de cinq ans qui est valide ou qui est expiré depuis moins d'un an;
- avoir été âgé ou âgée de 16 ans ou plus quand il ou elle a présenté sa propre demande de passeport;
- connaître personnellement le requérant ou la requérante depuis au moins deux ans.

Tout membre d'une famille ou toute personne vivant à la même adresse que le requérant ou la requérante peut agir à titre de répondant, si cette personne satisfait aux exigences énoncées ci-dessus. En tant que répondant ou répondante, vous aurez maintenant à indiquer votre numéro de passeport et les dates de délivrance et d'expiration du document de voyage quand vous signerez une demande de passeport. Le numéro de passeport n'est pas un identificateur personnel – il ne sert qu'à identifier le livret de passeport.

N'oubliez pas que la signature d'une déclaration de répondant est un acte volontaire de confiance. Si vous ne pensez pas connaître une personne assez bien pour signer sa demande de passeport comme répondant ou répondante, vous n'êtes aucunement obligé(e) de le faire. Les requérants qui sont incapables de se trouver un répondant ou une répondante peuvent signer une Déclaration faute de répondant.

Pour de plus amples renseignements, consultez notre site Web à l'adresse www.passportcanada.gc.ca ou composez le 1-800-567-6868.





CONGRATULATIONS

Colpitts Developments
on taking home the top award.

By choosing to build 35 homes with natural gas central heat and hot water, you not only won 'Natural Gas Builder of the Year', you also helped your community. By making the choice to go with natural gas central heat and hot water over electric, you're saving your customers money, and you've spared the environment as much as 470 tonnes of greenhouse gas emissions per year. Thank you for going green with blue.

**Colpitts Developments
Winner - Natural Gas Builder of the Year
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*To find out how you can make a
difference in your community,
call 1-866-343-8427 or visit
naturalgasnb.com*

FÉLICITATIONS

à Colpitts Developments,
gagnant du premier prix.

Avoir choisi de construire 35 résidences avec les systèmes de chauffage central et d'eau chaude fonctionnant au gaz naturel vous a permis non seulement de remporter le prix de « constructeur au gaz naturel de l'année », mais d'aider votre collectivité. En optant pour les systèmes de chauffage central et d'eau chaude fonctionnant au gaz naturel plutôt qu'à l'électricité, vous permettez à vos clients de réaliser des économies en plus d'éviter qu'environ 470 tonnes d'émissions de gaz à effet de serre ne se retrouvent dans l'environnement par année. Merci d'être passé au vert en optant pour le bleu.

**Colpitts Developments,
Gagnant - Constructeur au gaz naturel de l'année
Association canadienne des constructeurs
d'habitations du Nouveau-Brunswick**

*Pour savoir comment vous pouvez faire une
différence au sein de votre collectivité,
composez le 1-866-343-8427 ou
visitez le site gaznaturelnb.com*



At home. At work. Everywhere.
Natural Gas.



Le gaz naturel.
Au travail. Chez vous. Partout.

THE ART OF NEGOTIATING IN CONSTRUCTION

By Robert Allore, P.Eng.



There is almost no aspect of construction that does not directly depend on the negotiating skills of a construction professional, whether it's the owner, engineer, architect, contractor or subcontractor.

The phases or stages between bidding and finishing a project are numerous. It can literally take years to complete the cycle. All projects are different, and negotiating is required throughout the scheduled duration.

The number of books and papers written on the subject of negotiating construction contracts, change orders, and claims would fill volumes.

While not attempting to add to the list, here are some recommendations to assist in the management of construction projects with a view towards successful negotiations of a contract, and the associated change orders and claims.

Most people think negotiating is playing poker and you simply go in with your best poker face. Nothing could be further from the truth. To be a successful negotiator requires preparation and credible, factual and supportable information. This does not come easy. It requires dedicated work.

Preparation

Preparing for negotiations should be treated much the same as preparing for litigation. You can never be too prepared and you can never have too many facts. There is a common adage that states it is more important to be prepared than to be right and it is the preparation for negotiations that lessens the chance of litigation. It is therefore always advisable to start out with the premise that final negotiations will end up in court, and then conduct business accordingly.

Finally, during the process of carrying out the work, do everything possible to avoid the courthouse.

In this context, it is important to conduct business in the following manner:

- **Read** carefully and understand the contract documents. Know the key contract words and definitions. Understand the



It is more important to be prepared than to be right.

sequence of documents in the contract and the importance this has in establishing priorities. Pay strict attention to the notice provisions set forth in the contract. Notice provisions are important to preserve the rights to several forms of entitlement in the contract, especially for additional compensation and extension of time. Numerous notice requirements may be included in the documents, the most common being those dealing with changes, delays, increased costs, equitable adjustments, changed conditions, termination and force majeure.

- **Identify** all situations which appear to lead to contract changes and claims for extras as early as possible to allow all parties maximum time to take corrective action and minimize impact on project cost, schedule and quality.
- At such time as a claim for extra compensation for change orders, delay,

or changed conditions is contemplated it is important that notice provisions in the contract be then made in writing at the earliest possible date. At this time it is advisable to have an attorney provide guidance relative to the proper wording consistent with the contract requirements for notice provisions. Failure to conform to contractual notice provisions may result in the claim being rejected, perhaps years later, even before it is submitted or read. This may occur after spending considerable time and money preparing the claim.

- It is recommended that **CCO (contemplated change order) and CO (change order) systems** be used right from the start of the project. All requests for changes to the contract documents should have a CCO issued by the owner, with the time and date recorded. A monetary value is then entered on the CCO, and it is

returned to the client. Upon acceptance, a CO is issued for the work to be carried out.

- **Avoid hostile or violent verbal confrontations.** Make all important communications in writing. Written communication is critical to the negotiating process. Do not invent new words. As much as possible, use the words as defined in the contract to describe events.
- **Attend meetings and keep notes** in a neat and accurate manner. Record date, names of those in attendance and all pertinent information.
- **Maintain office files** in an accurate, neat and orderly manner.
- **Keep a daily diary**, being careful to clearly note critical details of events, names, weather, etc.
- In correspondence, **establish credibility**, be honest, precise and consistent, know what was previously said, and avoid contradictions.

Negotiating

At some point face to face meetings are mandatory. Meetings allow the proponents to present an explanation of how their respective positions were derived. Know your opponent, determine who the decision maker is in the room and talk to him/her without being discourteous to the others. More than any other aspect of negotiating, it is of prime importance to listen attentively and pay attention to what is being said and what is not being said, and know when to say nothing.

Body language often tells more than words and the eyes tell most everything. Make clear

they like facts, figures and drawings or sketches to study. They make decisions on facts, not emotions.

The premise of conduct in the negotiating process should be the principles of fairness, prudence, honesty, and respect, and the mutual understanding that everyone is entitled to make a profit. Laws or rules do not, as a general rule, govern the process.

In negotiating changes and claims, both sides try to get the best deal and proceed within the general understanding that no one has committed fraud. Although there is no clear authority on basic negotiating principles, there seems to be general agreement with the principles laid out by Fisher and Ury in their book, *"Getting to Yes"*, which are :

1. **Separate the people from the problem.**
Try to know the other side personally and then build a working relationship. Dealing with a friend is quite different from dealing with a stranger. Separating the people from the problem is not something you can do once and forget about; you have to keep working at it. The basic approach is to deal with the people as human beings and with the problem on its merit.
2. **Focus on interests, not positions.**
Behind opposed positions lie shared and compatible interests, as well as conflicting ones. The most powerful interests are basic human needs. Listen and understand the other side's point of view and be open to their suggestions. Successful negotiation requires being both firm and open.
3. **Invent options for mutual gain.**
Identify shared interests and areas of agreement, and then enlarge on them.

based on principle, not pressure.

Concentrate on the merits of the problem, not the mettle of the parties. Be open to reason, but closed to threats. Principled negotiation produces wise agreements amicably and efficiently.

Arriving at a solution involving opposing situations or bargaining positions ultimately requires compromise and flexibility. It is an axiom that a poor settlement during negotiation is better than a good lawsuit.



EDITOR'S NOTE

Bob Allore, P. Eng., was manager of construction for one of Canada's foremost structural and mechanical engineering firms. During his career, he was project manager on a variety of construction projects including structural buildings and bridges, oil refinery vessels, oil rig modules, pulp and paper recovery and power boilers, iron ore handling and processing facilities, hydro-electric, and nuclear power plants. Assignments included proposal preparation, contract negotiations and interpretation, new product development, and foreign negotiations in Finland and with Japanese firms.

The latter part of his career was spent with the National Research Council Canada as a Construction Technology Advisor.

Mr. Allore is presently retired but remains active with issues in the construction sector. He can be contacted at alorer@nb.sympatico.ca

In preparing this article, the author would like to thank the following people for their assistance:

- **Al Morgan**, P. Eng.
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- **Dr. Robert Gascoigne**
(NRC – Halifax, NS),
- **Stephen Beatty**
(Saint John Construction Association)
- **E. Neil McKelvey**, O.C., Q.C.
(Saint John, NB).

and detailed notes during the discussions. The most successful, yet unheralded, approach to construction negotiations is to play it straight, be alert and prudent, and listen carefully.

Most engineers, accountants and project architects are analyzers and when negotiating with them, it is important to understand that they seek accuracy and precision, and

In complex situations, creative inventing is a necessity. Generate many options. Look for shared interests and differing interests to dovetail. Try to make the other side's decision easy.

4. **Insist on using objective criteria.**
Frequently, solutions may be found by researching building codes, standards, decisions of record, etc. The approach is to be committed to reaching a decision

*Body language often tells
more than words and the
eyes tell most everything.*

89th APEGNB Annual Meeting

February 19-20, 2009

Delta Fredericton, Fredericton, NB

SPECIAL GUEST: LEAD INVESTIGATOR OF 9-11 WTC COLLAPSE



Dr. W. Gene Corley, PE
Senior Vice-President, CTL Group
Shelke, Illinois

Dr. Corley is one of the world's foremost experts in analyzing buildings damaged by bombs, earthquakes, fire, and tornadoes. He led the federal investigation into the September 11, 2001, collapse of the World Trade Center's twin towers. He also conducted the investigation of the 1995 bombing and collapse of part of the Murrah Federal Building in Oklahoma City, and served as an engineering expert during the investigation of the 1993 fatal fire at the Branch Davidian complex in Waco, Texas.

His wide range of experience includes evaluation of earthquake- and blast-damaged buildings and bridges; investigation of distress in prestressed concrete structures; evaluation and repair of high-rise buildings, stadiums, silos and bridges; design and construction of repairs for prestressed and conventionally reinforced, precast and cast-in-place concrete, and structural steel facilities and foundations.

The award-winning engineer is licensed in more than 30 states and currently serves as President of the National Council of Examiners for Engineers and Surveyors (NCEES). Dr. Corley has published over 170 papers and books, including more than 90 on bridge design and/or seismic design.

His presentation, *Forensic Study of the New York City World Trade Center Collapse* will answer:

- How did the World Trade Center towers withstand the impact of a 767 airliner for as long as they did?
- Could anything be done to make the twin towers survive longer?
- What did the WTC Building Performance Study Team uncover about the buildings' performance?
- What will make buildings safer?

CATCH THE QUICK WIT OF TONY QUINN ON FEBRUARY 19!



Atlantic Canadian Tony Quinn's hilarious musical stand-up comedy has had audiences laughing and singing along from coast to coast. He has appeared at the Halifax Comedy Fest, on the Royal Canadian Air Force and the Comedy Channel as well as at large-scale corporate venues across Canada. For the last five years Tony has been playing a weekly musical comedy matinee to a packed to capacity crowd on the Halifax waterfront.

Forensic Engineering: LEARNING from LOSS



Association of Professional Engineers and
Geoscientists of New Brunswick
APEGNB

SCIENCE FAIR PARTICIPATION REACHES AN ALL-TIME HIGH IN NEW BRUNSWICK

Submitted by Karla Gimby, Science East

More than 310 students province-wide participated in one of three regional science fairs organized by Science East this year. Events such as the New Brunswick Science Fairs are very important to the future of our province as they help to increase the number of students interested and excited about science. This, in turn, will lead to more youth choosing careers in science, engineering and technology.

This year's regional fairs took place in Saint John, Bathurst and Fredericton and every school district was represented. First place prizes were awarded to 18 projects in Saint John, eight in Bathurst and eight in Fredericton in divisions which included biotechnology, computing & engineering, earth & environmental science, health & life sciences, and physical & mathematical sciences.

These fairs are only possible with the continued support from the volunteers who help organize as well as all of the sponsors who generously contributed to making these events a success.

Science East is grateful to APEGNB for their continued support and appreciates the Association's sponsorship of the Engineering and Computing Division at both the River Valley Regional Science Fair and the Chaleur Regional Science Fair.

At the River Valley Fair, 11 of the 55 projects were in the engineering and computing division. At the Chaleur Fair, five of 76 projects were in the same division.

We were also pleased to have a few APEGNB members participate in both of the science fairs sponsored by the Association as this encourages New Brunswick youth to explore science and engineering in greater depth. **Tom MacNeil**, P.Eng., and **Ray Ritchie**, P.Eng., attended the awards ceremonies in Fredericton and Bathurst respectively to hand out awards and say a few words, while **Greg Snyder**, P.Eng., was a judge at the Fredericton competition.

The winners of the Engineering and Computing Division prizes were:

- **Nathaniel Legere** and **Joshua Liston** from Nackawick Middle School
- **Judith Desjardins** and **Juliane Bischoff** from École Sainte-Anne
- **Dakota Acott** from Hartland Community School
- **Aaron Farkas** and **John Blackmore** from Leo Hayes High School
- **Andrew Mathis** from Fredericton High School
- **Daniel Babineau** and **Alexandre Barrieau** from École Marée Montante
- **Jérémi Dupuis** and **Rémi Carrier** from École Calixte-F.-Savoie
- **Vincent Morneau** and **Justin Collin** from Cité-des-Jeunes –A. –M. Sormany; and
- **Jessy Cormier** from Polyvalente Thomas-Albert School.



The winners of the Engineering and Computing division senior category at the Chaleur Regional Science Fair are presented with their medals: (L-R) **Ray Ritchie**, P.Eng., **Jessy Cormier**, **Justin Collin** and **Vincent Morneau**.



The winners of the Engineering and Computing division senior category at the River Valley Regional Science Fair are presented with their medals: (L-R) **Michael Edwards**, **Tom MacNeil**, P.Eng., **John Blackmore** and **Andrew Mathis**.



The winners of the Engineering and Computing division junior category at the River Valley Regional Science Fair are presented with their medals: (L-R) **Dave Desjardins**, CEO of Science East; **Michael Edwards**, Director of Programming at Science East; **Joshua Liston**, **Nathaniel Legere**, **Tom MacNeil**, P.Eng., **Dakota Acott**, **Juliane Bischoff** and **Judith Desjardins**.

New Brunswick Regional Science Fairs give New Brunswick students the opportunity to put their classroom knowledge into practice and to test out their innovative ideas. Science East appreciates the support it receives from APEGNB's members and looks forward to continue working together to offer superior science fair experiences to the youth of New Brunswick.



STANTEC'S AWARD-WINNING WELL REGENERATION WORK



Stantec won two ACEC–New Brunswick Showcase Awards, announced in April for innovation and sustainability. The awards were given in recognition

for its work in well regeneration, in collaboration with City of Fredericton staff.

The work has been ongoing in Canada's second largest municipal sand and gravel aquifer, located at Fredericton's Wilmot Park Wellfield. Stantec and the water and sewer utility are using Stantec well regeneration methods in order to provide a sustainable water supply. With a multi-faceted strategy, Stantec diagnosed the causes for well deterioration and resulting loss of daily water production. The wells are seeing increased water output, and monitoring efforts are proving the work to be sustainable. Stantec studies have provided significant information about the aquifer and well performance status, allowing the city to accurately predict and plan for, its water supply and demand.

Well regeneration work began in 2005 and is still continuing.



Gil Violette, P.Eng., project manager, checks out the presence of sand in test conditions. The amount of fine sediments in the cones indicate the amount of sand that is present around the mechanical components in the well and geological formation, posing clogging conditions. Well regeneration removes the fines and biological growth and returns the well to stronger pumping capacity.

ADI SYSTEMS INC. IMPLEMENTS NEW WASTEWATER TREATMENT SYSTEM



ADI Systems Inc. is currently working at Ken's Foods in Massachusetts installing new anaerobic membrane bioreactor (AnMBR)

technology. Slated for start-up the end of July, it will increase the current treatment plant's capacity by 60 percent; and will be the first full-scale installation of its kind in North America and the largest such system in the world.

The AnMBR system is a compact high-rate anaerobic treatment process that utilizes Kubota-submerged membranes as the biomass retention and solids-liquid separation mechanism. It is reliable, easy to operate, and integrates well with existing anaerobic reactors, allowing increased capacity. The membranes provide near-absolute separation of solids from the effluent, which in turn provides complete retention of the biomass.

Salad dressing wastewaters present some serious challenges for waste treatment, especially when the owner wants a simple, robust system that is economical, reliable, and offers low operation and maintenance (O&M) costs. Fat, oil, and grease (FOG) coupled with high total suspended solids (TSS) concentrations are the primary characteristics that create the challenge—a challenge that ADI has successfully accepted.

New Brunswick's ADI won out against one of the largest water treatment companies in the world, Siemens (Germany) and its US Filter (USA) division, to design/build the original wastewater treatment plant (WWTP). The initial WWTP consisted of a patented ADI-BVF® anaerobic reactor followed by an ADI-SBR (sequencing batch reactor) aerobic system to meet effluent discharge permit limits. Ken's Foods has experienced continual growth, causing increasing organic loads and flows which resulted in the WWTP having to operate above the design values, (while still meeting the permit limits).

ADI was selected as the sole-source provider for the necessary upgrading required to handle increased flows/loads, which is a testament to the owner's confidence in ADI and its abilities.



UNB ENGINEERING RECEIVES \$1.75 MILLION LEGACY

The faculty of engineering at the University of New Brunswick in Fredericton has received a \$1.75-million gift from former Bathurst residents, the late **Rudolph** (Rudy) and **Theresa Esterbauer**. The bequest will support the departments of civil and mechanical engineering.

"This is a remarkable gift," said **John McLaughlin**, P.Eng., president of UNB. "Two New Brunswickers, whom we did not have the privilege of knowing, made UNB the ultimate recipient of their legacy. Our students for generations to come will benefit from the Esterbauer's extraordinary generosity."

The Rudy and Theresa Esterbauer Fund will provide financial support to graduate and undergraduate students, leverage funds for research grant applications, assist with the development of new and innovative teaching methods, assist with student travel, and purchase new laboratory equipment.

"This wonderful bequest from the Esterbauers will provide our two largest engineering programs with ongoing annual support for student scholarships, facilities upgrades and other important initiatives," said **David Coleman**, P.Eng., dean of engineering at UNB Fredericton. "This generous support will help ensure that our students and programs remain nationally competitive."

The Esterbauers, originally from Austria, immigrated to Bathurst in 1954 where Rudy was an engineer/machinist with Larson Diamond Drilling until 1957. He then went on to work at the then Bathurst Power and Paper as a design engineer in the maintenance department. In the 1970s, Mr. Esterbauer transferred to the Noranda Mine in Murdochville, Que., assuming the position of superintendent of maintenance. Upon retirement, he and Theresa settled in Strathroy, Ontario.

Long-time friend and former Bathurst mayor, **Blair Orser**, fondly remembers the Esterbauers.

"They were private, hard-working people, who were extremely grateful for the opportunities and hospitality offered by New Brunswickers," he said. "They told me of their intent to give back to the people of this province with a gift to the University of New Brunswick. I am sure that Rudy and Theresa would be pleased and honored to know that UNB students will forever be the beneficiaries of their tremendous generosity."



CONTEST CORNER



Summer/Fall 2008 Contest Corner Winners

Jean-Francois Moreau, MIT
Moncton, NB

John P. Campbell, P.Eng.
Saint John, NB

Timothy Dulenty, MIT
Moncton, NB

Jim Knight, P.Eng.
Fredericton, NB

Stewart Jones, P.Eng.
Fredericton, NB

Moncton residents raced to their computers to answer the Spring 2008 *Engenuity* Contest Corner question, **What is the Saxby Gale?**

Congratulations to the winners listed on the left who correctly identified **"B: A devastating 19th-century tropical cyclone that flooded New Brunswick's Tantramar Marsh"**.

A special **Honourable Mention** is in order for **Al Cunningham**, P.Eng., Moncton's director of management systems development engineering who submitted this response along with a photo:



"Moncton was affected by the Saxby Gale in 1869. Approximately 100 lives were lost throughout the Maritimes

particularly in the Bay of Fundy area. There is a plaque in Moncton's Bore Park on Main Street commemorating this flood event. It indicates the height of the tide (when the hurricane hit). It reached a height of 10.08 m as compared with normal high water of 8.0 m. When Bore Park was renovated a few years ago, the flood high water mark was painted around the seating area and is clearly visible. It gives you a clear indication of exactly how high that tide was.

"This event could be repeated during any hurricane season, and combined with global warming and even higher waters, the devastation would be far worse. For example, Champlain Mall would certainly be under water along with most of downtown Moncton. A recent disaster planning exercise

focused on just such an event and it's one we are very aware of but pray it never happens.

"The 'Saxby Gale' pre-dates the naming of hurricanes, as is done today, so it was given its name in honour of **Lieutenant Stephan Saxby**, Royal Navy, who wrote a letter of warning on Christmas Day, 1868, almost a year in advance of the storm that occurred on the night of October 4 - 5th, 1869."

If you'd like to be the proud owner of your very own APEGNB prize package, tell us:

WHAT IS THE NAME OF THE LARGEST WHIRLPOOL IN THE WESTERN HEMISPHERE?

- A Corryvreckan
- B Saltstraumen
- C Naruto
- D Old Sow

To win this season's *Engenuity* prize package, e-mail your answer to melissa@apegnb.com by **October 30, 2008**. The first five correct submissions drawn will win all kinds of cool APEGNB goodies like a square umbrella, ball cap, messenger bag, t-shirt, and more!

ACEC—NEW BRUNSWICK IN REVIEW

CENB renamed ACEC—New Brunswick

As of April 23, 2008, **ACEC-New Brunswick** is the first provincial organization in Canada to rebrand from CENB to ACEC-New Brunswick. ACEC-Ontario and ACEC-British Columbia made the same change in June 2008. The provincial association name change process is expected to continue across Canada.

The new name was made official at this year's 2008 Annual General Meeting in Saint John when a motion passed changing the name of "Consulting Engineers of New Brunswick Inc." to "Association of Canadian Engineering Companies of New Brunswick". Instead of "CENB", the new acronym is "ACEC - New Brunswick".

Accordingly, the French version of the name was changed to "Association des Firmes d'Ingenièrre canadiennes du Nouveau-Brunswick" with the acronym being changed from "ICNB" to "AFIC Nouveau-Brunswick".

The Consulting Engineers of New Brunswick (CENB) was incorporated in 1982. However, as early as 1978, the need for an association representing the interests of engineering companies was being discussed by companies such as ADI, Crandall Engineering, Eastern Designers, Godfrey Engineering, Neill & Gunter and Touchie Engineering.

Executive Director Message

The Board of ACEC- New Brunswick is pleased to welcome our new President **Lee MacWilliams**, P.Eng., of AMEC Earth & Environment and new vice-president, **Bruce Pearson**, P.Eng., ADI Ltd., along with new directors **Serge Levesque**, P.Eng., and **Kelly Ashfield**, P.Eng.

A special thanks to the outgoing president, now past president, **Chris Haines**, P.Eng., for his strong leadership and many contributions to the organization over the past year.

With Chris Haines at the helm and the support of Lee MacWilliams, vice-president; **Bruce Pearson**, P.Eng., director; **Dave Kozak**, P.Eng., treasurer; **Brian Moreau**, P.Eng., secretary; **Michel Dufresne**, P.Eng., director; **David McAllister**, P.Eng., director; and **Roland Leblanc**, P.Eng., ACEC-Canada Representative, CENB built the foundation for your organization to move forward to better serve the interests of both regular and affiliate members.

ACEC—New Brunswick Board of Directors 2008–2009

President	Lee MacWilliams , P.Eng., AMEC Earth & Environment
Vice-President	Bruce Pearson , P.Eng., ADI Ltd.
Past President	Chris Haines , P.Eng., Dillon Consulting Ltd
Treasurer	David Kozak , P.Eng., Terrain Group Inc.
Secretary	Brian Moreau , P.Eng., CBCL Limited, Consulting Engineers
Director	David McAllister , P.Eng., The Maricor Group, Canada Ltd
Director	Michel Dufresne , P.Eng., Roy Consultants Group
Director	Serge Levesque , P.Eng., Opus International Ltd.
Director	Kelly Ashfield , P.Eng., Business New Brunswick
ACEC Representative	Roland LeBlanc , P.Eng., Acadia Consultants & Inspectors Ltd.

Special Events

CENB has had a productive 2008 fourth quarter with an **ACEC Canada reception** being held in Fredericton on March 31 for members, in which **Leon Botham**, CEO, ACEC-Canada, did a state of the country address regarding Canadian engineering companies.

This was followed by the **APEGNB's Annual MLA reception** held in Fredericton and attended by **John Fudge**, P.Eng., ACEC-New Brunswick executive director; **Lee MacWilliams**, P.Eng., president and **Chris Haines**, past president. This reception gave CENB an excellent opportunity to address individual MLAs on important issues to CENB such as the need for Limitation of Liability legislation and Best Practices for engaging engineering companies.



(L to R): Premier **Shawn Graham**; **Andrew McLeod**, executive director, APEGNB; **Lee MacWilliams**, P.Eng., President, ACEC-New Brunswick; **Chris Haines**, P.Eng., past president, ACEC-New Brunswick.

The **2008 CENB Trade Show, Seminars, AGM, Reception and Showcase Awards Dinner** was held on April 23, 2008 in Saint John. This was the most ambitious and best-attended event in the 28-year history of CENB. In excess of 220 people participated throughout the day with 155 guests and engineering company representatives attending the Showcase Awards Gala Dinner.

We want to thank all of the firms that submitted their projects for the 2008 CENB Showcase Awards. To better reflect the work of engineering companies in addressing the challenges of today, the category of **Sustainability** was added to this year's awards program.

Congratulations to this year's
2008 CENB Annual Showcase Award Winners:

Benefit to Society Award

CONSULTANT:	Crandall Engineering
OWNER:	Greater Shediac Sewerage Commission
PROJECT:	Cap-Bimet and Boudreau Ouest Sanitary Sewer Extension Project



(L to R): **Brian Harper**, General Manager, Greater Shediac Sewerage Commission; **Yvon Gautreau**, Commissioner - Greater Shediac Sewerage Commission; **Mike Cormier**, P.Eng., vice-president, Crandall Engineering Ltd. The award was presented by **Peter Needra**, P.Eng., vice-president and general manger, XL Design.

Innovation Award

CONSULTANT: Stantec
OWNER: City of Fredericton
PROJECT: Successful Regeneration of Sand and Gravel Wells



(L to R): **Gil Violette**, P.Eng., Stantec, accepts the Innovation Award from **Barrie Black**, CEO, Innovation Foundation of New Brunswick.

Technical Excellence Award

CONSULTANT: Hatch Mott MacDonald
OWNER: Town of Riverview
PROJECT: Gunningville Boulevard Phases 1 & 2



(L to R): **David Muir**, Town Administrator, Town of Riverview NB; **Radya Rifaat**, P.Eng., Hatch Mott MacDonald Ltd.; **Steven LeBouthillier**, Hatch Mott MacDonald Ltd. Mayor **Clarence Sweetland**, Town of Riverview; **Robert McLure**, P.Eng., Hatch Mott MacDonald Ltd. The award was presented by **Tanya Horgan**, P.Eng./P.Geo., APEGNB president and environmental engineer with Irving Oil Limited.

Sustainability Award

CONSULTANT: Stantec
OWNER: City of Fredericton
PROJECT: Successful Regeneration of Sand and Gravel Wells



(L to R): **Chris Owen**, Stantec; **Jon Keizer**, P.Eng., Stantec; **Marc Colwell**, City of Fredericton; **Danny Lanteigne**, City of Fredericton; **Gil Violette**, P.Eng., Stantec. The award was presented by **Paul Gregory**, Centre for Sustainable Community Development, Federation of Canadian Municipalities



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www.worldwidescience.org

Learn all about the global seas at *The Oceans Alive!* website—created by Boston's Museum of Science.

www.mos.org/oceans

Watch your knowledge of volcanoes erupt at *Volcano World!* Published by the Department of Geosciences at Oregon State University, *Volcano World* is an education and public outreach project of the North Dakota and Oregon Space Grant Consortia.

www.ecoworld.com

Skyscraperpage.com is touted as the world's finest resource for skyscraper and urbanism enthusiasts. Featuring unique skyscraper diagram illustrations, a world-wide buildings database, and one-of-a-kind skyscraper posters, the British Columbian website is a one-stop resource for anybody fascinated by skyhigh superstructures.

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THE ASSOCIATION OF PROFESSIONAL ENGINEERS & GEOSCIENTISTS OF NEW BRUNSWICK

URANIUM EXPLORATION IN NEW BRUNSWICK

Submitted by Dr. David Lentz, P.Geol.
Professor, University of New Brunswick
Department of Geology



Uranium exploration in New Brunswick dates back to the cycle of higher uranium prices that hit the markets in the mid-1970s and continued until the mid-1980s. Those higher prices for uranium, which reached over \$50 CAD per pound, helped find a new deposit type that was very rich in uranium, relative to all known uranium resources at the time.

In the **exploration boom** that hit in the 1970s, northern Saskatchewan was already known for several fault-controlled varieties of vein uranium mineralization located outside the mining town of Uranium City situated on Lake Athabasca.

Eldorado Mining and Refining Limited (referred to as Eldorado Nuclear Limited in the 1960s), which found and then operated the Beaverlodge deposit, had become a crown corporation, with the purchase of stock by the federal government in 1943 during the race for the nuclear bomb. Eldorado was mining the Port Radium polymetallic (and uranium) deposits located on the eastern shores of Great Bear Lake. Those **vein-related uranium** deposits are similar in many ways, therefore, there was considerable interest in uranium exploration early on in northern Saskatchewan and in several parts of the Northwest Territories (now encompassing Nunavut) during the exploration surge in the 1970s.

These huge successes in finding new uranium resources were because of a relatively **unique geological situation** that helped form these uranium resources. These deposits are now widely known as unconformity-type uranium deposits, which, in a relative sense, are the richest, if not the largest deposits in the world. Those six operating mines, with the Cluff Lake operation recently being decommissioned, produce over 50 percent of all uranium resources in the world. The mining operations have several multinational interests driven by major nuclear power corporations worldwide. With the dismantling of Eldorado Nuclear Limited and closure of the Beaverlodge deposits earlier, its assets were merged with the provincially owned Saskatchewan Mining Development Corporation (SMDC). It later became Cameco Corporation. Cameco is considered the largest producer of uranium worldwide and has its headquarters in Saskatoon.

The immense successes in exploration resulted in a **perceived over-supply** and the price of

uranium began dropping in the 1980s and remained very low until recently. However, the tax revenues and derivative employment from uranium mining for Saskatchewan has been nothing less than phenomenal. The very successful decommissioning of the Cluff Lake operation recently, and progress towards the permitting of new operations since the 1980s, overseen by both Saskatchewan and the Canadian Nuclear Safety Commission (formerly Canadian Nuclear Control Board, which is beyond the arm's length of federal bureaucracy) has clearly demonstrated that **uranium mining can be safe**. In fact, there are consulting engineering experts in New Brunswick who have provided expertise on these sites.

Currently, there are **41 countries operating 439 uranium-based nuclear reactors**, producing 16 percent of the world's electrical power, with 34 reactors being built. Decisions on refurbishment of many of the older nuclear reactors are currently being made, just as they have been here at Point Lepreau. In addition to these, more than 90 new reactors have been ordered in these and other countries, with detailed plans for approximately 200 more being proposed by the power corporations.

It is small wonder that **uranium has surged** from a low of \$7 USD per pound, to over \$130 USD per pound within two years, but is temporarily stabilized to near \$60 USD per pound.

Since uranium-generated nuclear power directly relates to energy production, there is an indirect link with the price of other fossil fuels. The **future of uranium is strong** and renowned experts suggest that the price will stabilize at well over \$100 USD per pound in order to spur exploration and development of future resources, especially if governments try to reduce fossil fuel consumption for power generation.

Although exploration for the very high-grade unconformity type uranium deposits will continue in sedimentary basins, like those in the Athabasca region (SK), Thelon basin (NU),

and Hornby Bay (NWT), there has been **phenomenal interest in all types of uranium deposits**, including those known to occur in Atlantic Canada.

In New Brunswick, Shell, British Petroleum, Uranerz, Canadian Nickel, Séru Nucleaire, and Can-Oxy were involved in the earlier uranium exploration boom. In this period, many different types of uranium-bearing mineral occurrences were found throughout the province, some of which occurred near larger communities. Large airborne geophysical surveys, including helicopter- and airplane-based platform multi-parameter spectral radiation surveys were run by companies and by the Geological Survey of Canada, using its skyvan. These were followed up by regional geochemical surveys of streams sediments, tills, soils, and even vegetation, but also included analyzing people's water.

Before the recent exploration boom, there were 35 known mineral occurrences throughout the province (source: *NB Mineral Occurrence Database*) that were found via mineral exploration 25 years earlier with notable levels of uranium. These are grouped into granite-related vein deposits, felsic volcanic-related vein deposits, and Carboniferous-aged sedimentary basin associated reduction front (roll front) deposits, of which the latter two have generated the most interest to exploration companies.

Some of these deposit types can have quite **favourable grades of uranium**, as well as considerable size potential. Recent exploration interests by almost 10 different companies, a few of which are based in New Brunswick, were (are) mainly following up on these occurrences, and other known anomalies from previous geological, geophysical, and geochemical surveys.

More than \$10 million CAD on **uranium exploration expenditures** alone speaks to this potential mineral endowment. Last year, exploration worldwide for uranium exceeded \$700 million dollars, with Canada receiving the lion's share of those exploration expenditures. In addition to the known deposits, several larger scale studies of uranium-bearing systems have been conducted in the geology department at the University of New Brunswick, with several underway presently.

The **earlier surveys** also revealed the looming problems of naturally occurring, but very anomalous values, for uranium, radium, and other heavy metals that were unknown previously. In addition, natural but dangerous levels of radon accumulation in certain dwellings, in particular basements, are of great concern. Both **radium and radon** are daughter products from the natural decay (radioactive breakdown) of uranium and thorium, and are both of major health concern in areas known to be anomalous in uranium and thorium.

Radium is soluble in water and can be mobilized selectively away from zones of uranium enrichment, therefore it can be a groundwater contaminant. If ingested, radium (like barium) is absorbed into bones so long-term or high levels of exposure are a major health concern. These elements are widely known to cause varieties of leukemia.

Uranium, in its pure form, is only very weakly radioactive. Its toxicity is related to its heavy metal chemical toxicity (low) and not its radioactivity (even lower).

Radon is the only gaseous byproduct of uranium and thorium decay, and can differentially be mobilized to near surface areas. **Only in enclosed spaces is radon dangerous to human health**, so accumulation of the heavy gas in basements is of notable concern to those affected. Health Canada and local authorities know that **New Brunswick homes generally have no issues with radon accumulation**, but it is also known that those areas higher in uranium in particular need testing. Based on news releases by the government, there has been uranium, arsenic, and selenium testing of people's water, and apparently results of radium analyses are pending. Radon testing in certain regions is planned for the winter months, when radon typically becomes a more acute issue due to restricted ventilation.

The recent **public consultations**, with New Brunswickers and the NB Department of Natural Resources (NB-DNR) – Minerals Division, mainly in the regions directly affected by anomalous uranium occurring in their communities, made their concerns known about uranium exploration (and possibly

future mining). No doubt this helped bring about the new government regulations on drilling and drilling sites which were recently announced and are welcome by all. As in most cases, the regulations now in place, were already standard practice, so compliance is not an issue.

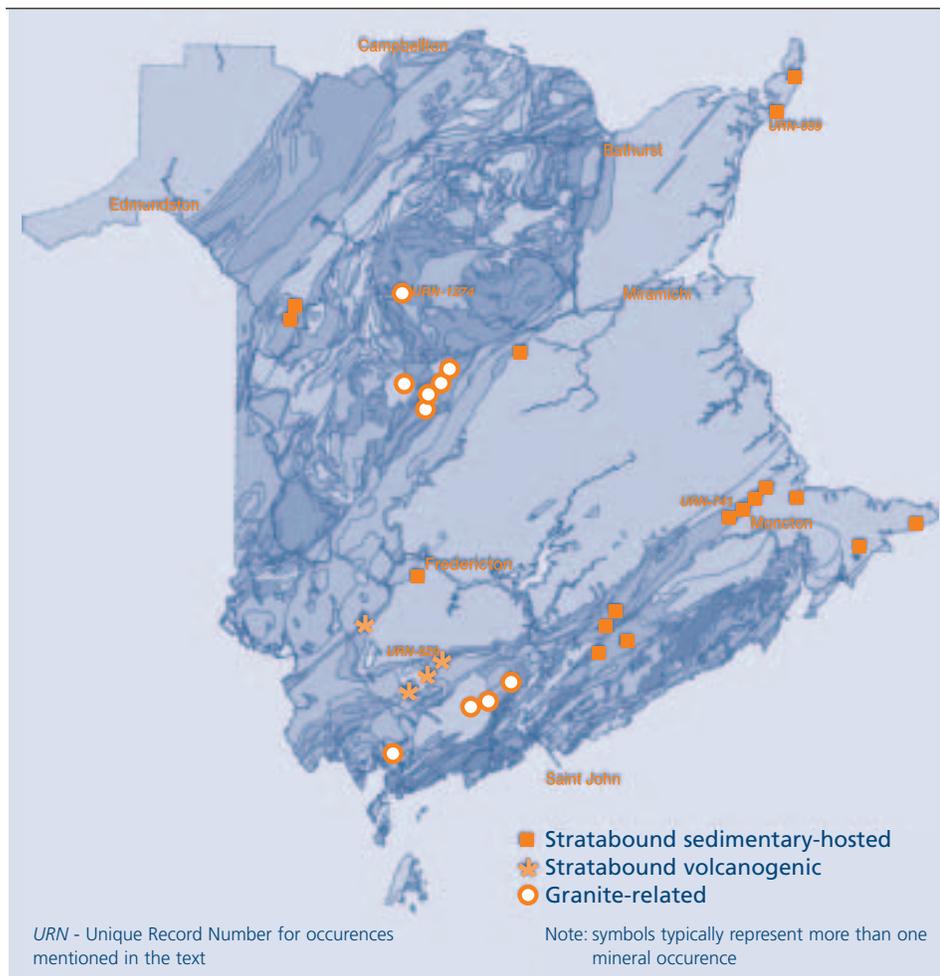
Renewed awareness of **health concerns** associated with radon and radium, as well as the parent uranium that is sought after by companies, will no doubt help bring attention to those affected by naturally higher background uranium in their communities. Because these issues are health-related, action is being taken at all levels and supported by strong community and media interest.

New regulations announced July 4, 2008, by NB-DNR Minister **Donald Arseneault** suspending uranium exploration within watershed areas, around communities, and certain dwellings, inevitably will be embraced by the mineral exploration community as well. For the most part, no company would actually try to define a uranium resource, and then try to develop a uranium mine near any habitation or communities. The exploration companies are more interested in isolated crown land development. Rather, geologists use the information from those regions to help explore outside those areas, because glaciers moved material (i.e., glacial dispersal trains), and ground waters can travel and be traced back to the source, given enough data points to vector with.

From now on, individuals and communities are going to have to rely on their provincial government to test for uranium, radium, and radon, because the **new regulations will inhibit geochemical information being obtained by exploration personnel.** In the past, the results of well-water testing by exploration companies were always released to the owners, especially if there were obvious health concerns. Regardless, the new provincial regulations will be embraced by all companies who really just want to know where they can focus their investor's exploration dollars in New Brunswick (or anywhere else in the world).

An educated public, aware of all the issues, is well known to influence investment decisions of exploration companies. In possible future public consultations, everyone can realize and weigh the potential (extraordinary) economic benefits of mining, while contributing to the discussion of developing resources in an environmentally respectful way if it is indeed deemed safe. Engineers and geoscientists in Canada have become globally recognized in this field and are widely considered to be leaders.

Uranium Occurrences in New Brunswick





Engineers Canada (CCPE) Director's Report

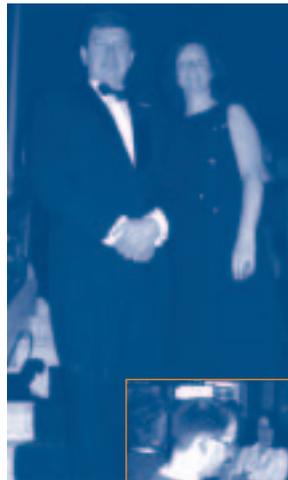
By Brent E. Smith, P.Eng.

This report covers some of the outcomes of the Engineers Canada Board of Directors annual meeting held in Quebec City from May 21 to 24, 2008. The Board discussed a variety of issues of concern to the Engineers Canada membership—the provincial and territorial licensing bodies.

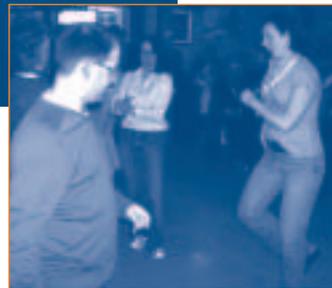
You may recall that in May 2007, the Canadian Council of Professional Engineers rebranded the organization under the new business name, Engineers Canada. Since this rebranding exercise, the organization and the profession have enjoyed an increase in awareness with federal government decision-makers, as well as other key partners in the industry.

It is clear that Engineers Canada is moving forward and that the Canadian engineering profession has made important advancements on numerous issues. Canadians from coast to coast to coast must be made aware of the role engineers and engineering play in their everyday lives and the exciting potential a career in engineering can provide. Consequently, during the Annual General Meeting of members, support was given to a **national advertising campaign** that would raise the profile of the profession with parents—to promote engineering as a career option for their children—and employers so that they may recognize the added value of hiring professional engineers. Other target audiences including students and educators will be addressed in subsequent years.

The campaign, to be launched in the fall of 2008, will carry through 2012 and possibly beyond. The Board confirmed that approval was given in February 2008 for Engineers Canada to cover the first year's costs, to be funded from the unrestricted reserves and combining and drawing down some other designated reserves, with the constituent members (like APEGNB) being asked to contribute up to half of the first year's



Engineers Canada Director, **Brent Smith, P.Eng.**, and APEGNB president, **Tanya Horgan, P.Eng./P.Geo.**, attend the Engineers Canada Annual General Meeting in Quebec City.



APEGNB president, **Tanya Horgan, P.Eng./P.Geo.**, (right) kicks up her heels (think Elaine Benes from Seinfeld) with fellow delegates during one of the social events hosted by Engineers Canada during their Annual General Meeting in May.

funding. Further funding will be determined when the Board focuses on the budget for the year ending December 31, 2009 at its October 2008 meeting.

Further, in terms of promoting our profession, six of Canada's leading national engineering organizations have come together to develop a **national engineering summit** to take place from May 19 to 21, 2009 in Montréal. The summit will be held in conjunction with Engineers Canada's annual meeting. The summit's theme is **Leading a Canadian Future - the New Engineer in Society** and will focus on creating a vision that will help Canada's engineering community contribute to an increased quality of life and to the further development of Canadian society over the next generation. Current indications are that the summit is attracting a high level of attention. Individuals may now register to receive information on the summit at www.engineeringsummit.ca

Another item of interest stemming from the annual meeting is the **Canadian Engineering Accreditation Board's (CEAB) new terms of**

reference and criteria that were approved following constructive discussion. The new criteria bring aspects of outcomes assessment into the accreditation process, balanced with input assessment from the previous criteria. Outcomes assessment requires the educational institution to demonstrate that their graduates possess specified attributes such as "an ability to use appropriate knowledge and skills to identify, formulate, analyze, and solve complex engineering problems in order to reach substantiated conclusions." The Board of Directors asked the CEAB to develop a framework for moving in a measured fashion to the outcomes assessment system. As the Accreditation Board develops this framework, they will continue to consult with the constituent members, the National Council of Deans of Engineering and Applied Science and others.

The federal government is another important partner in moving our files forward. Accordingly, the Board approved the **Bridging Government and Engineers program**, a non-partisan grassroots initiative that links engineers with local members of Parliament, as a permanent program of Engineers Canada.

And the expertise of Canadian engineering is being felt worldwide. Our role as leaders on the issue of climate change adaptation has not gone unnoticed as Engineers Canada, led by **Darrel Danyluk, P.Eng.**, a well-known member of APEGGA and an Engineers Canada past president, has been given the chair of the World Federation of Engineering Organizations' Committee on Engineering and the Environment. During this four-year initiative, sponsored by TD Insurance Meloche Monnex, Engineers Canada will assume leadership in two themes: engineering and climate change adaptation, and environmental and sustainable practices of engineers.

In addition, the Public Infrastructure Engineering Vulnerability Committee published the first **National Engineering Vulnerability Assessment Report**, which includes a main report presenting the results of the assessment to date followed by conclusions and recommendations for next steps. The report is available at www.pievcc.ca

At the national level, Engineers Canada's Board of Directors has extended the mandate of the **Aboriginal Outreach Task Force** to May 2009. The Task Force will continue to provide guidance on the implementation of its recommendations, which include but are not limited to, encouraging outreach programs to aboriginal youth and support to science and math teachers in aboriginal elementary and secondary schools.

After a successful Board workshop in June, Engineers Canada set its priorities and goals for the coming year, 2008-09. I will have the pleasure of participating in the Audit (as chair) and Government Relations Committees

as well as the From Consideration to Integration (as chair) and Synergy Task Forces. The Synergy Task Force goal is to look back at the past 70 years to help us chart a new course of opportunities for Engineers Canada and its members so that we can continue to be leaders in Canadian society.

I, and the other members of Engineers Canada Board, look forward to working with President **Dick Fletcher**, P. Eng. and welcoming **Dan Motyka**, P.Eng., as the organization's president-elect. Mr. Motyka will be working with past president **Tony Dawe**, P.Eng., and their fellow executive committee members, **Ron LeBlanc**, P.Eng.,

and **Zaki Ghavitian**, ing. We will continue to work with our members and partners to promote the profession as an invaluable resource for the public, government and the industry. We thank our members for their ongoing support.

If there are any issues that the membership of APEGNB would like to discuss, or issues that you would like to be considered at the national level, please contact me at cpdirector@apegnb.com. 

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Rapport du représentant au CA d'Ingénieurs Canada (Conseil canadien des ingénieurs)

Par Brent E. Smith, ing.

C

e rapport rend compte de certains des aboutissements de l'assemblée annuelle du conseil d'administration d'Ingénieurs Canada qui s'est déroulée à Québec du 21 au 24 mai 2008. Le conseil a discuté de plusieurs différents enjeux qui préoccupent les membres d'Ingénieurs Canada, c'est-à-dire les instances d'attribution de permis des provinces et des territoires.

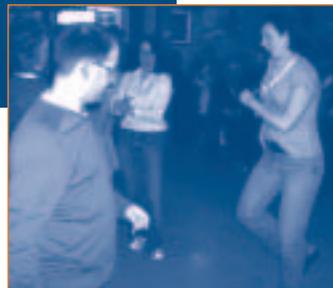
Vous vous rappelez peut-être qu'en mai 2007, le Conseil canadien des ingénieurs a voulu créer une nouvelle image de l'organisme avec la dénomination **Ingénieurs Canada**. Depuis cet exercice de renouvellement de l'image, l'organisme et la profession ont profité d'une meilleure sensibilisation auprès des décideurs du gouvernement fédéral, ainsi que d'autres partenaires de l'industrie.

Il est évident qu'Ingénieurs Canada va de l'avant et, qu'au Canada, la profession d'ingénieur a franchi d'importantes étapes par rapport à de nombreux enjeux. On doit sensibiliser les Canadiennes et les Canadiens d'un océan à l'autre au rôle que les ingénieurs et le génie jouent dans leur vie quotidienne et au potentiel attrayant d'une carrière en génie. Pendant l'assemblée générale annuelle des membres, on a donc appuyé une **campagne nationale de publicité** qui rehausserait le profil de la profession auprès des parents – promouvoir le génie en tant qu'option de carrière pour leurs enfants – et des employeurs pour qu'ils reconnaissent la valeur qu'ajoute l'embauche d'ingénieurs. On s'occupera d'autres publics cibles, dont les étudiants et les intervenants scolaires, dans les années subséquentes.

Avec un lancement prévu à l'automne de 2008, la campagne se poursuivra jusqu'en 2012 et peut-être au delà. Le conseil a confirmé l'approbation accordée en février 2008 à ce qu'Ingénieurs Canada assume les coûts de la première année, financés à l'aide



Le directeur d'Ingénieurs Canada, **Brent Smith, ing.**, et la présidente de l'AIGNB, **Tanya Horgan, ing./géosc.**, assistent à l'assemblée générale annuelle d'Ingénieurs Canada à Québec.



La présidente de l'AIGNB, **Tanya Horgan, ing./géosc.**, (à droite) se défoule (genre Elaine Benes de l'émission Seinfeld) avec des collègues congressistes au cours des activités sociales offertes par Ingénieurs Canada lors de son assemblée générale annuelle en mai.

de fonds tirés des réserves non assujetties à des restrictions et d'autres provenant de réserves déjà affectées à des fins particulières; on demandera aussi aux membres constituants (tels que l'AIGNB) de fournir jusqu'à la moitié du financement de la première année. On établira le reste du financement quand le conseil se penchera sur le budget de l'exercice se terminant le 31 décembre 2009 lors de sa réunion d'octobre 2008.

De plus, du point de vue de la promotion de notre profession, six des principaux organismes canadiens voués au génie ont réuni leurs efforts pour préparer un sommet national du génie qui devrait avoir lieu du 19 au 21 mai 2009 à Montréal. Le sommet se tiendra en conjonction avec l'assemblée annuelle d'Ingénieurs Canada. Le thème du sommet est **L'avenir de la société canadienne façonné par le nouvel ingénieur**. On tentera d'y forger une vision qui aidera la communauté canadienne du génie à fournir son apport à une meilleure qualité de vie et au plus grand développement de la société canadienne au cours de la prochaine génération. Les indications

actuelles sont à l'effet que le sommet suscite un grand niveau d'intérêt. Les particuliers peuvent déjà s'inscrire pour obtenir l'information relative au sommet au site www.engineeringsummit.ca.

Un autre point d'intérêt qui découle de l'assemblée annuelle est le nouveau mandat du **Bureau canadien d'accréditation des programmes d'ingénierie** (BCAPI) et ses critères qui ont été approuvés par suite d'une discussion constructive. Les nouveaux critères font entrer certains aspects de l'évaluation des résultats dans le processus d'accréditation, en équilibre avec l'évaluation de l'apport issue des anciens critères. L'évaluation des résultats exige que les établissements éducatifs démontrent que leurs diplômés ont acquis les attributs spécifiés tels que « *la capacité de se servir des connaissances et des compétences appropriées pour repérer, formuler, analyser et résoudre de complexes problèmes de génie, afin d'en arriver à des conclusions corroborées.* » Le conseil d'administration a demandé au BCPAPI d'élaborer un cadre pour passer progressivement à un système d'évaluation des résultats. Pendant que le bureau d'accréditation élabore ce cadre, il continuera de consulter les membres constituants, le Conseil canadien des doyens d'ingénierie et de sciences appliquées, ainsi que d'autres intervenants.

Le gouvernement fédéral est un autre partenaire important pour faire avancer nos dossiers. Ainsi, le conseil a approuvé le programme **Rapprocher le gouvernement et les ingénieurs**, une initiative non partisane de la base qui fait le lien entre des ingénieurs et leur député fédéral, en tant que programme permanent d'Ingénieurs Canada.

Et le savoir-faire du génie canadien a des effets de par le monde. Notre rôle en tant que chefs de file sur la question de l'adaptation au changement climatique n'est pas passé inaperçu alors qu'Ingénieurs Canada, dirigé par **Darrel Danyluk, ing.**, un membre fort bien connu de l'APEGGA et ancien président d'Ingénieurs Canada, a été porté à la présidence du comité sur le génie et l'environnement de la Fédération mondiale des organisations d'ingénieurs. Au cours de cette démarche sur quatre ans, parrainée

par TD Assurance Meloche Monnex, Ingénieurs Canada prendra les devants sur deux thématiques : génie et adaptation liée au changement climatique, et pratiques écologiques viables chez les ingénieurs.

De plus, le Comité sur la vulnérabilité de l'ingénierie des infrastructures publiques a publié le premier **Rapport national d'évaluation de la vulnérabilité de l'ingénierie**, qui comprend un rapport principal présentant les résultats de l'évaluation à ce jour, suivi de conclusions et de recommandations en vue des prochaines étapes. On peut se procurer le rapport au site www.pievc.ca.

Au plan national, le conseil d'administration d'Ingénieurs Canada a prolongé le mandat du **groupe de travail sur les relations avec les autochtones** jusqu'en mai 2009. Le groupe de travail continuera d'apporter une orientation à la mise en œuvre de ses recommandations, qui comprennent, entre autres d'encourager les programmes de

sensibilisation auprès des jeunes Autochtones et d'appuyer les enseignants de sciences et de mathématiques dans les écoles autochtones primaires et secondaires.

Après un atelier fructueux du conseil en juin, Ingénieurs Canada a fixé ses priorités et ses objectifs pour l'année 2008-2009. J'aurai le plaisir de prendre part au Comité de vérification (à titre de président) et au Comité des relations gouvernementales, ainsi qu'au groupe de travail De la considération à l'intégration (à titre de président) et à celui de la synergie. L'objectif du groupe de travail sur la synergie est de se pencher sur les 70 dernières années pour nous aider à dresser un nouveau parcours de possibilités pour Ingénieurs Canada et ses membres, de sorte que nous puissions rester chefs de file dans la société canadienne.

Tout comme les autres membres du conseil d'Ingénieurs Canada, j'ai hâte de travailler avec le président **Dick Fletcher**, ing., et de

souhaiter la bienvenue à **Dan Motyka**, ing., à titre de président élu de l'organisme. M. Motyka travaillera avec le président sortant, **Tony Dawe**, ing., et ses collègues du Comité de direction, **Ron LeBlanc**, ing., et **Zaki Ghavitian**, ing. Nous continuerons de travailler avec nos membres et partenaires pour promouvoir la profession en tant que ressource inestimable pour le public, les gouvernements et l'industrie. Nous remercions nos membres de leur soutien continu.

Pour tout aspect que souhaiterait discuter un membre de l'AIGNB, ou pour toute question que vous aimeriez voir soulevée sur la scène nationale, prière de communiquer avec moi à l'adresse ccpedirector@apegnb.com.



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CCPG News Release

Submitted by Bruce Brosner, P.Geo.

The Canadian Council of Professional Geoscientists (“CCPG”) is pleased to announce the recent unanimous decision of its Board of Directors to accept proposed revisions to the geoscience knowledge and experience requirements for professional registration in Canada

GEOSCIENTISTS APPROVE REVISIONS TO KNOWLEDGE AND EXPERIENCE REQUIREMENTS FOR REGISTRATION

This funding allowed for extra working meetings of CGSB and a national consultation meeting with stakeholders to provide input on the proposed revisions, and also facilitated investigation of a competency-based approach to licensure requirements. The HRSDC funding agreement is also enabling on-going work on inter-jurisdictional mobility for geoscience professionals licensed in Canada.

greatly facilitate and ease the transfer of licenses between jurisdictions.

Key elements of the revised document are:

- Clear grouping of knowledge requirements for each of the three principal streams of geoscience practice (geology, geophysics and environmental geoscience);
- Groupings that cover and list knowledge expectations in Foundation and Additional Science; Foundation and Additional Geoscience, and Other Science and Geoscience;
- Brief descriptors of the knowledge outcomes expected in each topic;
- A principle-based approach to setting out expectations for geoscience experience prior to independent practice.

The full text of the revised document is available on the CCPG website at www.ccpq.ca.

While the document is primarily prepared as a common reference for the regulators, its other purpose is as a guide for students in the geosciences, geoscience educators and geoscience curriculum developers, and those requiring general information in advance of applying for licensure with an individual regulator and others in the broader public.

The mission of CCPG is to develop consistent high standards for licensure and practice of geoscience, to facilitate national and international professional mobility, and to promote recognition of Canadian geoscientists.



Commenting on the knowledge and experience revisions, the president of CCPG, **Dr Bruce Broster**, P.Geo. said, “We are delighted to see these revisions come about. They provide the profession with a new national document that represents consensus between all the regulators as to the commonly expected body of knowledge in geoscience, and breadth and depth of geoscience experience, that a candidate should demonstrate when they apply for professional licensure anywhere in Canada. Specific licensure requirements in each of the provinces and territories are still set by law in that jurisdiction, but with this document we have consensus on what the profession as a whole expects in the area of knowledge and experience, and geoscience competencies, for safe and effective practice, and protection of the public.

“The CGSB has done a great job of providing CCPG and our member associations - the regulators - with a clearer more concise consensus document on requirements, while at the same time introducing greater flexibility to reflect the necessities of a profession that is broad yet specialized, and which is ever evolving”.

Dr. Broster concluded by saying, “Having these revisions agreed to and in use by the regulators for initial registration decisions will, over time,

The new revisions are set out in the CCPG document entitled “*Geoscience Knowledge and Experience Requirements for Professional Registration in Canada*” which will replace the previous document set out for that purpose entitled “*Recommended Minimum Requirements of Geoscience Knowledge and Work Experience for Professional Practice*”, which had been in use since 2000.

Work on these revisions has been the focus of intense activity over the past three years at the Canadian Geoscience Standards Board (CGSB), a standing committee of CCPG which is made up of representatives from each of the 10 constituent associations of CCPG that regulate the practice of professional geoscience in each of the 11 provinces and territories in Canada where licensure applies. The original requirements document, which was released in 2000, was developed in the late 1990s, at a time when regulation of the geoscience profession was still evolving across Canada. In 2005, the five-year mandatory review, by CGSB, of this documentation commenced.

During the past 15 months, the revision project has benefited from contribution funding from Human Resources and Social Development Canada (“HRSDC”) as part of a funding agreement with CCPG under HRSDC’s Labour Mobility Division.

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Communiqué du CCPG

Par Bruce Broster, géosc.

Le Conseil canadien des géoscientifiques professionnels ("CCGP") se fait un plaisir de vous annoncer la décision récente et unanime des directeurs d'accepter les modifications proposées aux exigences de connaissances et expériences requises pour l'inscription professionnelle au Canada.

Les amendements sont décrits dans le document du CCPG intitulé "Geoscience Knowledge and Experience Requirements for Professional Registration in Canada" (disponible uniquement en anglais), qui vient remplacer le document précédent intitulé "Recommended Minimum Requirements of Geoscience Knowledge and Work Experience for Professional Practice", en usage depuis l'an 2 000.

Durant ces trois dernières années, le Conseil des normes géoscientifiques canadiennes (CNGC), un comité permanent du CCPG, composé de représentants de chacune des 10 associations constituantes du CCPG, responsable de la réglementation de l'exercice de la géoscience professionnelle dans les 11 provinces et territoires reconnaissant le permis d'exercice, travaille intensément et avec acharnement sur ces amendements et modifications. Le document original des exigences, publié en 2000, avait été produit à la fin des années '90 alors que la réglementation régissant la pratique de la profession géoscientifique au Canada était en pleine évolution. En 2005, le CNGC débuta une étude quinquennale obligatoire sur ce sujet.

Ce projet a reçu dans les derniers 15 mois des subventions de Ressources humaines et développement social Canada (RHDSC) conformément à l'entente avec le CCPG et la division de la mobilité de la main d'oeuvre de RHDSC. Grâce à ce support financier, le CCPG a pu couvrir une réunion de travail supplémentaire du CNGC et une réunion de consultation nationale avec diverses parties prenantes dans le but de fournir de la rétroaction concernant les amendements proposés. Il a aussi pu mener une étude sur une approche basée sur les compétences en ce qui a trait aux exigences de permis

LES GÉOSCIENTIFIQUES PROFESSIONNELS APPROUVENT LES MODIFICATIONS AUX EXIGENCES DE CONNAISSANCES ET EXPÉRIENCES REQUISES POUR L'INSCRIPTION.

d'exercice. L'entente vis-à-vis de la subvention impliquait également un travail continu au sujet de la mobilité interprovinciale pour les géoscientifiques professionnels agréés au Canada.

Commentant sur les modifications au niveau des connaissances et expériences, le président du CCPG, **Bruce Broster**, géosc., nous confiait : "Nous sommes vraiment heureux de voir enfin ces changements arriver. Notre profession aura finalement un document national qui représente un consensus parmi tous les organismes de régulation sur le corpus de connaissances en géoscience et l'envergure et pertinence de l'expérience en géoscience attendus d'un candidat lorsqu'il fait une demande de permis d'exercice n'importe où au Canada. Bien que les exigences spécifiques liées au permis d'exercice soient toujours telles que prescrites par la loi dans chaque province et territoire, notre document fait état de ce que notre profession exige en matières de connaissances, expériences et compétences géoscientifiques permettant une pratique professionnelle sécuritaire et efficace et la protection du public.

Le CNGC a fait un énorme travail et a réussi à fournir au CCPG et à ses associations constituantes – les organismes de régulation – un document concis reflétant un consensus sur les exigences requises et incorporant une plus grande flexibilité pour faire face aux obligations de la profession qui est tout autant générale que spécialisée et constamment en évolution".

Broster conclut son intervention en ajoutant "Le fait d'avoir les modifications votées et en place à l'usage des organismes de régulation pour les décisions initiales d'inscription nous aidera grandement à long terme dans le transfert des licences entre provinces et territoires canadiens. Cela aidera également le CCPG dans son exploration internationale envers la mise en place d'arrangement de reconnaissance

mutuelle des géoscientifiques professionnels, au nom de ses associations constituantes".

Les éléments-clés du nouveau document révisé sont les suivants :

- Un regroupement précis de connaissances requises pour chacune des disciplines principales de la géoscience pratique (géologie, géophysique et géoscience environnementale);
- Regroupements qui comprennent et énumèrent les connaissances requises en – Science de base et complémentaire; Géoscience de base et complémentaire; et autre science et géoscience;
- Brèves descriptions des résultats d'apprentissage pour chaque sujet;
- Une approche basée sur les principes pour identifier l'expérience géoscientifique requise avant d'établir une pratique géoscientifique indépendante.

Le texte entier du document révisé est disponible sur le site web du CCPG au www.ccpq.ca.

Le document a une double fonction. Bien que préparé, à la base, dans le but de fournir une référence commune aux organismes de régulation, il est également utile comme guide aux étudiants et éducateurs en géoscience, aux didacticiens qui développent les programmes d'enseignement géoscientifique, à tous ceux et celles qui désirent des renseignements avant de faire une demande de permis d'exercice auprès d'un organisme individuel de régulation et, finalement, à toute autre personne dans le grand public.

Le CCPG a pour mission de veiller à l'élaboration continue de normes élevées en matière d'attribution de permis d'exercice et de pratique des géosciences, de faciliter la mobilité des professionnels aux plans national et international et de favoriser la reconnaissance des géoscientifiques canadiens.



OSCO CONSTRUCTION TEAMS UP WITH LOCAL SCHOOL BOARD TO PROVIDE CAD TRAINING

Submitted by *Henrietta Burns, Learning Specialist for Technology School District 8, Saint John.*



School District 8 and the New Brunswick Department of Education are looking forward to tapping into expertise available via local engineering professionals and OSCO Construction, a local group of companies. We hope to establish a viable network that will provide support to our high school and middle school teachers.

Through **OSCO Construction** and local engineers, schools can benefit from the following :

1. Hands- on training for our teachers in software used currently in industry;
2. Opportunities for industry tours for both teachers and students;

3. Expert consultants for student projects and enrichment, and;
4. Co-op placements for high school students interested in pursuing engineering careers.

Middle School Technology Education (MSTE) curriculum in Grades 6 through 8, and Broad Based Technology (BBT) curriculum in Grades 9 and 10, reflect a continuum of learning.

There is an increase in expectations for students according to the nature of the learning process, complexity and sophistication of tasks and the repertoire of strategies and skills students apply to technology experiences.

Modules involving Computer Assisted Drafting and Robotics will be introduced to Middle School technology teachers in 2008-2009. Knowledge and skills gained by students in middle school can be expanded upon in Broad Based Technology, as well as generate interest in related courses in Grades 11 and 12.

Two other provincial and district initiatives, **Co-Operative Education 120** and **New Brunswick Youth Career Connections Program**, provide students with more exposure to careers in engineering. Industry partnerships will be a crucial part of the learning process in developing interest and supporting curricula to prepare students for careers in engineering and construction. 

LE GÉNIE RENDU AMUSANT GRÂCE AU CLUB EURÊKA

Par *Anne-Marie Laroche, ing.*
Professeure adjointe, Département de génie civil, Faculté d'ingénierie, Université de Moncton



Cette année encore, trois écoles de la région de Moncton et de Shédiac ont accueilli le Club Eurêka à l'intérieur de leur mur afin de faire découvrir aux filles de la 3^e à la 6^e année, les sciences et le génie.

Grâce au soutien de l'Association des ingénieurs et des géoscientifiques du Nouveau-Brunswick (AIGNB), le Club Eurêka a pu augmenter son nombre de membres. En effet, 120 filles ont pris part aux sept activités ainsi qu'à la journée découverte. C'est une augmentation de 5 % par rapport à l'année dernière. Les élèves participantes provenaient des écoles Champlain, Monseigneur-François-Bourgeois et Sainte-Bernadette.

Cette année, les animations ont porté sur la poussée d'Archimède, l'électricité statique, les forces qui agissent sur un objet volant, la création de dioxyde de carbone, les molécules de savon et les couleurs.

Lors de la journée découverte, les filles ont pu exercer leur talent en créant un accumulateur d'énergie, une tour de télévision et un puits à eau. Vingt-trois élèves ont pris part à cette journée, qui s'est déroulée le 5 avril à la Faculté d'ingénierie de l'Université de Moncton.

Le Club Eurêka a innové cette année en intégrant dans son équipe de bénévoles, des étudiantes et des étudiants de la Faculté des sciences de l'éducation de l'Université de Moncton. Les animateurs proviennent donc maintenant de trois facultés différentes du campus.

Cette décision a été prise afin de permettre à plus de filles de participer au Club Eurêka, mais aussi dans l'intention de laisser aux enseignantes et enseignants futurs la chance de mettre en pratique leurs connaissances théoriques apprises à l'université, en plus de s'initier aux disciplines des sciences et du génie, domaines moins connus de leur part. De plus, leur venue apporte une expertise du point de vue du rapport avec les élèves, ce qui crée un amalgame enrichissant pour le Club Eurêka.

Nous avons reçu beaucoup de félicitations de la part des directions d'école et des parents des élèves par rapport à la pérennité de cette initiative. L'enthousiasme des jeunes filles envers les activités du Club Eurêka grandit chaque année.

Toutefois, le Club Eurêka ne pourrait pas exister sans le soutien financier de l'AIGNB. Une fois de plus, l'AIGNB a remis un montant de 2 000 \$ au Club

DIVERSIONS

WHERE'S ANDY?



...at the Engineers Canada **Board of Directors annual meeting** held in Quebec City from May 21 to 24, 2008

... on board the M.V. *Voyageur II* for the APEGNB Saint John Branch's **annual June Dinner and Cruise.**



Eurêka, ce qui a permis d'engager une coordonnatrice, Mme **Élise Haché**, étudiante en sciences de l'éducation. Cette somme a aussi servi à l'achat de matériel neuf afin de fournir aux élèves l'équipement essentiel au bon déroulement de toutes les activités. Il est indispensable de reconnaître le travail bénévole des 16 animatrices et animateurs dévoués qui ont offert leur temps, leur énergie et leur passion envers les sciences et le génie et surtout à l'endroit des

élèves des écoles visitées tout au long de l'année. Sans la participation active et volontaire des étudiantes et des étudiants des facultés d'ingénierie, des sciences et des sciences de l'éducation, le Club Eurêka ne pourrait pas exister.

La Faculté d'ingénierie de l'Université de Moncton et le Club Eurêka sont fiers de compter sur le soutien de l'AIGNB. Sans ce soutien et cet encouragement, il

serait difficile d'offrir cette possibilité de découverte des sciences et du génie aux jeunes filles des établissements scolaires français. Cette collaboration est toujours très appréciée et elle permet de promouvoir la profession d'ingénierie dans les écoles primaires francophones de la région de Moncton et de Shédiac.



40 New Brunswick engineers

awarded national fellowships

2008 APEGNB FELLOWS OF ENGINEERS CANADA

Back Row: George Flanagan, P.Eng. Wayne Chambers, P.Eng. Donald Good, P.Eng. Lawrence Pearson, P.Eng. Brian Barnes, P.Eng. Hollis Cole, P.Eng. Wolfgang Falg, P.Eng. Donald Mackay, P.Eng. Elai Duguay, Ing. Kirk Barik, P.Eng. Lyle Smith, P.Eng.

Over Row: Brent Smith, P.Eng. David Crandall, P.Eng. Allan Giberson, P.Eng. John Wheatley, P.Eng. Edward Haggerty, P.Eng. Euan Strachan, P.Eng. Boyd Tuschik, P.Eng. William McNamara, P.Eng. Paul Belyea, P.Eng. Doug Colwell, P.Eng. William Barrett, P.Eng. Michael MacDonald, P.Eng. Frank Wilson, P.Eng. William Paterson, P.Eng. Lee Fraser, P.Eng.

Front Row: Hamiley Wishart, P.Eng. Edward Smith, P.Eng. Robert Burridge, P.Eng. Robert Noll, P.Eng. Albert Stevens, P.Eng. Keith Leighton, P.Eng. Patricia Dineen, P.Eng. Iris Auldair-Bernard, Ing. Sherry Sparks, P.Eng. Edward Stephenson, P.Eng. Arthur Gunn, P.Eng. Sheila McLeod (Honorary)

Short form photo: John Bliss, P.Eng. Joseph Donahue, P.Eng. William Godfrey, P.Eng.



SPECIAL GUESTS (from L to R):

Cdr. Peter Vail, District 2 Ontario RCMP; Gaëtan Lefebvre, P.Eng., executive board member of Engineers Canada; Chantal Guay, P.Eng., CEO, Engineers Canada; Tanya Borgan, P.Eng., P.Eng., APEGNB president; Johanna Hildebrand, ELO Hildebrand, P.Eng., vice-president, APEGNB; Donna Crandall; Dave Crandall, P.Eng., past president, APEGNB; Marie Lemay, P.Eng., emcee and CEO of the National Capital Commission; Sgt. Gilles Blouin, RCMP J Division.

In recognition of their outstanding service and dedication to the engineering profession, 40 New Brunswick engineers and a former APEGNB executive director were appointed Fellows of Engineers Canada during an awards ceremony in Fredericton on May 16, 2008.

This elite group of New Brunswick engineers and senior regulatory staff have made exceptional contributions during their careers and volunteer work to improve the quality of life for all Canadians.

Recipients include former professors, business leaders and government officials. Each has the privilege of using the designation "Engineers Canada Fellow" (FEC).

As the national organization of the 12 engineering licensing bodies, **Engineers Canada** delivers national programs that ensure the highest standards of engineering education, professional qualifications and professional practice. It is the voice of its members, including APEGNB, in national and international affairs. Engineers Canada promotes licensure and a greater understanding of the nature, role and contribution of engineering to society.

Established in 1920, the **Association of Professional Engineers and Geoscientists of New Brunswick** (APEGNB) regulates and governs the practice of engineering and geoscience in the province in accordance with the Engineering and Geoscience Professions Act. APEGNB has approximately 5,000 members.

Association of Professional Engineers and Geoscientists of New Brunswick
Association des Ingénieurs et Géoscientifiques du Nouveau-Brunswick



UNB BAJA TEAM THANKS APEGNB FOR SUPPORT

Submitted by David Dudley, UNB Baja, Team Leader

I would like to extend sincere appreciation for APEGNB's support of the University of New Brunswick's Baja Team.

With your contributions, we were able to successfully attend and complete UNB's inaugural SAE Baja competition. This event marked a great achievement for the department of mechanical engineering at UNB and we are proud that APEGNB was a part of this success.



(L to R) Philippe Richer, Kaiyi Luo, Michel Picard, David Dudley, Gregory Tayes, Haikun Li, Mike Gallant, David Ryan, Simon Kilfoil

In May 2008, the UNB Baja team, consisting of nine members, travelled to Cookeville, Tennessee, to compete against 96 universities and colleges from across the world. Schools from as far away as India and France participated in this prestigious event that Tennessee Tech University graciously hosted.

The Baja teams were tasked with the design and manufacture of a prototype of a rugged, single-seat, off-road recreational vehicle for the non-professional weekend off-road enthusiast.

After the team failed the technical inspection segment of the competition, we worked the whole night through, borrowing tools and equipment to meet the requirements for racing. This was not an uncommon occurrence for a rookie team as we soon discovered when we socialized with other teams.

The following morning, we passed inspection and were ready to compete in the various

events. Our team successfully completed all five events only sustaining minor damages and short trips to the pit to readjust systems to optimize performance for the next event. We were very satisfied with our results, although they were not the best.

On the final day of racing, the four-hour endurance race commenced. We started near the end of the pack due to our placement in the previous day's events. We seemed to struggle through the course's rough terrain and many obstacles. It seemed like every lap pulled us back to the pits to repair the damage. After some driving strategy alterations, we seemed to post quicker every lap thereafter, while at the same time, avoiding the same mistakes as the previous laps.

After a successful weekend of racing, the UNB Baja team ranked 50th out of 96 positions.

From the UNB Baja team and the Department of Mechanical Engineering at the University of New Brunswick, we would like to thank the APEGNB members for your generous support, and we hope to partner again in the years to come.

For more updates, videos, and photos, visit our team website at: www.unbf.ca/clubs/baja or contact us at baja@unb.ca.



THEY SAID IT BEST

"A common mistake that people make when trying to design something completely foolproof is to underestimate the ingenuity of complete fools."

—DOUGLAS ADAMS—AUTHOR, 1952-2001

"Let me tell you the secret that has led me to my goal. My strength lies solely in my tenacity."

—LOUIS PASTEUR—CHEMIST AND MICROBIOLOGIST, 1822-1895

"To invent, you need a good imagination and a pile of junk."

—THOMAS A. EDISON—INVENTOR, 1847 - 1931

"Science is the poetry of reality."

—CLINTON RICHARD DAWKINS—BIOLOGIST AND SCIENCE WRITER

"Fear paralyzes; curiosity empowers. Be more interested than afraid."

—PATRICIA ALEXANDER—EDUCATIONAL PSYCHOLOGIST



Quarante ingénieurs du Nouveau-Brunswick reçus Fellows au plan national

FELLOWS D'INGÉNIEURS CANADA 2008 DE L'AIGNB

Devote (rang) : George Horagis, ing.; Wayne Chambers, ing.; Donald Good, ing.; Lawrence Puzan, ing.; Brian Barnes, ing.; Halls Cole, ing.; Wolfgang Felg, ing.; Donald Mackay, ing.; Eliot Degane, ing.; Kirk Ravis, ing.; Lyle Smith, ing.

Range de milieu : Brent Smith, ing.; David Crandall, ing.; Allan Gibson, ing.; John Whalley, ing.; Edward Raggerty, ing.; Euan Stachan, ing.; Boyd Toulton, ing.; William McNamara, ing.; Paul Rejcek, ing.; Doug Corwell, ing.; William Barrett, ing.; Michael Macdonald, ing.; Frank Wilson, ing.; William Patterson, ing.; Lee Esmer, ing.

Preière rangée : Hazelley Whitart, ing.; Edward Smith, ing.; Robert Barnidge, ing.; Robert Neill, ing.; Albert Stevens, ing.; Keith Leighton, ing.; Patrick Davies, ing.; Més Asclan-Bernard, ing.; Sherry Sparks, ing.; Edward Stephenson, ing.; Arthur Gana, ing.; Sheila McLeod, membre honoraire.

Abonnés de la photo : John Ellis, ing.; Joseph Desautels, ing.; William Godfrey, ing.



En hommage à leurs services et à leur engagement exceptionnels à l'endroit de la profession, 40 ingénieurs du Nouveau-Brunswick et un ancien directeur général de l'AIGNB ont été reçus Fellows d'Ingénieurs Canada lors d'une cérémonie à Fredericton, le 16 mai 2008.

Durant leur carrière et dans leurs œuvres bénévoles, les membres de ce groupe d'élite d'ingénieurs et de responsables de la réglementation au Nouveau-Brunswick ont contribué de façon remarquable à améliorer la qualité de vie de l'ensemble des Canadiens et Canadiennes.

Au rang des nouveaux Fellows se trouvent des professeurs, des chefs d'entreprises et des fonctionnaires. Chacune et chacun jouit du privilège d'utiliser la désignation Fellow d'Ingénieurs Canada (FIC).

Regroupant les douze organismes de réglementation au pays, **Ingénieurs Canada** offre des programmes nationaux qui visent à assurer le respect des normes les plus rigoureuses concernant la formation en ingénierie, les compétences professionnelles et l'exercice de la profession. Il agit à titre de porte-parole de ses membres, dont l'AIGNB, aux paliers national et international. Ingénieurs Canada fait la promotion du permis d'exercice, en plus de favoriser une meilleure compréhension de la nature, du rôle et de l'apport des ingénieurs et de leur profession dans la société.

Fondée en 1920, l'**Association des ingénieurs et des géoscientifiques du Nouveau-Brunswick (AIGNB)** réglemente et gouverne la pratique du génie et des géosciences dans la province conformément à la *Loi sur les professions d'ingénieur et de géoscientifique*. L'AIGNB compte près de 5000 membres.

INVITÉS SPÉCIAUX (dans l'ordre alphabétique) :

Agent Peter Kall, GRC, district n° 2 d'Onitococco; **Gaetan LeBelwaie**, ing., membre du comité exécutif d'Ingénieurs Canada; **Chantal Guay**, ing., chef de la direction, Ingénieurs Canada; **Tanya Morgan**, ing. et géoc., présidente de l'AIGNB; **Johanna Heidebrand**; **Ilida Heidebrand**, ing., vice-présidente, AIGNB; **Donna Crandall**; **David Crandall**, ing., président-élu, AIGNB; **Marie Lemay**, ing., présidente de cérémonie et chef de la direction de la Commission de la capitale nationale; **sergent Gilles Ellis**, GRC, district 1.



KVMS ACCEPTS THE ENGINEERING CHALLENGE

Submitted by Michael Albright, P.Eng.

In January 2008, APEGNB put out a call to engineers to mentor Grade 5 students at schools that accepted this year's Engineering Challenge as part of the festivities leading up to National Engineering Week.

I contacted the principal of Keswick Valley Memorial School in Burtt's Corner, Wayne Annis, and the Grade 5 teacher, **Tina McPhee**, to see if they would accept the Engineering Challenge. The answer was an enthusiastic yes!

The Engineering Challenge activity was designed to coincide with the celebrations for National Engineering Week (NEW). NEW is set by Engineers Canada and is usually celebrated during the first week of March each year. The plan was to have the class work on the project over the course of four weeks, but just like in many great engineering works, the weather played havoc with the schedule. That did not dampen the spirits of the students or the teachers.

We stayed the course and completed the challenge on April 4, 2008.

Working in teams, the students were challenged to design, build, and test an engineering prototype of a **MPL (Mechanically Powered Launcher) Catapult!**



The prototype had to accommodate the following design specifications:

- The "capsule" (standard ping pong ball) must be launched by the MPL. A device was required to hold the "capsule" in place.
- Only the materials listed below were

allowed. Decorations were permitted and encouraged, as long as they did not interfere with the function of the MPL.

- The MPL had to fit, completely assembled, into a standard photocopy paper box (432 mm x 279 mm x 225 mm), with the lid on. An oversized MPL would be disqualified.
- All types of launchers were allowed (catapult, trebuchet, slingshot, etc.) but had to be built with the specified materials.
- No modifications were allowed to the payload (ping pong ball).



The teams consisted of three to five students with the following responsibilities:

- **Designer:** With input from the other team members, creates the design and obtains authorization from the teacher or volunteer engineer to proceed with construction. The designer also sketches the team's design drawing.
- **Materials Manager:** Collects and keeps a record of all materials used by the team during construction.
- **Constructor/Builder:** Leads construction of the prototype according to the design drawing plan and includes modifications suggested by team mates.
- **Communications Specialist:** Spokesperson for the team who presents project to others.

The students were given limited construction materials:

- ▶ paper, cardboard, newspaper
- ▶ string, yarn, rope, fabric
- ▶ glue, play-Doh, tape
- ▶ popsicle sticks, tongue depressors, toothpicks, skewers, chopsticks
- ▶ wooden pencils
- ▶ plastics, styrofoam, rubber
- ▶ CDs



- ▶ spools (wooden, plastic)
- ▶ bottle caps (plastic)
- ▶ paint, decorations
- ▶ straws, rubber bands
- ▶ paper clips
- ▶ sand

They could not use:

- ▶ glass
- ▶ metal (except paper clips)
- ▶ mousetraps
- ▶ lumber/wood (except popsicle sticks, tongue depressors, toothpicks, skewers, chopsticks, pencils, spools)
- ▶ construction kits (Lego, Meccano, K'nex, etc.)
- ▶ batteries
- ▶ water

During February and March, the students were introduced to the engineering profession, application of engineering principles and work, proper mechanical drawings, geometry and mathematics. After each team had completed construction of their prototype, the teams presented their work, then tested their MPLs against the other teams in the class. To test the prototypes, each team was given one practice and three shots at three different targets 5 m away: 1 m square; standard photocopy paper box; and a 6x6" basket. Each time they hit the target they received five points. The teams were judged and graded on:

Teamwork: How they worked together as a team (communication) and whether they stayed on task during their working periods. Each student also had to ensure their team members completed their assigned task for the project.

Presentation: Each group had to present their final project. In their presentations, they had to be sure to mention the materials they had chosen and why; the steps taken to complete their final project (including things that worked and didn't work so well); and they had to be sure to speak clearly and answer any questions properly from others.

Drawing: Each group had to include a drawing of their project to scale. The drawing had to be done using a ruler and geometry tools and include a proper border and title box with the group name, the draftsperson's name, date and scale used. All parts had to be properly labelled.



The students really took to the challenge and were very eager to design and build their MPL's. They asked important questions that showed they were trying to figure out the principles behind a catapult and really put a lot of thought into their designs taking into account the key engineering obstacles and construction materials. I too accepted the challenge and built a MPL of my own, presented and tested it with the class. As an engineer I was proud to be part of the challenge with these students. They all deserved a round of applause.

The best overall team was a tie between two teams.

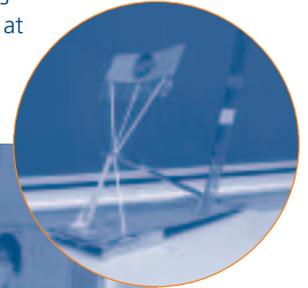


Jonah Rideout, Randy Moss Lyons, Trianda Fox and Olivia Seymour (top left) tied with **Lisa Haines, Mileena Stewart and Haley Philips** (top right). The first group also had the most accurate and powerful catapult.

Ms. McPhee commented that "the students were always eager and excited when time



came to work on the project. It was challenging at first, and for some teams, it required a lot of re-planning and re-thinking their ideas. Through this project, the students learned more about the importance of working together and how important it was to cooperate and to use their time effectively. They also learned a lot more about forces and motion, which is what is currently being studied in class. This was a great hands-on opportunity to further our knowledge about a subject which is interesting but at times hard to understand".



Going for it! The team of **Jonah Rideout, Randy Moss Lyons, Trianda Fox and Olivia Seymour** try for paper box target.



REGISTRATION SUMMARY

MARCH, MAY & JUNE, 2008

Registrations

Bryar, Jean-Luc, ing.
Carrier, Alain, ing.
Carson, Aaron, P.Eng.
d'Entremont, Adam, P.Eng.
Dawe, Melissa, P.Eng.
Dionne, Karen, P.Eng.
Duguay, Marc, P.Eng.
Gorman, Heather, P.Eng.
Haque, Laboni, P.Eng.
Horgan, Tanya, P.Eng., P.Geo.
Ibrahim, Khaled, P.Eng.
Jeong, Jin, P.Eng.
Jones, Rachel, P.Eng.
Kaiser, Elizabeth, P.Eng.
Kervin, Matthew, P.Eng.
Léger, Martin, P.Eng.
Lemay, Jean-Guy, P.Eng.
Lenehan, Jeffrey, P.Eng.
Li, Chunying, P.Eng.
Lowry, Brian, P.Eng.
Luther, Rayna, P.Eng.
MacVey, J. Andrew, P.Eng.
Mawhinney, Spencer, P.Eng.
McHarg, Amy, P.Eng.
Mendez de Lopez, Maria, P.Eng.
Murray, Colin, P.Eng.
Ng, Chien-Ee, P.Eng.
Parks, Craig, P.Geo.
Piercy, Grace, P.Eng.
Pope, Bradley, P.Eng.
Quinn, Heather, P.Eng.
Raymond, Natalie, ing.
Savoie, Marilou, ing.
Smith, Charles, P.Eng.
Smith, Erin, P.Geo.
Speight, Peter, P.Eng.
van Driel, Christopher, P.Eng.
Yao, Qinq, P.Eng.

Transfers-in

Aubin, Jonathan, P.Eng.
Bonham, Jeffrey, P.Eng.
Gilroy, David, P.Eng.
Hickman, Keith, P.Eng.
MacDermott, Thomas, P.Eng.
MacDonald, Andrew, P.Eng.
Merrithew, Robyn, P.Eng.
Pelletier, Sophie, ing.
Poirier, Michel, P.Eng.
Stone, Robert, P.Eng.

Members-in-Training

Adams, Scott W., MIT
Allard, Eric Y., MIT
Arbeau, Elizabeth, MIT
Babineau, André, MIT
Badruddin, Suhail, MIT
Bell, Brady, MIT
Belliveau James, MIT
Belyea, Leah, MIT

Bouchard, Alexandre, MIT
Boucher, Pierre, MS
Brucker, Steven, MIT
Clifford, George, MIT
Cunningham, Patrick, MIT
Dellapina, Mark, MIT
Demers, Thomas, MIT
DesRoches, Jeremie, MIT
Diduch, Timothy, MIT
Doucet, Philippe, MS
Electricwala, Muzahid, MIT
Forster, Shawn, MIT
Fox, Joshua, MIT
Gorman, Mark, MIT
Grant, Benjamin, MIT
Grant, Kendra, MIT
Grant, Marsha, MIT
Greeley, Jason, MIT
Guay, Stephanie, MIT
Hogan, Darren, MIT
Illsley, Sheldon, MIT
Kadhim, Yasir, MIT
Kalafut, Andrea, MIT
Kilfoil, Simon, MIT
Kinnie, Matthew, MIT
Lachapelle, Eric, MIT
Lamarche, Francis, MIT
Landry, Amelie, MS
Losier, Joey, MS
MacLaggan, Andrew, MIT
MacLaughlin, Robert, MIT
McCann, Greg, MIT
McIntyre, Genevieve, MS
McKnight, Kevin, MIT
Melanson, Marc, MIT
Moss, Robert, MIT
O'Brien, Nicole, MIT
O'Callaghan, Ralph, MIT
Phaneuf, Simon, MIT
Pilgrim, Robert, MIT
Price, Justin, MIT
Pugh, Brian, MIT
Robertson, Shaun, MIT
Ross, Tyler, MIT
Roy, Anna, MIT
Tao, Susan, MIT
Thompson, Aaron, MIT
Thompson, Adrian, MIT
Thorne, Brennan, MIT
Watson, Charles, MIT
Weatherby, James, MIT
Wilcox, Kevin, MIT
Wood, Timothy, MIT

Licences

Agbayani, Nestor, P.Eng.
Alvarez, Luc, ing.
Antonini, Mark, P.Eng.
Audley, Gerald, P.Eng.
Bach, Douglas, P.Eng.
Bakke, Raymond, P.Eng.

Behmanesh, Hosein, P.Eng.
Blackmer, Andrew, P.Geo.
Blair, David, P.Eng., P.Eng.
Bruneau, Annie, ing.
Chan, Roger, P.Eng.
Clark, Christina, P.Geo.
Connolly, Kevin, P.Eng.
de Ruyter, Monique, P.Eng.
Demaiter, Leon, P.Eng.
Drover, Matthew, P.Eng.
Edelchteine, Efim, P.Eng.
Edelman, Mike, P.Eng.
Fleurant, Joel, P.Eng.
Francoeur, Joël, ing.
Friesen, Randy, P.Eng.
Gallahue, Michael, P.Eng.
Houasnia, Layachi, ing.
Jung, Alfred, P.Eng.
Kadoch, Arielle, ing.
Kaliannan, Athiannan, P.Eng.
Langlais, Troy, P.Eng.
Lee, Jackelin, P.Eng.
MacDonald, Garry, P.Eng.
Mandelzys, Barry, P.Eng.
Marks, Victoria, P.Eng.
McVeigh, William, P.Eng.
Michaud, André, ing.
Mok, Joseph, P.Eng., P.Eng.
Moore, Sammie, P.Eng.
Myket, Allan, P.Eng.
Nejat, Eric, P.Eng.
Norman, David, P.Eng.
O'Connor, Randy, P.Eng.
Penney, Barry, P.Eng.
Pong, Simon, P.Eng.
Reich, Jim, P.Eng.
Robinette, David, P.Eng.
Sivanantham, Suresh, P.Eng.
Smith, Jesse, P.Eng.
Staroszik, Wayne D., P.Eng.
Stevens, Ross, P.Eng.
Szilveszter, Andras, P.Eng.
Tuck, Bruce, P.Eng.
Vanvat, Awatar, P.Eng.
Veldman, Willem, P.Eng.
Wilkie, William, P.Eng.
Zimny, Mark, P.Eng.

Certificates of Authorization – Resident

A.P. Hardie Engineering Ltd., Fredericton, NB
Hometown Engineering Inc., South Esk, NB

Certificates of Authorization – Non Resident

Areva NP Canada, Limited, Pickering, ON
Bower Damberger Rolseth Engineering Ltd.,
Calgary, AB
Cohésion Totale Inc., Terre Bonne, QC
Corrosion Service Co. Ltd., Dartmouth, NS
Demaiter Engineering Inc., Waterloo, ON

E.Z. Nejat & Associates Inc.,
Richmond Hill, ON
Eastpoint Engineering Ltd., Halifax, NS
Enmax Utility Services Ltd., Calgary, AB
Johnston-Vermette Groupe Conseil Inc.,
Trois-Rivières, QC
Larson Engineering Inc. Naperville, IL, USA
MacDonald Harland Engineering Inc.,
Charlottetown, PE
Matrix Solutions Inc., Calgary, AB
MGP Instruments Inc., Smyrna, GA
Minner, Stinnett, Koo & Agbayani,
Bakersfield, CA, USA
MPX Geophysics Ltd., Richmond Hill, ON
NHWL Engineering, Inc., Tallahassee, FL
Promation Engineering Ltd., Mississauga, ON
Site, Incorporated, Knoxville, TN
Turriss Corp., Mississauga, ON

Reinstatements

Manning, Ross, P.Eng.

Resigned

Arsenault, Ronald, P.Eng.
Gandhi, Indrajit, P.Eng.
Imbulgoda, Bandu, P.Eng.

Transfers-Out

Chiasson, Anick, ing.
Lajoie, Gilles, P.Eng.
Lapointe, Kimberley, P.Eng.
MacPhee, Neil, P.Eng.
Sanabria, Aldemar, P.Eng.
Wu, Yan, P.Eng.

Deceased

Chapman, Douglas, P.Eng.
Maillet, Paul, P.Eng.
Miller, Gerald, P.Eng.

Strike Offs

Bastin, Geoffrey, P.Eng.
Bird, Todd, P.Eng.
Dedinca, Nysret, P.Eng.
El-Khoury, Michel, P.Eng.
Faulder, Bruce, P.Eng.
Frauley, Michael, P.Eng.
Hatchard, Gregory, P.Eng.
Hossain, Zahid, P.Eng.
Hussey, Michael, P.Eng.
Lutes, Peter, P.Eng.
Nicks, Craig, P.Eng.
Plaisance, Tristan, ing.
Ramsay, Ronald, P.Eng.
Smith, Brian, P.Eng.
Walker, John, P.Eng.
Wolfe, Michael, P.Eng.
Young, Eric, P.Eng.

**DONNEZ UNE
JOURNÉE DE SALAIRE**



**AIDEZ À LANCER
UNE CARRIÈRE :**

L'obtention d'une éducation universitaire est une entreprise onéreuse au Canada – surtout pour ceux et celles qui s'inscrivent en génie et en sciences. Selon Statistique Canada, les droits de scolarité moyens ont triplé dans les universités depuis le début des années 1990, et rien n'indique qu'ils vont diminuer. De nombreux étudiants valeureux ont besoin de lourds prêts étudiants pour les aider à financer leur éducation; ils se retrouvent écrasés par une dette considérable dès l'obtention de leur diplôme, avant même leur premier emploi.

En contribuant à la Fondation pour les études de l'AIGNB, vous aidez à :

- financer les bourses d'études et les prix existants pour le génie et les sciences de la terre;
- en créer de nouveaux;
- assurer que les étudiantes et étudiants du Nouveau-Brunswick sont motivés à entreprendre une carrière gratifiante qui viendra enrichir notre qualité de vie, notre économie et, en fin de compte, notre avenir.

N'oubliez pas!

Votre don est admissible en déduction d'impôt!

DONNER

Postez votre chèque à :
FONDATION POUR LES ÉTUDES DE L'AIGNB
183, chemin Hanwell, Fredericton (N.-B.)
E3B 2R2

Ou

Appelez Rachael au 506-451-9624 pour effectuer un don par carte de crédit.



GIVE A DAY'S PAY



HELP LAUNCH A CAREER!

Pursuing a university education in Canada is an expensive undertaking—especially for students enrolled in engineering and science. According to Statistics Canada, average tuition fees at universities have tripled since the early 1990s and show no signs of decreasing. Many deserving students require hefty student loans to help finance their educations—graduating with a sizable debtload before they even get their first job.

Contributing to APEGNB's Foundation for Education will help:

- fund existing engineering and geoscience scholarships and prizes
- create new ones, and
- ensure that New Brunswick students are motivated to embark on a rewarding career that will enrich our quality of life, economy and ultimately, our future.

Don't forget!
Your donation is tax deductible!

DONATE

Mail your cheque to:
APEGNB—Foundation for Education
183 Hanwell Road, Fredericton, NB E3B 2R2

Or
Call Rachael at 506-451-9624
to make a donation by credit card.

