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# president's message

by Stephen Green, ALS

It is hard for me to believe that I have already completed more than half of my term as president...time truly does move quickly when you enjoy what you are doing! As I reflect on activities of the past several months, I am impressed with the determination and hard work of my colleagues on Council as they strive to achieve ALSA goals. And I am proud to represent our dynamic organization as I meet with other associations and industry groups throughout the country.

## Manitoba

The Association of Manitoba Land Surveyors (AMLS) is the oldest land surveyor association in Canada. I attended their 125<sup>th</sup> AGM in September, which was held at the historic Fort Garry Hotel in downtown Winnipeg. The event was a significant reminder of the important role that land surveying and land surveyors have played in the history of our country.

Winnipeg is a beautiful city full of history and culture. The presidents' forum took place on board the Paddlewheel Queen, while we cruised through the city on the Red River. The main theme from this presidents' forum is the demographics facing all associations, resulting in a shrinking membership.

We also attended a reception at Government House hosted by Manitoba's Lieutenant-Governor John Harvard who declared it "Land Surveyors' Week" throughout Manitoba. On another evening we attended a presentation of local Manitoba culture. We were entertained by a Ukrainian Dance troupe, an Indian Hoop dance and the sounds of the 402 Squadron Pipes and Drums.

Congratulations to the new AMLS president, David Quirk from Estevan, Saskatchewan.

I truly appreciate the conversations I have had with colleagues in Alberta about matters of interest and concern to land surveyors.

## Canadian Council of Land Surveyors

The Canadian Council of Land Surveyors (CCLS) also held their AGM at the Fort Garry Hotel at the tail end of the AMLS AGM.

CCLS is a dedicated group working hard on all our important common issues. Here is a partial list of their current initiatives:

- Board of Examiners Coordinating Committee
- Professional Liability Committee
- Business Seminars
- International Committee
- Distance Learning Steering Committee
- Public Awareness
- Communication
- Harmonization of Entry Standards
- Expanded Profession
- Limitations Act
- Letters Patent
- Labour Mobility Monitoring Group

The item given the highest priority is "public awareness" which is a concern in every Association across Canada.

The Geomatics Industry Association of Canada (GIAC) and the Canadian Institute of Geomatics (CIG) both gave very interesting presentations.

Congratulations to the new CCLS president, Bert Hol from British Columbia.

## Nova Scotia

In October, I attended the Association of Nova Scotia Land Surveyors (ANSLS) AGM held in Pictou Lodge, a beautiful old CP hotel on the Northumberland Strait. The events for their AGM included plentiful amounts of Nova Scotia hospitality. The theme for the presidents' forum was boundary confirmation when there is uncertainty. Most provinces have some type of mechanism for confirming boundary uncertainty.

Congratulations to the new ANSLS president, Garry Parker.

## Ad Hoc Oil and Gas Working Group

The Ad Hoc Oil and Gas Working Group is becoming involved in the following initiatives over the next few months:

- The CAPP Geomatics committee has asked for ALSA's position on SRD's future plans for full monumentation of crown land dispositions. They would like us to review how this issue will impact the petroleum industry.
- Mike Michaud, through Sustainable Resource Development (SRD), has tentatively given his OK for a ten well field test program for Public Land applications using Lidar data. This data will be the basis for the survey plan for the application. They are working with Crape Geomatics to study the benefits of using Lidar data when preparing these plans. SRD has indicated they will involve the Ad Hoc Oil & Gas working group to help fully study any issues or concerns that may arise.

## Other Developments

- The Board of Examiners for the western provinces along with ACLS has proposed a new name for

....continued on page 10





# councillor's forum

by Victor Hut, ALS

## Safety, Safety, Safety

I can recall a time not too long ago when safety was the presumed responsibility of the individual and that accidents or injuries (while not wished upon anyone) were viewed as character-building and a life lesson. Safety programs were more of a verbal education of what you should and shouldn't do or what one should look out for. Common sense was the only official policy and even that was not written anywhere.

Nowadays, we are all too aware that common sense is not that common. With a booming economy comes newfound interest of inexperienced people into the survey industry. Coupled with recent changes in federal legislation (Bill C-45) regarding liability of employers for the physical well-being of their staff, safety is an issue of serious importance. As employers, we are responsible for giving our staff proper training to help ensure their safety.

Within our company's own walls, we were stricken with more incidents this past year than we had hoped. Naturally, we all strive for the goal of zero lost-time incidents, but due to intense growth and ever-increasing client demands we ended up with less than desirable results. ATV loading/unloading, chainsaw operation, and highway travel are just a snapshot of some of the common hazards that we are all faced with on a daily basis.

In a proactive response to such issues, the ALSA Council has created the Safety Committee. Its purpose is to act as a forum for discussing common issues and incidents of concerns regarding safety. Simply put, it is hoped that this Committee will provide a means to share information to help all of us and our staff to return home (or to the motel/camp) safely at the end of each day.

It could be argued that surveyors need a specialized course that is unique to the type of cutting and limbing we do in the course of our work.

We have had very positive interest in this Committee and encourage anyone to feel free to pass on information of note to the Committee if you feel it might be of mutual benefit. After all, today's competitor might become tomorrow's colleague.

One such issue that has snuck up on a lot of us has to do with chainsaw safety and the changing requirements in obtaining a safety certificate for chainsaw operation. What was once a two-day course will now become a 30-day course come July 2006. This is in response to an increase in the number of deaths in BC loggers where there was roughly one death per month recorded over the past year.

Industry responded in turn by noting that the current safety certification was sub-standard in training those individuals who are professional fallers. Even though surveyors are not cutting trees in the same frequency or capacity of such workers, they are still subject to the same inherent dangers.

It could be argued that surveyors need a specialized course that is unique to the type of cutting and limbing we do in the course of our work. It is common for our crews to encounter everything from willows to 40 cm diameter spruce in the normal course of our work and we are not falling trees for the sake of logging. Then again, we are also not immune to the same dangers as these professional fallers encounter. Therefore, should we be any different in how we treat

training for our staff? Would any less training be "good enough" for us?

Another difficult task we seem to have is in getting genuine buy-in from our staff as to safe work practices. We generally don't have a problem with the majority of such changes in mentality. However, for the bulk of us who come from a time before formal safety programs, old habits are hard to break.

We have safety meetings galore, guest speakers, regular safety inspections, and even safety stand-downs and there end up being a few people with a bad case of selective understanding. They hear the information, but on occasion simply choose to ignore it, feeling that it applies to all but them. They/we still tend to feel (on occasion) that we know better and that a "calculated risk" is acceptable and besides that, it saves paperwork and time. This is what I feel is the biggest safety hazard of all – apathy towards our own personal safety.

It is incumbent in all of us as professionals to promote safety continuously and tirelessly, if it is ever to be accepted as being important at all.

It is incumbent on all of us as professionals to promote safety continuously and tirelessly, if it is ever to be accepted as being important at all. We all have to talk-the-talk and walk-the-walk. (I promised our safety manager that I would use at least one of his clichés in this article.)

So good luck to you, my peers, that we all may continue the safety preaching and hope that they all...no, **we all** genuinely "get it."





# editor's notes

by Brian Munday, Executive Director

It was the night before Christmas and all through the house, not a creature was stirring, not even...

...an Alberta Land Surveyor who was trying to send a crew up north to get ten more wells surveyed. Or, was that, try to get iron posts in the ground for a Section 47 plan?

There is no doubt that 2005 has been an extremely busy year for the land surveying profession. More than one member has told me that it is not just busy but that it is "crazy busy." Most of us remember a time when it wasn't like this and land surveyors had to fight for every job and "sharpen their pencils" to get any type of work. I don't think anyone wants to go back to those days but the crazy times of 2005 bring their own special challenges and problems. These problems might be staffing shortages or too much paperwork, but from the Alberta Land Surveyors' Association's perspective, let me tell you about one type of issue that we are seeing more of today than perhaps we have in the past.

With all Alberta Land Surveyors being so busy, it seems like we are becoming aware of more incidents in which non-Alberta Land Surveyors are trying to infringe on the land surveyor's exclusive scope of practice. With fancy technology and a little bit of knowledge, it seems like a number of people think that they have suddenly become boundary experts. The Association office becomes aware of these situations because they impact the public.

Recently, I received a phone call from a landowner who owned an acreage outside of Edmonton. He was in a dispute with his neighbour about the location of their property line. The neighbour had hired an Alberta Land Surveyor who rendered his opinion on the location of the boundary. My caller retained a friend from an engineering company who came out one weekend

With fancy technology and a little bit of knowledge, it seems like a number of people think that they have suddenly become boundary experts.

with his GPS equipment to tell him where the boundary was. I had to explain to the caller that his "survey" was not valid—even if he did use GPS.

About the same time, I received this phone call, I was made aware of a situation in which a non-Alberta Land Surveyor was hired by a Calgary-area organization to do some work. The request for proposal listed some things that anyone could do but clearly listed some things which only an Alberta Land Surveyor would be authorized to do. In speaking with the representative from the organization, they seemed to be unaware that an Alberta Land Surveyor would need to be retained. This person had the opinion that anyone could do the work because there was no plan to be registered or post to be put in the ground. I, of course, replied that there is more to the practice of land surveying than that. In this case, letters went to both the client and the company that was awarded the contract.

It is possible, in this case, that the company that was awarded the contract would subcontract the legal survey work to an Alberta Land Surveyor. If this is going to happen, it is imperative that the client knows that the legal survey work is to be subcontracted to an Alberta Land Surveyor and that it is clear what the contractual obligations are between the prime contractor and the sub-contractor. If it is not clear what those arrangements are, the client might

believe that the non-Alberta Land Surveyor can do the legal survey work. If this happens, it is more likely that the professional will be facing a disciplinary committee, rather than the other party facing legal action. Please refer to the June 2004 issue of *ALS News* (page 45) and the September 2002 issue of *ALS News* (page 26). The Alberta Association of Architects recently published a summary of a discipline case in which an architect was approached by an architectural technologist with the request that he act as the professional of record on two ongoing projects. The architect had limited involvement in both projects yet affixed his signature and seal to the documents and drawings respecting those projects. In both cases, he contracted directly with the technologist rather than the owner and, in both cases, the fee charged by the architect was minimal and inadequate to provide the services required of a coordinating professional. The architect was found guilty of unskilled practice and unprofessional conduct and the Alberta Association of Architects said that this is a matter that it takes very seriously.

In the land surveying profession, there was a complaint made against a practitioner under somewhat similar circumstances. While the complaint did not go forward to a hearing for various reasons, the investigator expressed concern that neither of the practitioners involved had adequate notes on file to make it clear what the arrangement was. If this had been in place, there might not have been a complaint at all.

Sometimes, even an Alberta Land Surveyor with the best of intentions, can end up facing an awkward circumstance. I received a phone call from a landowner who complained about the manner of a specific Alberta Land Surveyor working in the field. My caller told me that the Alberta Land Sur-

veyor first refused to identify himself and then, reluctantly, handed his business card to her. The other member of the field crew did his best to try to diffuse the situation. I thought the call was rather strange as I know the Alberta Land Surveyor to be even-tempered; it seemed to be out of character. When I called the Alberta Land Surveyor, he acted like he didn't know anything about this incident. After a little investigation, the Alberta Land Surveyor called me back and told me that his party chief had handed out a business card with the Alberta Land

Surveyor's name on it and my caller understood that the person she was speaking to was the Alberta Land Surveyor. The real Alberta Land Surveyor spoke to my caller and straightened everything out.

Many of these problems (or potential problems) can be resolved with honest, open communication and clear records. Please give it some thought as we finish off 2005 and look forward to 2006.

***Merry Christmas to all and to all a good night!***

## net notes

North Americans will be celebrating the accomplishments of surveyor and explorer David Thompson over the next few years. Organizations will formally commemorate significant events that took place in his life between 1807 and 1811. Here are a few sites that highlight his incredible accomplishments.

**David Thompson Bicentennial**

[www.davidthompson200.ca/home.html](http://www.davidthompson200.ca/home.html)

**David Thompson Things**

[www.davidthompsonthings.com](http://www.davidthompsonthings.com)

**The Life of David Thompson**

[www.northwestjournal.ca/V1.htm](http://www.northwestjournal.ca/V1.htm)

**Canadian Biography Online: David Thompson**

[www.biographi.ca/EN/ShowBio.asp?BioId=38340](http://www.biographi.ca/EN/ShowBio.asp?BioId=38340)

**David Thompson: The Man Who Looks At Stars**

[www.collectionscanada.ca/explorers/kids/h3-1640-e.html](http://www.collectionscanada.ca/explorers/kids/h3-1640-e.html)

*President's Message continued from page 5.....*

themselves—The Board of Examiners for Professional Surveyors (BEPS). The BEPS working group is diligently putting together their bylaws and hopes to be fully functional by spring 2006.

- On November 8, Bob Wallace, Syd Loepky and I met with representatives from CMHC to discuss issues surrounding title insurance. The meeting was a tremendous opportunity for the frank exchange of thoughts and ideas dealing with this issue. The meeting ended in a spirit of cooperation with a collective desire to offer the best product to the public.

In conclusion, I truly appreciate the conversations I have had with colleagues in Alberta about matters of interest and concern to land surveyors. I urge you to contact me if you have ideas, issues, or possibilities you would like your Council to consider.

I wish you and your families a joyful holiday season, and a new year filled with success and prosperity.





# letters

## Alberta/Saskatchewan Border vs. 4th Meridian

On the Cripple Creek 72 E/1 (1:50,000) map, the boundary with Saskatchewan is not right on 110 degree longitude, but to the west somewhat. So, I went out there yesterday. The fence line between Saskatchewan and Alberta is met at the 49th Parallel by a metal post indicating Alberta (do not remove). However, the iron bar survey post at the 49th Parallel is something like 80 metres east of this fence line along the 49th Parallel. I always thought that the border between Saskatchewan and Alberta was right on 110 degree longitude. If the survey stake is correct, then, as on the map, the border between the two provinces, i.e., the 4th Meridian, is not right on the 110 degree longitude. I tried to find an explanation in your recent book, *Laying Down the Lines* (fascinating reading), but it only talked about establishing the 5th Meridian not establishing the 4th Meridian. Could you clarify for me?

JOHN F. DORMAAR

I am happy to try to respond to your query as best as possible.

Section 6 of the Boundary Surveys Act of Alberta states, "subject to the passing of an act of the same import as this part by the Province of Saskatchewan, the report of the Interprovincial Boundary Commission appointed to complete the necessary surveys to mark the interprovincial boundary between the provinces of Alberta and Saskatchewan and the plan of the survey of record in the office of the Director of Surveys of Alberta...are approved and confirmed and that portion of the boundary between the province of Alberta and Saskatchewan, as marked on the ground by the Commission in 1938, is approved, confirmed and declared the true interprovincial boundary."

As you can see, the Alberta/Saskatchewan boundary is not at 110 degrees although, as you point out, it is approximately at 110 degrees and all of us tend to refer to it as that. The Alberta/Saskatchewan border is the fourth meridian. The intent was to establish the fourth meridian at 110 degrees longitude and given the equipment they had to work with at that time in difficult working conditions, their accuracy was quite good.

Dava Sobel's book, *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time*, is an excellent account of the problems encountered trying to determine longitude. Bob Dunn's *The Disputed Country: Australia's Lost Border* provides another example of the problems encountered when surveyors tried to establish longitude in the 19th century.

In 2003, retired Alberta Land Surveyor Doug Barnett wrote, *The Demarcation of Alberta's Boundaries*. Mr. Barnett's reference book was not published but we do have a copy of it in our library. In chapter 9, he states: *The Alberta/Saskatchewan boundary is a unique interprovincial boundary. It is one of the oldest dividing lines in Western Canada. Initially surveyed in the southern part as one of the main initial meridians (the fourth meridian) west of Winnipeg, it did not become an interprovincial boundary until 1905 when the western provinces as we know them today were formed. It is the longest straight line boundary in Canada, an astronomic meridian stretching from the international to the 60th parallel north or Lake Athabasca. This 761 mile (1,125 kilometre) boundary was surveyed and monumented on the ground over 59 years from 1879 to 1938. Today the invisible line of the boundary which we all take for granted as we pass from province to province, is of strategic importance as a major division line in the west. It is the result of many years of dedicated, skilled and difficult work by surveyors. It is an important part of our national heritage.*

*The Alberta/Saskatchewan boundary is defined as "the fourth meridian in the system of dominion land surveys" in the Alberta Act and the Saskatchewan Act, both enacted in 1905. The initial meridians in Western Canada, including the fourth meridian, were first provided for in the Dominion Lands Act of 1872.*

*Fortunately, the position (longitude) of the initial meridians were not rigidly defined by statute. The Dominion Lands Act of 1883 specified the principal (Winnipeg) meridian "drawn northerly from the 49th parallel of latitude at a point 10 miles or thereabouts westerly from Pembina), and such other initial meridians as the Minister orders to be established... styled the second, the third, the fourth, and so on, according to their number in order westward from the principal meridian." Under that authority it was decided that the "other initial meridians" should be established as nearly as possible 4 degrees in longitude apart, commencing with the second meridian in longitude 102 degrees. It was therefore not requisite that the fourth meridian should coincide with the line of longitude 110 degrees, but only that it should be as close as possible to within the limits of locational accuracy feasible at the time. The "locational accuracy" at the time turned out to be that provided by the special survey between 1874 and 1880. The best that could be done in this period was to position the initial meridians "by account," that is by chaining westward along the specific baselines... This was due to the impracticability of extending the survey control westerly by triangulation, and failure of the telegraph line which could have provided more accurate longitudes. The position of the initial meridians as established by the special survey, once approved by the Department of the Interior, fixed for all time their location on the ground for purposes of the Dominion Land Survey system. This wise policy prevented different positions for the meridians over time, depending on the technology and use – once the positions were verified and marked on the ground, these positions (marked by monuments) governed absolutely. For example, the position of the*



*fourth meridian obtained today by Global Positioning Systems (GPS) is somewhat different than 100 degrees longitude, but this is immaterial. The monuments as shown on approved township and provincial boundary plans mark the boundary to this day.*

Please feel free to contact me at any time.

B.E. MUNDAY, EXECUTIVE DIRECTOR

## Scholarships

On behalf of the University of Calgary, I am pleased to advise you that the recipient selected for the Alberta Land Surveyors' Association Scholarship is Ms. Angela Rae Jeffray.

I would like to take this opportunity to express to you the thanks of the University of Calgary for the provision of this award. The financial reward and support you offer to the students here is greatly appreciated. Please do not hesitate to call if you have any questions or comments regarding the administration of this award or the University awards program in general.

LINDA SHARMA, DIRECTOR  
STUDENT AWARDS AND FINANCIAL AID

I would like to express my sincere gratitude to the Alberta Land Surveyors' Association for their generous contribution as a scholarship donor. I am delighted and very honoured to have been selected as the recipient of the Alberta Land Surveyors' Association Scholarship.

I am currently enrolled in my final year of studies at the University of Calgary in the Geomatics Engineering program. This program is providing opportunities for me in areas of personal interest and enjoyment. Upon conclusion of my undergraduate studies, I hope to become a professional land surveyor.

The funds provided by this scholarship are a welcome encouragement to me in the pursuit of my educational goals. I am very grateful to those who have generously supported my academic endeavours through this scholarship.

ANGELA JEFFRAY

I was chosen to receive the J.H. Holloway Scholarship this year and I am writing this letter to express my sincerest thanks to you for providing this scholarship. It is an honour to receive this award from such a highly influential association in the geomatics community.

I am currently in my final year of the Geomatics Engineering Undergraduate Program at the University of Calgary. Receiving the J.H. Holloway Scholarship is of tremendous financial benefit to me.

Thank you once again for your contributions to the University of Calgary awards program.

KIMBERLY JOHNSON

Thank you very much for considering me for the Geographical Information Science Scholarship. This award has lifted any financial worries I had when entering my last year here at the University of Lethbridge. I cannot express how greatly I appreciate being recognized for my hard work and academic achievement.

CHRISTOPHER JACKSON

## Carl Lester

Quite by accident, I came to your website, [www.landsurveyinghistory.ab.ca](http://www.landsurveyinghistory.ab.ca). A cousin of mine in Nova Scotia, who spends more time on the internet than I, found it. She mentioned my dad, Carl Lester, was on it. I have read the article that is on the website as it was published in the Alberta Land Surveyors magazine when my dad died.

But, what I really want you to know, is that I have a great pile of photos taken at various camps where my dad worked. They are quite old—I can tell from the clothes. Unfortunately, there are no names and few dates on the photos. I have never known what to do with these photos. Just couldn't bring myself to throw them out. I once called the Alberta Archives and was going to send the photos to them but never did. Would you be interested in them? Is there a museum where one could go and look? I would love to visit it if there was. I have a lot of memories of my dad leaving on survey

crews for the summer (with roads and cars being what they were in those day and the fact that they quite often so worked on Saturdays as well, he did not make it back to Edmonton very often during those six months May-October

I remember my dad becoming Director of Surveys and the fact that he was home for the whole year.

EILEEN LESTER

**Editor's Note:** I have indicated to Ms. Lester that the Association would be very interested in receiving the photographs.

## Question Time

*This is the third in a series of questions commonly asked of the ALSA by the membership. Please contact the ALSA at [info@alsa.ab.ca](mailto:info@alsa.ab.ca) if you have a question that needs answering.*

**Question:** What is the article pupil's affidavit of service?

**Answer:** According to Section 9 of the Examination & Training Regulation under the Land Surveyors Act, "on or before January 15 of each year, a pupil must provide to the Registrar an affidavit of service that is signed by the principal and describes the surveying operations in which the pupil was engaged during the preceding calendar year.

After providing an affidavit of service, the pupil must meet with the Registration Committee to review the training and experience received. Failure to provide the affidavit of service by January 15 may be considered a breach of articles and the Registration Committee may decide to terminate or suspend the articles. A blank affidavit is in the pupil handbook.

The article pupil is expected to list all of the work done in the preceding year but the Registration Committee is particularly interested in work done in Alberta. The more detailed the affidavit is, the easier it will be for the Registration Committee to grant the proper amount of field and office time that has been earned.



# association notes

## New Members

### #750 THEUERKAUF, Mark Peter



Mark was born in August 1973 in Nanaimo, BC. He graduated from Wellington Secondary School in 1991 and went on to receive a diploma in Surveying and Mapping

Technology from SAIT in 1998 and a B.Sc. in Geomatics Engineering from the University of Calgary in 2002.

Articles were served under Ron Hall, Floyd Stochinski and Kirk White from 2002 to 2005 until he received his commission as an Alberta Land Surveyor on October 6, 2005. Mark is also an Engineer-in-Training with APEGGA.

From 1991 to 1996, Mark served in the infantry with an operational tour in Bosnia in 1994. His surveying experience includes oil & gas and transmission line surveying. He is currently a member of the ALSA Future of the Association Ad Hoc Committee. Mark is employed with McElhanney Land Surveys (Alta.) Ltd. in Calgary.

Hobbies include hiking, shooting and cross country skiing.

Mark and Sherry Theuerkauf and their two children, Anna and Lars, reside in Airdrie.

### #751 COMEAU, Real

Real Comeau was born in August 1970 in Yarmouth, Nova Scotia. He graduated from Clare District High School in Meteghan, Nova Scotia in 1988



and went on to receive his B.Sc. in Surveying Engineering from the University of New Brunswick in 1994.

Articles were served under Alberta Land Surveyors Jim Berry, Peter Brown, Kevin Swabey and Daniel Lachance. He received his commission as an Alberta Land Surveyor on November 22, 2005.

Real is also an Engineer-in-Training with APEGGA and is currently employed with All West Surveys Ltd. in Edmonton

Tammy and Real Comeau and their two children, Madeline (3) and Aidan (5), reside in Spruce Grove.

### #752 RADOUX, Murray Gerald

Murray Radoux was born in Watson, Saskatchewan in September 1969. He graduated from Watson High in 1987, received a diploma in surveying technology from SIAST Palliser Campus in 1989 and a B.Sc. from the University of Calgary in 1995.



Murray is a Saskatchewan Land Surveyor who joined the ALSA under the Mutual Recognition Agreement as an affiliate member on November 28, 2001. He received his commission as an Alberta Land Surveyor on December 1, 2005. Murray also holds a designation as a planner and is a member of APEGS and APEGGA.

He served on the SLSA Convention and Public Relations Committee as well as on the SLSA Council.

He started his career in surveying in 1988 while employed with Tri-City Surveys in Saskatoon, Saskatchewan. He is currently employed with Inter-provincial Surveys Ltd. of Lloydminster.

Murray is married to Sheri. He enjoys fishing, camping, skiing and hockey.

### #753 SKELTON, Jeffrey Thomas

Jeff Skelton was born in Regina, Saskatchewan in August 1967. He graduated from Dr. Martin LeBoldus High School in 1985, received a diploma in surveying engineering from SIAST in 1987 and a B.Sc. from the University of New Brunswick in 1994.



Articles were served under Bernard J. McKenna, ALS from September 13, 1999 until he received his commission on December 5, 2005.

Jeff is a Saskatchewan Land Surveyor and served on the SLSA Council from 1998 to 2000 and on GEAC/GELC from 1999 to 2005.

Surveying experience includes oilfield, construction and deformation monitoring. Current employment is with McElhanney Land Surveys (Alta.) Ltd. of Calgary.

### #754 TIMOCIN, Metin

Metin Timocin was born in Turkey in August 1966. He graduated from Ataturk Lisesi Elazig in Turkey in 1983 and received a degree in Geomatics Engineering from the Yildiz University in Istanbul, Turkey in 1991. Metin immigrated to Canada in 1995.



Metin articulated under Alberta Land Surveyors Gord MacDonald and

Wayne Berg. He received his commission on December 6, 2005.

Surveying experience includes: 1992 to 1995—worked as an engineer in Russia; 1996-1998—worked for Henderson & Associates in Vancouver; 2001-2004—worked for Challenger Geomatics in Calgary; 2004-2005—worked for Kellam Berg Engineering and Surveys in Calgary. Metin is presently employed with Midwest Surveys Inc. in Medicine Hat. Metin and Fatma Timocin have two children, Selin Zana and Avin Zengin.

## #755, BARICH, Jessica D.

Jessica Dyan Barich was born in Calgary in May 1979. She graduated from W.G. Murdoch High School in Crossfield in 1997 and went on to receive a B.Sc. in Engineering from the University of Calgary in 2002.



Articles were served under John Van Berkel, ALS until she received her commission on December 12, 2005. Jessica is also an Engineer in Training with APEGGA.

Jessica has been involved with the land development area including subdivision surveys and condominium plans.

Slo-pitch, biking, skiing and reading are a few of her leisure activities.

## Changes to the Register

**Peter Brown, ALS** will be joining Universal Surveys Inc. in Calgary on January 2, 2006. E-mail address will be pbrown@universalsurveys.com.

**Charles Chaisson, ALS** is employed with Jones Geomatics Ltd. effective October 19, 2005. His e-mail address is cc.jones@telus.net

**Cameron Christianson, ALS** is leaving Midwest Surveys Inc. January 1, 2006. He can be reached at: P.O. Box 301, Brooks A1R 1B4; cchristi@eidnet.org; (403) 362-5726.

**Eclipse Planning, Geomatics and Engineering:** new e-mail address is general@eclipseltd.ca.

**Shaun Ewen, ALS:** new e-mail—sewen@raymacsurveys.ca.

**Don Lantz, ALS:** e-mail address is don@boardmanpeasley.net.au.

**Mike Fretwell, ALS:** e-mail address is now mfretwell@eclipseltd.ca.

**Focus Surveys Inc.** has been cancelled as of September 29, 2005.

**Focus Surveys Limited Partnership (P046)** received partnership status on September 29, 2005 and will take over all of the Focus Surveys Inc. offices.

**Focus Surveys GP Ltd. (P231)** received corporate status on September 29, 2005. This corporation is a shareholder of Focus Surveys Limited Partnership.

**Geoff Hobbs, ALS** is now at the Edmonton office of McElhanney Land Surveys (Alta.) Ltd.

**Terry Hudema, ALS:** new e-mail—thudema@raymacsurveys.ca.

**IBI Geomatics Ltd.** will establish a branch office in Calgary effective January 1, 2006 under the supervision, direction and control of Brian Wetter, ALS.

**IBIWN Surveys Inc.** will be cancelled as a surveyors corporation effective January 1, 2006.

**Al Jamieson, ALS:** new e-mail—ajamieson@raymacsurveys.ca.

**Jeff Johnston, ALS:** e-mail address is now jjohnston@eclipseltd.ca.

**Gordon MacDonald, ALS:** e-mail—gmacdonald@raymacsurveys.ca.

**Ray MacDonald, ALS:** new e-mail—ray@raymacsurveys.ca.

**Jim McLellan, ALS (Ret):** new address is Kodiak Nav Solutions Ltd. (A Division of the Destiny Resource Services Partnership), 444 - 58 Avenue SE, Suite 300, Calgary T2H 0P4.

**Lorne McNeice, ALS** has new contact information: Natural Resources Canada/ Geomatics Canada Canada Centre For Cadastral Management PO Box 669 Yellowknife, NT X1A 2N5 Tel: (867) 766-8520

Direct Tel: (867) 766-8519

Fax: (867) 766-8533

E-mail: lorne.mcneice@nrca.gc.ca

**Dave McWilliam, ALS:** new e-mail—dmcwilliam@raymacsurveys.ca.

**Robert Morrison, ALS** is no longer with User Canada Limited. He can be reached at (403) 804-7421 or familymorrison@telus.net.

**Navland Geomatics Inc.** has been approved as a surveyors corporation under the supervision, direction and control of Alberta Land Surveyors Jim Harland and Dave Higgins.

**Al Nelson, ALS** is now listed as a sole practitioner. He can be reached at: 6 Garraway Place, St. Alberta T8N 2A1; Tel: (780) 459-0519; Fax: (780) 418-5824; Cell: (780) 718-7494 E-mail: a.nelson@shaw.ca or a.nelson@swg.ca.

**Raymac Surveys Ltd.** new e-mail—admin@raymacsurveys.ca.

**Andrew Roop, ALS:** new e-mail—aroop@raymacsurveys.ca.

**Ed Scovill, ALS (Ret.)** e-mail address is changed to ascovill@telus.net.

**Jack Webb, ALS (Hon. Life)** has moved to c/o Emmanuel Village, 1622 Acadia Drive, Suite 310, Saskatchewan, SK S7H 5H7. Tel: (306) 244-9916

E-mail: webjohw@shaw.ca

**John West, ALS (Ret.)** became a retired member on November 3, 2005.

**Ross Woolgar, ALS:** e-mail address is now rwoolgar@eclipseltd.ca.

**Wally Youngs, ALS (Hon. Life)** has new contact information—(780) 633-0159; dwyoungs@shaw.ca.

## ARTICLED PUPILS

**LeMont Edwards** articulated to Hugo Enger, ALS of Usher Canada Ltd. on August 3, 2005.

**Andrew Hall** articulated to Philippe Breaux, ALS of All West Surveys Ltd. in Grande Prairie effective September 12, 2005.

**Warren Lippitt** articulated to Bernie McKenna, ALS of McElhanney Land Surveys (Alta.) Ltd. on October 28, 2005.

**Sara Prescott** articulated to Caroline Anderson, ALS of The Cadastral Group Inc. on December 1, 2005.

**Javier Siu** transferred articles to Scott Westlund on September 29, 2005.

**Jeffrey Stockdale** began employment with Millennium Geomatics Ltd. on October 3, 2005. He transferred his articles to Mark Kocher on October 1, 2005.

**Randy Wayne** article to Bob Baker, ALS of Brown Okamura & Associates Ltd. in Lethbridge on December 1, 2005.

#### **AFFILIATE MEMBER**

**Jade Hugh McLeod (AF 033)** joined the Association as an affiliate member on November 9, 2005. Jade is a Saskatchewan Land Surveyor.

#### **ASSOCIATE MEMBER**

**Cameron Gartner** joined the Association as an associate member on December 8, 2005. Mr. Gartner is presently employed with All-Can Engineering & Surveys (1976) Ltd.

## Wally Youngs Honored

Wally Youngs, ALS (Hon. Life) has been chosen as one of the public servants who has contributed to the success of public administration in Alberta's Edmonton region over the last 100 years.

The Edmonton Regional Group of the Institute of Public Administration of Canada (IPAC) launched a book entitled *100 Years of Excellence in Public Administration* and Mr. Youngs is profiled in the book.

A reception was held for the book launch with fellow honorary life members Ted Rippon, Dave Usher and Charlie Weir and current Director of Surveys Mike Michaud joining with Mr. Youngs to celebrate his recognition.

In 1981, Dave Usher made the following presentation to Wally Youngs on receipt of the Outstanding Service Award to him.

*Wally, as we all know him was born at Didsbury, Alberta and grew up on his parents' farm on NE1/4 Sec. 14-31-3-5. On completion of high school in 1947 he got his first introduction to surveying working as a rodman and instrumentman for Paul Hargrove, ALS in the Depart-*

*ment of Public Works. Since that time, Wally has devoted his total energies and his whole career to the Public Service of Alberta, and by so doing I submit that he has made an "outstanding contribution to society."*

*Paul Hargrove, the surveyor that Wally worked for, belonged to the old school of land surveyors—he carefully supervised all his own fieldwork in person, he was meticulous in everything he did, and was extremely proud of his profession—and it was under Paul's tutelage, supervision and influence that Charles Walton Youngs served his term of articles and later qualified as an Alberta Land Surveyor in 1953. Wally pursued his studies further, and received his commission as a Dominion Land Surveyor in 1955.*

*The former Director of Surveys, Carl Lester, must have been very much impressed with the abilities of Paul Hargrove's student because as soon as Wally received his Alberta Land Surveyors' Commission in 1953, he was appointed Assistant Director of Surveys.*

*Wally Youngs, as Director of Surveys for Alberta, has made an outstanding contribution to the people of Alberta. As long ago as 1956, Wally presented a paper to the ALSA annual meeting entitled "A Proposed Triangulation Net for The City of Edmonton," and in many respects this could be considered to be the beginnings of*



From left to right: Mike Michaud, Charlie Weir, Wally Youngs, Ted Rippon, Dave Usher

*the development of the Alberta Survey Control system. Through Wally's consistent and dedicated efforts to upgrade and improve surveying and mapping within Alberta, we now have surveying and mapping programs and capabilities which are second to none. As a corollary to these surveying and mapping programs, and again largely through Wally's efforts, Alberta has embarked on the development of a comprehensive Land Related Information System, which will be without equal anywhere, and will be of invaluable assistance to the people of Alberta in the orderly planning and development of their province.*

*Mr. Youngs was Director of Surveys from 1963-1982, president of the Alberta Land Surveyors' Association in 1960 and made an honorary life member in 1989.*

## New Director of Practice Review Appointed

Fred Cheng, ALS, has been appointed the Alberta Land Surveyors' Association's Director of Practice Review.

Mr. Cheng graduated from the University of Alberta in 1979 and earned a master's degree in geomatics engineering from the University of New Brunswick in 2003.

He was commissioned as Alberta Land Surveyor 548 in 1984. He has worked in private practice, being responsible for cadastral surveying and mapping projects, as well as the public service. Mr. Cheng brings to the Association cadastral surveying, mapping and business experience from private practice as well as the public service.

Fred Cheng has served on the Alberta Land Surveyors' Association's Professional Development Committee, Registration Committee and Editorial Board. He is also a commissioned Canada Lands Surveyor, and holds a Professional Engineer designation from the APEGGA.



# ALSA Professional Examination Results – Fall 2005

## Statute Law

Nineteen students wrote the Fall 2005 Statute Law Exam. Eight were successful and the overall average score was 68.6 %. The high mark was 86.5% (one candidate did not attempt any questions; this score was excluded from the average).

There were several questions that most students had trouble with.

### **Condominium Property Act**

i The legal description for a bare land condominium unit is normally written as follows:

*Condominium Plan 051 1234*

*Unit 1*

*And 2500 undivided one ten thousandth shares in the common property excepting thereout all mines and minerals*

When you divide an existing unit with another bare land condominium plan you use Bare Land Condominium Plan of redivision of unit \_\_, Condominium Plan \_\_\_\_\_ as your plan heading.

i You cannot create common property on a re-division plan. Although in practice it is common, according to the Condominium Act, unit factors do not have to affect condominium fees. They do, however, relate directly to ownership of common property (Section 6(2)), liability of the condominium corporation (Section 7), voting rights (Section 26(1)), and ownership of the property upon dissolution of the condominium (Section 62(2)).

i When referring to the easements implied against and in favour of unit owners, implied means that no documentation is registered on title.

### **Surveys Act**

i The geographical positioning system means a series of databases co-ordinated by the Director that contain the geographical positions of survey control markers, land survey monuments and photogrammetric control points. It is not the same as the global positioning system.

• It is also important to note that survey control marker means any mark, other than a monument, set in the ground whose coordinate position is confirmed by the Director under Section 8.

### **Municipal Government Act**

• A deferred reserve caveat means that the provision of reserve (or money in lieu) can be delayed by the filing of the caveat at Land Titles. Reserve requirements are transferred to other land owned by the subdivision applicant.

• A complete application for subdivision generally consists of a completed application for subdivision in the form set out in the Subdivision and Development Forms Regulation, a proposed plan of subdivision or other instrument that affects a subdivision, the required fee, and a copy of the current land title for the land that is the subject of an application.

i The subdivision authority is looking for (among other things) its topography, soil characteristics, storm water collection and disposal, any potential for the flooding, subsidence or erosion of the land, its accessibility to a road, the availability and adequacy of a water supply, sewage disposal system and solid waste disposal, the use of land in the vicinity of the land that is the subject of the application, and any other matters that it considers necessary to determine whether the land that is the subject of the application is suitable for the purpose for which the subdivision is intended.

### **Land Titles Act**

i A plan correction must be authorized by the ALS who signed the plan, or the Director of Surveys if the ALS is not available. A signature is also required from any person who may be adversely affected by the correction.

i Roads are not a lot type and when a plan of subdivision is registered no titles are issued for roads.

### **Land Surveyors Act**

i Certifying elevations falls under the practice of surveying as there is no boundaries being established. A lease area plan is generally prepared in accordance with the BOMA standard to certify the area of an office building or retail establishment. According to BOMA, these can be certified by an ALS or an architect. There is no mention of property boundaries on these plans and they do not relate to well sites.

i There was only one person who knew that, according to Section 8, the powers of the Association include the ability to acquire and hold real property and sell, lease or otherwise dispose of it, and borrow money for the purposes of the Association and mortgage or charge real or personal property of the Association or its sources of funds as security.

## The Surveying Profession

Seventeen candidates wrote this fall's surveying profession exam and six were successful at obtaining 75% or greater. The average mark was 63.7%.

### **Q1. Question on knowledge of the role and purpose of the Director of Systematic Practice review.**

Common oversight was that the Director of Practice Review has many more responsibilities than the Phase 3 practice reviews. The average mark for this question was 47%.

### **Q2. Question on the possible outcomes as a result of unprofessional conduct or unskilled practice, and identifying the difference between the two.**

Most candidates did fairly well on this question with an average mark of 81%.

### **Q3. Question on factors that should be considered when setting a fee schedule for a professional surveying practice.**

The average mark for this question was 72%.

**Q4. Question on timelines to register survey plans and what part of the Code of Ethics is being breached relating to dormant plans.**

The average for this question was 54%.

**Q5. Candidates were asked to define “a profession” within the context of the Land Surveyors Act and the responsibilities an Alberta Land Surveyor has towards his/her profession, practice, client, employer and employee/articled pupil.** Most candidates did fairly well on this question with an average mark of 72%.

**Q6. Question on copyright and ownership of digital survey plans.** The average for this question was 73%.

**Q7. This question dealt with the definitions of some commonly used acronyms.**

The average of this question was 57%.

**Q8. Candidates were asked to identify things to be considered to ensure a safe work environment relating to ground disturbance and potential buried facilities.**

The average for this question was 62%.

**Q9. Question on what section(s) of the Code of Ethics an Alberta Land Surveyor might be in breach of when not taking any action when some obvious errors and omissions on his/her registered plan that has been brought to the his/her attention.**

The average for this question was 67%.

**Q10. Candidates were asked to discuss the Boundary Resolution Process recently presented to the ALSA’s members.**

The average for this question was 43%.

**Q11. Most candidates did well on identifying the categories of membership within the ALSA.**

The average for this question was 84%.

**Q12. Candidates were asked to describe the principles of “Professional Judgement” as outlined in the ALSA’s Code of Ethics.**

The average for this question was 59%.

## Practical Surveying

Eighteen candidates attempted this fall’s Practical Surveying Exam with four receiving a passing grade of 75% or higher. This represents a 22% pass rate, with the average mark being 61%. This exam was prepared with the goal of covering a variety of areas of practice requiring practical knowledge of surveying in Alberta.

The following is an analysis of this Practical Surveying Exam on a question-by-question basis:

### 1. Integrated Surveys

This question dealt with the understanding of the ALSA Manual of Standard Practice (MSP) requirement for integrating to survey control, and allowable control closure requirements in accordance with the MSP. Despite one candidate who did not attempt this question, most candidates did fairly well.

Thirteen candidates passed this question with an average mark of 7.9/10.

### 2. Subdivision of a Legal Subdivision in Surveyed Territory

This question dealt with knowledge of candidates in handling proportioning of LSD corners. Candidates were expected to have knowledge to deal with subdivision of a fractional section adjacent to a meridian.

Eight candidates passed this question with an average mark of 6.9/10.

### 3. Field Notes and Evidence Assessment

Candidates were expected to have knowledge of evidence to be found at a certain township/section corners as per information specified in Bulletin 38. Candidates were also expected to apply their knowledge in reading and deciphering information from different editions of township plans and their associated (split-line) field notes, and at

the same time, demonstrate their knowledge in surveying the centre of a section.

Four candidates passed this question with an average mark of 6.0/10.

### 4. Practical Surveying in Unsurveyed Territory

This question dealt with general surveying knowledge in unsurveyed territory surveys. Candidates were expected to have knowledge on the theoretical township fabric, wellsite survey requirements, ATS, as well as Alberta Public Lands disposition surveys within unsurveyed territory.

Four candidates passed this question with an average mark of 6.0/10.

### 5. Real Property Report Survey

This question dealt with governing evidence as applied to subdivision plans that were registered at a certain date in accordance with the Surveys Act (*plans registered between February 16, 1912 and June 9, 1988*). Practical knowledge on how to read and interpret information on registered plans was put to the test. Most candidates missed the pertinent information in the legend where it denotes curve distances recorded on the plan were chord distances. As such, improvements on deciphering plan information are needed.

Four candidates passed this question with an average mark of 5.7/10.

### 6. Examination of a Pipeline Survey

This question dealt with the day-to-day practice of an Alberta Land Surveyor as it relates to plan examination. Candidates who did well on this question are familiar with plan requirements as defined by the Manual of Standard Practice and the Alberta Land Titles Office Procedures Manual. Candidates who wish to do better on this type of question would benefit from performing plan checking themselves and by reviewing the checklists used for Systematic Practice Review.

Four candidates passed this question with an average mark of 6.0/10.

### **7. Rural Subdivision**

This question dealt with the locating and establishing of monuments required for a subdivision survey within a quarter section. Practical knowledge was required on how to quarter a section and how to establish the east quarter and the northeast corners of a section that had not been established during the original township survey. Most candidates did well on the sub-question dealing with the necessary evidence required for the survey but a few were confused on whether they were posting for a subdivision or a wellsite survey.

Four candidates passed this question with an average mark of 5.6/10.

### **8. Rural Survey**

This question dealt with understanding what evidence is required to be found and placed to mark the corners of a parcel defined by a metes and bounds

description. The question also touched on how the placement of those monuments can be registered at the Land Titles Office. Candidates who did not do well on this question appears to be needing some understandings of the different types of plans that can be registered at the Land Titles Office, and what effects those plans may or may not have on the title to the parcel. Some candidates also need a better understanding of governing evidence for boundaries in the Alberta Township System.

Six candidates passed this question with an average mark of 5.4/10.

### **9. Urban Subdivision**

This question dealt with governing evidence as it applies to subdivision plans that were registered at a certain date in accordance with the Surveys Act (*plans registered prior to February 16, 1912*). Practical knowledge on how to

read and interpret information on a certificate of title is put to the test. Candidates were also expected to have knowledge in the subdivision plan registration process.

Four candidates passed this question with an average mark of 4.7/10.

### **10. Evidence Evaluations and Re-establishment**

This question dealt with the re-establishment of the E $\frac{1}{4}$  of a section corner by evaluating available evidence. Three scenarios were presented to the candidates for them to evaluate, in terms of availability and the use of best evidence towards the re-establishment. Candidates were expected to provide their supporting arguments for each identified situation and to provide a suggested notation to be placed on a plan of survey for each scenario.

Seven candidates passed this question with an average mark of 6.4/10.

## **Planning Seminar Proves to be Entertaining and Informative**

Approximately eighty land surveyors, articulated pupils, survey staff and municipal personnel participated in two recent seminars on Planning and the Municipal Government Act. The two seminars held at the Edmonton Petroleum Club on November 14th and in Calgary at the Village Park Inn on November 18th featured former professor of law from the University of Alberta, Fred Laux, and Gwendolyn Stewart-Palmer, both of whom now practice law with the firm of Shores Belzil Jardine—the Association solicitors.

The seminar concentrated on Part 17 of the Municipal Government Act - Planning and Development which is essentially the old Planning Act. In addition to the planning legislation the seminar covered other parts of the Municipal Government Act pertaining

to types of municipalities, roads, municipal boundaries, annexation, and so on.

In his opening remarks, organizer Ken Allred related how cadastral surveys and plans formed the cornerstone for virtually all municipal record systems, and how municipal records, including taxation and assessment, rely on an accurate, reliable cadastral base. The definition of the word cadastre in fact comes from Napoleon's time, and is defined as *a public record of the extent, value, and ownership of land for purposes of taxation*.

Fred and Gwendolyn were an exceptional pair of instructors, both having considerable background in the planning field. Ms. Stewart-Palmer practiced in the office of the City Solicitor for the City of Edmonton for twelve years. Mr. Laux is perhaps best

known to surveyors for the many planning seminars that he taught at the University of Alberta in the Land Use Planning program in the Department of Extension for several years. He was also a Professor of Law and an active practitioner in the field of planning and administrative law. His text on Planning Law is a classic in Alberta. He was also involved as an advisor to Municipal Affairs in the drafting of planning legislation. Participants were entertained while learning from two great instructors who often presented different points of view on the subject.

An excellent set of materials prepared for the seminar is available in the Association library.

The seminar is one in a series of seminars put on by the Alberta Land Surveyors' Association through the Professional Development Committee.



# Made to Measure



As Alberta's centennial celebrations are underway, at Science Alberta Foundation, we are also marking our 15th anniversary. This is a time for us to celebrate the engaging and creative programming that has contributed to our province's success. We are also thanking our sponsors for their help in making these programs possible. We appreciate the support we have received from the Alberta Land Surveyors' Association and we are delighted to report on the success of "Made to Measure" *Science-In-A-Crate*.

## Science-In-A-Crate

Our *Science-In-A-Crate* program is an innovative science learning program that uses real-life contexts and hands-on activities to make learning enjoyable, relevant, and enduring. With over 240 crates in rotation province-wide (a 50% increase over last year), we are able to share with schools, museums, and community groups a treasure trove of scientific activities linked directly to Alberta's science and mathematics curriculum. In the last fiscal year, the crate program reached over 65,000 students province-wide!

Seven hands-on activities help participants make sense of math while discovering how math helps makes sense of the world around us.

## "Made to Measure" Crate

Developed with support from the Alberta Land Surveyors' Association, and originally launched in September 2003 "Made to Measure" is directly linked to Alberta's grade eight math

curriculum (shape and space) leading to an awareness of the land surveying profession. Seven hands-on activities help participants make sense of math while discovering how math helps makes sense of the world around us. The activities centre around real-life scenarios faced by land surveyors from creating and analyzing a digital network to building a 3-D land model of a potential oil well site to estimating the composite area of a property. Students even create a treasure map to determine the location of a lost gold mine.

The activities have been designed to advance skills in scientific/mathematic inquiry, problem-solving, and science/mathematic literacy. Through the activities, participants learn about the variety of applications of mathematics used by land surveyors.

They also develop understanding in difficult concepts ranging from measurement, transformations, and 2-D shapes and 3-D objects. As they work in groups, students enhance their communication and problem-solving skills which are necessary as they role play land surveyors and resolve the scenarios posed in the activities.

The unique benefit of this crate is how it puts mathematics into a 'real world' context. Whether it's the Pythagorean Theorem or a surveyor's rangefinder, participants learn to make sense out of math while discovering how math helps make sense of the world around us. Between May 2004 and May 2005, the two copies of this crate travelled to 16 venues in 8 communities with 1,231 participants! Thanks to additional support from the Alberta Land Surveyors' Association, eight new copies of "Made to Measure" have been added for the 2005-2006 year, which will result in increased access for teachers and students province-wide.

## Science-In-A-Crate Evaluation

Our commitment to quality remains paramount. Proactive Information Services, a highly regarded organization in the evaluation field with expertise in evaluating programs in formal and informal contexts, conducted an

in-depth independent evaluation of the *Science-In-A-Crate* program in May 2005. We are proud to report to our sponsors and supporters that the study results demonstrate the continued excellent quality of the crate program, high user satisfaction, and the achievement of important outcomes. Highlights of the most recent evaluation summary include:

### Student Results

- 86% of students surveyed in grades 1 to 4 agreed that the crate activities allowed them to do things with science that they had never done before;
- 88% of grade 6 students agreed that the crate activities showed them that science can be fun;
- 90% of students surveyed in grade 8 and 82% of students surveyed in grades 9 to 12 reported that the crate activities helped them learn new things;
- 86% of students surveyed in grades 1 to 4 felt the crates showed that jobs using science of technology can be interesting and 87% of students surveyed in grade 5 felt the activities showed them that science is used in everyday life.

This crate is an excellent way for students to see practical applications of mathematics!

TEACHER, JOHN WARE JUNIOR HIGH SCHOOL

### Teacher Results

- 91% of teachers reported that the crates increased student interest in science or technology while 97% commented that the crates show students that science or technology can be fun;
- 94% of teachers reported that the crate activities increased student interest in the curriculum;
- 89% agreed that the crate activities helped them to achieve curriculum outcomes;



- 87% reported that the activities in the crates helped students develop a better understanding of the concepts presented in class and 96% reported increased student participation in class activities;
- 86% reported that the crate activities engaged students who do not usually show interest in science, with a further 83% reporting “at-risk” students and students who are not usually academically successful were engaged; and
- 98% were satisfied with the activities.

The feedback reinforces the important role *Science-In-A-Crate* can play in making science learning engaging and accessible to an audience with a wide range of learning needs and science experience.

Thank you for your help in making

“Made to Measure” possible. We value our relationship with the Alberta Land Surveyors’ Association and are proud to include your organization as one of our supporters.

#### **User Summary**

<i>Alberta Land Surveyors’ Association</i>	
Jasper	Users: 151
<i>Central Memorial High School</i>	
Calgary	Users: 17
<i>Dr. Folkins Community School</i>	
Chauvin	Users: 24*
<i>Dr. Gordon Higgins School</i>	
Calgary	Users: 166
<i>Ernest Morrow Junior High School</i>	
Calgary	Users: 207
<i>F.E. Osborne Junior High School</i>	
Calgary	Users: 204
<i>Georges P. Vanier Junior High School</i>	
Calgary	Users: 26
<i>Greely Road School</i>	
Fort McMurray	Users: 45

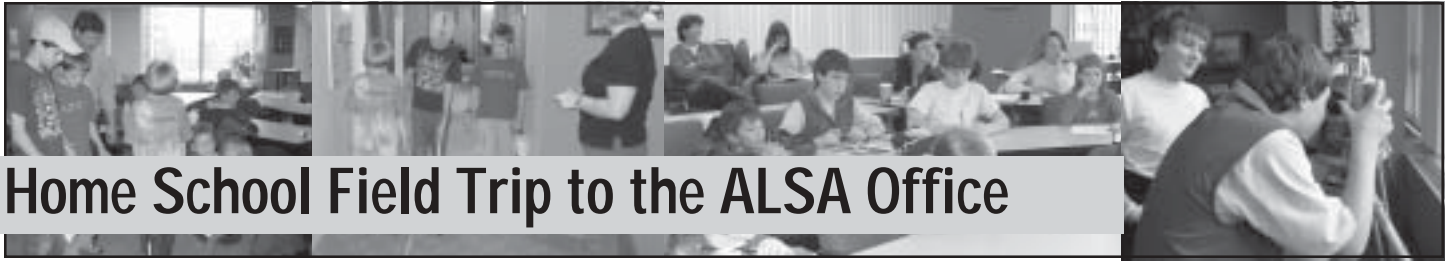
<i>Home School</i>	
Calgary	Users: 17
<i>John Ware Junior High School</i>	
Calgary	Users: 75
<i>Manachaban School</i>	
Cochrane	Users: 52
<i>School of Hope</i>	
Airdrie	Users: 22
<i>Senator Patrick Burns School</i>	
Calgary	Users: 131
<i>St. Paul School</i>	
Fort McMurray	Users: 37
<i>Tulliby Lake School</i>	
Tulliby Lake	Users: 26
<i>Turner Valley School</i>	
Turner Valley	Users: 31

**16 venues** **Users: 1,231**

**8 communities**

*\*estimate*

ARLENE I. PONTING, PHD  
CHIEF EXECUTIVE OFFICER  
SCIENCE ALBERTA FOUNDATION



# Home School Field Trip to the ALSA Office

Dear Brian, Lyall and Don:

*Thank you for doing this field trip. I really appreciate the effort you put into it.*

*This was a very good field trip and I hope, if you do more field trips, you have lots of fun. I also hope that one day you will get paid for passing your knowledge on down to us.*

TRISTAN FAIR (AGE 8)

The place we went for the field trip was downtown and it was called the Alberta Land Surveyors' Association. I am surprised that we were actually the first group that ever asked to have a field trip there!

First of all, we learned about what surveying was. Surveying is marking out where the land borders, where farms are, where provinces border other provinces, and things like that. We watched a couple of movie clips



about how they figured out longitude. They decided that the Alberta-Saskatchewan border would not be on the 4th meridian, but as close as the surveyors could get it because they didn't have the right tools at that time to get it exact.

How they surveyed Western Canada was using the township system. Now the township system is marking out land in square blocks, each one mile long. A township is 36 of these squares, plus road allowances. In each square there are four squares, or four quarter sections. Road allowances were

each one chain wide—a chain is 66 feet. Blind lines are lines where there is not a road, but is a border between two sections or farmlands. Laws said that you had to reach every quarter section by road, and doing what they did, it is possible though, some you could get in by two sides and some only one.

Correction lines were used to help make sure that everybody's square was the same amount of farm land. Of course it isn't, because the lines of longitude meet in two places: the North Pole and the South Pole. Near the poles, they get very narrow. Of course, latitude lines never meet, so there's no problem with latitudinal lines. Between every baseline, there is a correction line and baselines are every four squares or four miles plus road allowance. One road (N-S) every 24 miles, running perpendicular to the correction line (E-W), has a jog in it to make the sections even again.

After that was over, we did a little bit of activity. We tested different measuring tools to figure out which was the most accurate. The four tools we used were: a measuring wheel, a fibreglass tape, a tape measure (metal), and a measuring computer that used a light beam (I think). I believe that the two most inaccurate tools are the measuring wheel and the measuring computer, because with the measuring wheel you just have to walk around with it, but if you wobble just a little, it will add to the distance. The measuring computer, which sends out a light beam, sometimes goes out wider and hits things that you didn't mean to measure. Though the fibreglass tape is probably the most accurate, the measuring tape is also probably pretty inaccurate because it is metal so it would shrink or swell with changes of heat, and it only measured five feet. We were measuring much more than that

Correction lines were used to help make sure that everybody's square was the same amount of farm land.

so we had to keep our thumbs in the right place and we probably got it off once or twice.

The only three things they talked about were the measuring wheel, the computer, and the chain, which we didn't use, but I would have liked to have tried it! The chain was 100 links

long, and 66 feet long. It had a marker every 10 links. It was originally used for measuring out land in the township system.

How they made the markers to mark out the land was they took a marking pole, which was a metal pole sometimes, and sometimes not, with a little

disc on the top which said how many years imprisonment you would get if you moved it. They also dug a big ditch around it, and used the dirt from the





ditch to make a pile. Even if the marker is put in the wrong place, the surveyor did his best and it is illegal to move it.

The chain was heavy and cumbersome to use, so after that, they decided to use a flat steel tape which was also cumbersome, then they used a steel tape with a reel so that it was in a small place at all times, and easier to carry. In the 1940s and 50s, they started to use radio waves. The machines looked like big, cumbersome speakers. The one Brian showed us was green. The advantage to using them was that radio waves can go through stuff, but you had to have the other part of it at the other end and they were heavy.

In the 1960s, they started using light waves instead of radio waves. With the light waves you had to have a glass prism at the other end, but they were also heavy and hard to lug around. Nowadays, they use global positioning systems with different satellites that circle the earth.

We looked through some of the equipment and some of it was older than others. Two out of three things

we looked through, what you saw through them was upside down. They still use this equipment for land surveying.

After that, we did another activity about different surveying projects. We figured out a problem about a group of people and whether they had more or less land because of a border changing with river erosion. We figured out that they had lost some land. The amount of land was 48.22125 sq. kilometres.

Then our group of three (me Joshua and Garrison) went to a different centre that we were pretending to be drilling oil wells, and we had to put up the land in the right places according to a grid system. The land ended up looking like a contour map that showed the elevation. There were other neat centres too, but most of them we did not have a chance to get to.

Soon enough, it was time to go. I really liked that field trip, and I hope other people have good experiences there too. The best parts were probably the activities, but I enjoyed the whole time. I also learned lots of new things.

*Dear Brian, Lyall and Don:*

*Thank you very much for the great field trip. I hope you had fun doing things like that for other groups.*

JOSHUA TRYTTEN

On the 14th, we went on an Alberta Land Surveying field trip to their actual office. They had a whole conference room set up for us and we were actually the first tour group they'd had.

First of all, we were shown some slides about figuring out borders, which were on lines of latitude. The

border between Canada and the US runs along the 49th parallel of latitude and the Alberta-Saskatchewan runs along the 110th degree of longitude. The Canada-US border was marked using trenches dug around hills with little stakes in them. They would put them every four kilometres or so, all the way from the Pacific to the Great Lakes. The US wanted a straight line between the markers, but the earth is actually round so we had to put a curved line there or the US would have gotten more territory.



After that, we were shown some clips from a movie called *Longitude* which is about some of the crazy ideas people had for finding longitude, because Britain set up a whole big contest with a great big prize for whoever could find a successful way to measure longitude. The problem was that no one back then had accurate enough time pieces. Every four minutes you have a new line of longitude, but nobody had accurate time pieces





back then to be able to measure that.

The next slides were about the township system and showed how they marked up land in the prairies. If they found people living along rivers using the river lot system, they were told to leave them alone - I guess they learned something from the Riel rebellion! The one really cool thing about that is the main roads that go along the river in Edmonton, run along the edges of what used to be old farms, so some of the streets are angled. It just looks really cool on the map! The layout of the township system is in some of my other notes.

After that was done, we started doing a bit of surveying ourselves. We had to measure from one end of the hallway to the other with some surveying tools. They were two different tape measures, a measuring wheel, and an estimating computer. We used the biggest tape measure first. From using the different tools, we learned that the simplest tools are usually the best, because the measuring wheel, you had to stay in a very straight line and it's easy to stray. The estimator shoots out a laser beam in a cone shape so whatever it bounces off of, that's how far it will measure to. With the tape measure, people got really about the same answers. Even with the tape measure that was a little bit of difference, and that tells me that everyone get a different answer, so it means that you'll never be exact, and land surveyors just have to do their best.

Sir John A. Macdonald, who was the prime minister when the land surveying was going on in Alberta said, "do your best, because we know you can't

be exact." However, in Australia, they said, "this border has to be exactly along a specific longitude" so there is a great big argument going on about whether a border in Australia is in the right place or not. Really silly, I think.

After that was done, we started doing some projects about land surveying. At the first one, we had to figure out how much a family had, and whether they had more or less than they used to. It changed because the river did, and the river was one of the borders of their property. It worked out that they had less land, and the amount they had now was 48.22125 sq. kilometres.

The next was building a hill with rather unclear instructions. Our finished hill was similar to a 3-D map or a contour map.



Finally, I did one on my own. It was about cell phone towers. I picked a card out of a deck and I also had a map that showed meridians and townships. I had to find out what township the card showed and I had to put a magnet on it that stood for a cell phone tower. I got the four that I did right, amazingly enough. I had to connect those four towers in any way I wanted.

Finally, at the end, we had a look through some old survey equipment. It really magnified things, but strangely enough it turned them upside down because they had two lenses in them, not one or three.

It was a really great trip and really well organized too! I hope I get to go on one like that again.

*Dear Brian:*

*You might also be interested where your survey field trip has led us in further exploration. We borrowed the movie *Longitude* from the library and thoroughly enjoyed it. This was followed by reading a few books about Harrison and his docks, including *The Longitude Prize* by Joan Dash, which was probably our favourite. Then we went back and re-read sections of *Carry On, Mr. Bowditch*, about Nathaniel Bowditch who re-calculated the lunar tables, and discovered a new way to "work lunars" for American merchant ships because the marine watches were too expensive for most ships at that time. We may still do further research into sailing, but if this is as far as we go it has already added a lot of information to our understanding of the difficulties of sailing, trade, and warfare from the earliest ships through the Napoleonic wars. All this from a trip about surveying farmland in western Canada.*

*Another family did an internet search to determine exactly why a chain was 66 feet long which led to an examination of old measurements (like furlongs) and finding a site that showed how to make your own chain. They have also done research on David Thompson, how he did his surveying, and what his journeys were like. In fact, they have put together a short road trip for interested homeschool families in May to follow David Thompson's trek. We are one family that is looking forward to it.*

*I don't know where the other families' interests and discoveries from that day have led them, but I expect their journey's haven't been the same as the two above! You never know what kids will pick up on and want to explore further, but I can tell you that it was a very worthwhile trip for us—the boys still refer back to it when making various discoveries or travelling the roads outside of Edmonton, or those angled roads into the river valley. Thanks again!*

ELIZABETH FAIR











# spr director's message

by Lyall Pratt, ALS

**T**his is my final message as Director of Practice Review. It better be good then. There is only one message that I want to leave you with and that is thank you.

I started as Director of Practice Review on September 2, 1997 and, with my predecessor, conducted my first practice review on September 5, 1997. I will conduct my final practice review with my replacement on December 22, 2005. In between, according to my records, I will have conducted 303 Systematic Practice Reviews. In the last 100 months, I have collected lasting memories of my co-workers, Practice Review Board members, and the membership in general. I want to use this column to personally thank all of you for the cooperation and friendship I have experienced in my tenure as Director of Practice Review.

## To the membership....

The one remarkable thing about serving as Director of Practice Review is that I got to meet and speak with all practicing members and most articulated pupils. While I met with some of you more often than others, I enjoyed discussing any survey matters with you and listening to your views. I suspect that I am currently the only person that can say that I have met and spoken with each and every practicing member of our Association.

Thank you to the membership for the tremendous cooperation you gave me both in scheduling and conducting reviews. Although not all of you were prompt with your responses to the reports, most were and I thank you for that. With a few exceptions, your professional approach to the SPR process made my job much easier than it might appear on the surface. I truly enjoyed meeting with you one-on-one and talking a little surveying. Ah,

I truly enjoyed meeting with you one-on-one and talking a little surveying.

talking surveying; life doesn't get any better than that does it? I sense that I share my love for and attachment to this profession with nearly all of you. It is my observation that we all take pride in a survey job well done. I really enjoyed sharing with you, and many of your staff, survey related information through the field staff seminars, the Getting It Right seminars and the various exam preparation seminars I have been involved with over my term here. To this day, I am still amazed at the continuing success of the Getting It Right seminars. The annual visits to NAIT and SAIT were fun to do, and many of those former students are now employed in our profession.

## To the Practice Review Board....

I have also had the pleasure of working with a group of dedicated members that have served the Association on the Practice Review Board. As you know, I am appointed by the PRB under Section 14 of the Land Surveyors Act and report to the PRB on the investigations conducted on their behalf. According to ALSA records, there were 67 Practice Review Board meetings that I attended as Director of Practice Review. The seven PRB chairmen that I served with in order include: J.G. Halliday, J.J. Van Dam, R.J. McGaffin, D.H. VandenBrink, J. Van Berkel (2 years), L.C. Finner (2 years), and D.A. Wiberg. Many Board members served during my tenure—too many to mention by name here, but we sure had some interesting meetings and detailed discussions. Thank you all for your dedication to the profession, and your ability to collectively come to

what I realize was the correct decision on each and every review.

## To my co-workers past and present....

The last group that I must mention, and thank, is the staff of the Alberta Land Surveyors' Association. I have worked with some of them for my entire 100 month term, and others for shorter periods. Within SPR, I have known Jeremy Dawson for a little less than a year, and Don George since 1967. I thank Don George, my good friend for 38 years and co-worker the last eight, for all of his assistance. Hardly a day went by that he and I would not discuss some survey-related issue. The survey technologists working in Practice Review since I started are, in order: James Bendza, Wade Heck, Corey Levasseur, Dale Lawrence, Matt Parrish and Jeremy Dawson. Office assistance to Systematic Practice Review came first from Brigid McGarry and now Dawn Phelan. Thank you ladies for all your help.

While the remaining ALSA staff were not directly involved with SPR, I did work with all of them at various times. Sharon Stecyk, I suspect, sent me several thousand e-mail reminders for *ALSA News* articles. Thank you for your help when I had questions and even for the reminders, but now you can stop sending them Sharon. Michelle Woywitka and Cindy Chomlak, while relatively new to the ALSA, have both been good to work with. Brian Munday started his tenure as Executive Director a few days before I started in 1997. We shared a lot of stories over the years, and have dissected most sporting events from hockey to baseball. To each of these co-workers I say thank you for all your help and I know I will miss you all.





# spr corner

by Lyall Pratt, ALS - Director of Practice Review

## Case Study No. 26: Integration With Survey Control

*This is the twenty-sixth in a series of articles featuring problems or issues commonly encountered in Systematic Practice Review. The purpose of these articles is purely educational, so no names or identifying legal descriptions are included. Opinions expressed are those of the author.*

### The Issue

There is, in my view, a distinct lack of understanding within the profession about what integration with survey control means. In Case Study 22, I touched on some of the issues, discussed map projections and the issue of grid bearings. As noted in that article, through practice review, it has become obvious that many surveyors do not properly integrate their surveys as required.

### Past Information

In the 1987 summer issue of *ALS News*, T. W. Hudema, ALS wrote an article on integrated land surveys. His article covered what integration is, why it is required, when it's necessary and how to achieve proper integration. Certainly some things have changed since then, as the requirements for integration are now in our MSP rather than in a regulation, and the MSP now outlines when integration is required. Let's take a fresh look at Mr. Hudema's topics in today's environment.

### What Is Integration?

Integration is the means by which the land survey system is related to the survey control system. It provides the basis for a province-wide cadastral mapping system to which any user can relate other information. As outlined in Part C Section 5.2 of the Manual of Standard Practice, integration means

The urban and rural mapping programs are now in the maintenance phase and all surveys on public lands must now be georeferenced.

obtaining sufficient measurements from survey control markers into the survey to permit the derivation of grid bearings and the computation of a closure, starting at a survey control marker and proceeding along the shortest path through your survey to another survey control marker. As outlined in Section 5.3, when computing the closure you compare the *published coordinates* of the survey control markers to the computed coordinates obtained by closure. As the published coordinates are either 3TM or UTM grid coordinates, depending on the map projection required in the area of the survey (see Case Study 22), you *must* reduce your measured ground level distances to the mapping plane before computing the required closure. You should *not* use the combined factor in an attempt to scale the markers mapping plane coordinates to a ground level coordinate.

### Why Is Integration Required?

As shown in Section 5 of the Surveys Act, the Director of Surveys is responsible for the establishment and maintenance of a geographical positioning system for the province and the development and maintenance of a land-related information systems network. A key part of relating any information to land is a homogeneous land survey system. Integrated surveys create this homogeneous fabric. The urban and rural mapping programs are

now in the maintenance phase and all surveys on public lands must now be georeferenced. Anything related to the land can also be referenced through this spatial reference system. In years to come, the entire province and likely all surveys of any nature will be mapped and the efficiency of dealing with any land related information attached to the parcel will be greatly improved. We have come a long way since 1987. How does one now integrate their survey in accordance with the requirements of the Manual of Standard Practice?

### When Is Integration Needed?

Part C Section 5 of the Manual of Standard Practice deals with integrated surveys. It outlines when integration is required. This section was added to the MSP when the former Survey Control Regulation was rescinded in 1999 as part of the government's de-regulation initiative. So when is integration required? Section 5.1 states:

*"Every survey a plan of which is to be registered under the Land Titles Act shall be integrated with survey control if 2 or more monuments found or placed by the survey are each within 1 kilometre of any 2 survey control markers."*

There is, however, a case where the conditions in 5.1 are met but integration is not necessary as Section 5.4 states:

*"If a surveyor performs a survey within the bounds of a survey that has been integrated in accordance with Sections 5.1 to 5.3 then the requirements of Section 5.1 are optional."*

The most obvious case where this section (5.4) may be used is the situation where an urban subdivision plan has been integrated and the various right-of-way plans within the bounds of the subdivision do not require integration. Another situation might be where a lot or several lots of a subdivision are either further subdivided or

have had some lot lines adjusted. The key here is that the new survey must be *fully within the bounds* of a previously integrated survey. It can *not* be abutting or surrounded by previously integrated surveys, it must be fully contained within a previously integrated survey.

Surveys not meeting the requirements of Section 5.1 may still require a tie to an Alberta Survey Control Marker (see Section 6.6) if one exists within one kilometre of any monument found or placed by the survey. Integrating a survey and tying to a marker is *not* the same thing.

So let's be clear here that all surveys meeting the requirements of Section 5.1 must be integrated unless the survey falls fully within the bounds of a previously integrated survey.

## How Is Proper Integration Achieved?

Once you have determined that integration is required, and decided which mapping plane is required, you need to obtain ASCM ID cards in the required coordinates. See Case Study 22 for a checklist for ASCM. When integrating between markers with different combined factors, the mean of the factors is generally used as an approximation. A combined factor is only valid for a limited area around a marker. This selected approximate factor is the one that, according to Part D Section 1.2 of the Manual of Standard Practice, must be placed as a note in the legend of the plan. Don't forget that even if your survey is being done under Section 47 of the Surveys Act (delayed posting) you require *grid* not ground level coordinates. (See Part D Section 2.2.4 of the MSP).

Part D Section 1.2 of the Manual of Standard Practice states:

*"The recognized datum for spatially-referenced data in Alberta is the North American Datum 1983 (NAD'83), using the GRS 80/WGS 84 ellipsoid. This datum and related ellipsoid therefore shall be used on all plans of survey registered in the Land Titles Office, if plan information relates to grid bearings or grid coordinates. The choice of map projections must be consistent with the*

*requirements of the provincial mapping system."*

*"The recommended vertical datum for spatially referenced data in Alberta is CVD28."*

*"The plan of survey shall clearly show the datum of origin used for bearings and coordinates on the plan of survey as outlined below:*

*.1 Unless circumstances require greater accuracy, bearings should be shown to the nearest five seconds of arc. Ties to Survey Control Markers shall reflect the actual angle determined.*

*.2 All plans of survey pursuant to Section 47 of the Surveys Act; and Part C Section 5 of the Manual of Standard Practice, using grid bearings or grid coordinates, shall base grid bearings or grid coordinates on NAD'83 and show, in addition, to other requirements for plans, the following*

*A note in the legend of the plan and header for grid coordinate listings indicating*

- . The datum used,*
- . The projection used*
- . The reference meridian,*
- . The combined factor (scale/elevation)."*

Some members seem to think that the requirements of this section (Part D Section 1.2) only apply to Section 47 plans. Of course, all surveys done under Section 47 of the Surveys Act must be integrated. But the section also *applies to all integrated surveys.*

Starting at the published (3TM or UTM) coordinates shown on the marker ID card, compute from the marker through your survey using grid bearings and distances reduced to mapping plane by application of the mean combined factor to all ground level distances. At the closing ASCM, inverse from the computed coordinates to the published coordinates for that marker. According to Part C Section 5.3, this difference shall not exceed the greater of either the product of 0.00014 and the direct distance between the two ASCMs used for the closure, or 25 millimetres. If your closure meets this tolerance, you are integrated. If not, additional measurements must be made to ensure there are no measurement errors and to obtain closure and integration. Be careful, as a marker may have been

Really, the method of integrating your survey hasn't changed much since 1987, but the definitions and the field methods have.

disturbed and checking to a second marker, will yield a satisfactory closure. If you determine that a marker has been disturbed, fill out a marker condition report to document your findings as required by Part C Section 3.11 of the MSP.

## Conclusion

Really, the method of integrating your survey hasn't changed much since 1987, but the definitions and the field methods have. I think the Manual of Standard Practice spells out fairly clearly what is required and, coupled with this article, perhaps will reduce the number of improper integrations now seen.

## Regional Meetings 2006

### Grande Prairie

February 2 and March 23  
Quality Hotel & Conference Centre  
11201 - 100 Avenue

### Calgary

January 31 and March 29  
Calgary Winter Club  
4611 - 14 Street NW

### Edmonton

January 26 and March 30  
Edmonton Petroleum Club  
11110 - 108 Street

***All the meetings will be held from  
5:30 p.m. to 8:30 p.m.  
(cocktails at 5:30 p.m.  
dinner at 6:00 p.m.)***



# guardpost

by Bernie Jess, ALS

## RTK and Measurement Closures

The introduction of RTK techniques into our survey practices, over the past ten years or so, has brought many benefits in terms of accuracy, time and cost savings to our clients and has significantly altered the methodology utilized in field work today. This evolution, from a closed traverse using angle-distance observations with a closure calculation to a radial survey from a single GPS base station with multiple fixed integer solutions has, during the practice review process, led to many different interpretations by the membership with respect to requirements of the Manual of Standard Practice.

One of the issues that has generated some debate at the Board meetings, and is often discussed during the practice review interviews has been, is the RTK technique of “observation/forced loss of lock/re-observation” considered a redundant measurement and meets the requirements of the Part C, Sections 1.2, 1.3 and 2.4? Rather than offer my own opinion exclusively, I thought I would interview a small sample of the membership that encompasses the various sectors of the profession and try to briefly summarize what I consider to be the best field and office procedures being followed by those practitioners at the present time.

So, is the RTK technique of “observation/forced loss of lock/re-observation” considered a redundant measurement and meets the requirements of the Part C, Sections 1.2, 1.3 and 2.4? Some of the respondents answered yes with no conditions or reservations. Others accepted the results only under certain conditions or when field logistics dictated that to be the most efficient survey methodology. However, about half of the group indicated

that their standard/preferred procedure was a minimum time separation of 20 or 30 minutes between observations. Even though the answer to this question was not a definitive yes, it is obvious that this is considered an acceptable method of closure by the practitioners I spoke with.

At the heart of this is the question, is there sufficient movement in the satellite constellation and changes in environmental conditions over the short time gap to ensure a truly independent resolution of the integer ambiguities for the two solutions. Further exploring the topic of under what conditions the methodology would be acceptable and when it's not, turned the discussions to the various error sources and environmental factors that influence that decision. I have tried to summarize the major influences on that decision and how they affect the reliability of the RTK results in the table shown below.

If the field conditions put you in the lower left hand quadrant of the table, the consensus is that the obs/initialization/obs methodology will most likely result in a reliable repeatable coordinate difference and an

Rather than offer my own opinion exclusively, I thought I would interview a small sample of the membership ...

accurate baseline. In the field, you should observe quick times for initialization with a low RMS value and the solution should be stable over time.

In the upper left and lower right quadrants, the obs/initialization/obs methodology is capable of providing good solutions. However, the difficulty may be in determining when the results are accurate and reliable and when they are not. In this situation, it may be advisable to have a minimum time separation between the first and second observation or an alternate means of closure to ensure you have a valid solution. Generally, in the field, you may observe longer initialization times, higher RMS values or values that fluctuate, unstable solutions exhibited by loss of initialization that cannot be attributed to satellite obstructions.

↑ Increase in geomagnetic activity ↑ K-Indices	Unstable ionosphere, low DD-DOP, 7 or more satellites. <b><i>Good results are possible with short base to rover ranges, results deteriorate as the base to rover distance increases.</i></b>	Unstable ionosphere, high DD-DOP, less than 6 satellites or obstructed view of the constellation <b><i>Unreliable results, RTK is not recommended, static or conventional survey methodologies recommended.</i></b>
	Stable ionosphere, low DD-DOP, 7 or more satellites. <b><i>Reliable results.</i></b>	Stable ionosphere, high DD-DOP or less than 6 satellites or obstructed view of the constellation. <b><i>Possibly unreliable results, even with good RMS statistics</i></b>
⇐ Decrease in the number of Satellites ⇐ ⇐ Increase in DD-DOP values ⇐		

In the upper right quadrant, results should be used with caution or not at all.

The above discussion is limited to the single base solution and may not apply for a multi-base network solution, since the multipath caused by the ionosphere may be effectively removed from your observations.

Having obtained two RTK baselines, what is the allowable misclosure between the two vectors? The Manual of Standard Practice Part C, Section 1.2, outlines two methods to determine the acceptability of survey measurements; a misclosure computation or the method of least squares. Most of the practitioners used the misclosure method exclusively and expected the difference between the two measurements to be in the order of 0.020 and 0.030m. However, they accepted differences as high as 0.050m on longer baselines. Any difference larger than 0.050m was assumed to be an indication of an incorrect initialization and the observations were repeated. This seems to me to be a realistic expectation and in line with the capability of RTK technology and the field procedures most commonly used today. All ignored or didn't evaluate the results based on the 1:7500 ratio. Everyone I spoke with has come across poor or incorrect initializations in the course of their work and magnitude of the baseline differences ranged from 0.10 to 1.7m. I don't have reliable number on the frequency of bad initializations that practitioners are experiencing observations. However, judging from the comments I received, they exist and therefore, there needs to be a system in place to detect and remove these blunders from our computations.

Along with the coordinate difference, there are other conditions to be examined in the office checking routine? I think it stands to reason that if you are relying on the loss of lock or a time separation methodology to ensure you have two independent measurements, these events should

also be checked in the office by reviewing the electronic data file. Most data files are in a text format that can be searched and should contain some sort of sequence like "point observation/loss of lock/initialization gained/point observation" to determine a point closure or, in the case of the time separation, the observation times can be examined to ensure that the time separation requirements have been met. These procedures and examining the vector difference would be the equivalent of doing a closure calculation on a set of traverse notes. If the file shows you don't have the loss of lock or a sufficient time separation, you do not have a redundant observation but, rather, a hanging line that is not closed off.

Paper field notes. Do I need them? The consensus here is that paper field notes are required and that these notes are essential in understanding the sequence of the survey and in linking multiple point observations to track vector differences and closures. Anyone who has spent some time trying to evaluate an RTK survey from the digital file exclusively will quickly realize that it is tedious, time consuming and will most likely result in an incomplete evaluation of the field returns or, in the worst case, a defective product. In addition to the requirements outlined in Part C, Section 4 of the MSP, the field notes, at a minimum, should also contain; the filename for the digital file, base station point number(s) and the origin of the base coordinates (assumed from a code observation or derived from a control network), datum (local datum with/without a site calibration or NAD83, UTM, 3TM with ground to grid scale factors), rover occupation points, antenna heights, a diagram of the field survey and some method to alert the reader to multiple occupations of the same point. I would suggest using some common symbols for all your field crews, such as 4/#/6, to indicate that point 6 is the second observation on point 4 and the closure is deter-

mined by a forced loss of lock or  $4/\Delta t_{30}/6$ , to indicate that point 6 is the second observation of point 4 and with a closure based on a time separation of 30 minutes or more. Personally, I also find the paper field notes useful as an index or a table of contents for the digital file. If I feel the need to check a technical detail (number of satellites, RMS, loss of lock, and so on), it will quickly lead me to the location in the electronic file that I need to focus in on.

Another noteworthy item is that most firms have developed some sort of field procedure manual, job setup or check sheets to help the field and office staff deal with the intricacies of RTK surveys. Some have even gone as far as to vary the specifications for different types of surveys, which make sense. The RTK requirements for a wellsite survey can be significantly different than that of a subdivision project. Some of the more common elements contained in these documents are: minimum occupation times, minimum number of measurements per occupation, precision limits for coordinates, maximum allowable DOP values, whether to record raw data or not and the recording interval, maximum allowable RMS values, maximum ranges from the base to rover, maximum allowable K-indices (geomagnetic activity) and monitoring of geomagnetic activity. One of the best sources of information regarding geomagnetic activity can be found on the NRCAN website at [www.spaceweather.gc.ca/forecastmap\\_e.shtml](http://www.spaceweather.gc.ca/forecastmap_e.shtml). Some firms are distributing this information to their field crews on a daily basis and are restricting RTK work during active periods.

Many thanks to those of you who generously offered your time, opinions, expertise and check lists that were invaluable in helping me compile this article.



# pdc corner

by Andrew Miles, ALS, CLS

Since returning to Alberta, I have observed the involvement that the membership has in our Association and their commitment to a high level of professionalism. As a member of the Professional Development Committee (PDC) I would like to share my thoughts on a few different subjects pertaining to professional development.

Over the past year, a colleague of mine has been sending me the monthly magazine of the New South Wales Surveyors titled *Azimuth*. It has been interesting reading about the issues that they are working on as a group. There are many common issues that we share with our fellow surveyors from the Australian State of New South Wales. For example, in the June issue, an article outlined a program to promote surveying as a career option. The campaign they were running involved practicing land surveyors visiting the schools of their children or their own high school to promote the profession. The same subject was the main theme of the Mr. Tripp's March article for PDC Corner. It is interesting that we have a similar campaign developed for exposing students in Alberta to the survey profession.

A variety of topics have been covered in the last number of PDC

...positive mentoring relationships in our workplaces..will ensure our profession provides a constructive learning environment for our new incoming professionals.

Corner articles. There is a direct relationship between those articles and our Code of Ethics. The last two articles both dealt with the training of pupils and staff. Continuing professional development is a necessary part of our commitment to those ethics. (A seminar will be presented on Ethics and the Land Surveyors Act at our next AGM.)

Mentoring is also important in professional development. One definition of mentoring "is a role model, or mentor, who offers support to another person. A mentor has knowledge and experience in an area and shares it with the person being mentored." Whether formal or informal, mentoring takes place within our industry at the present time. The articling process between the pupils and their principals is formal

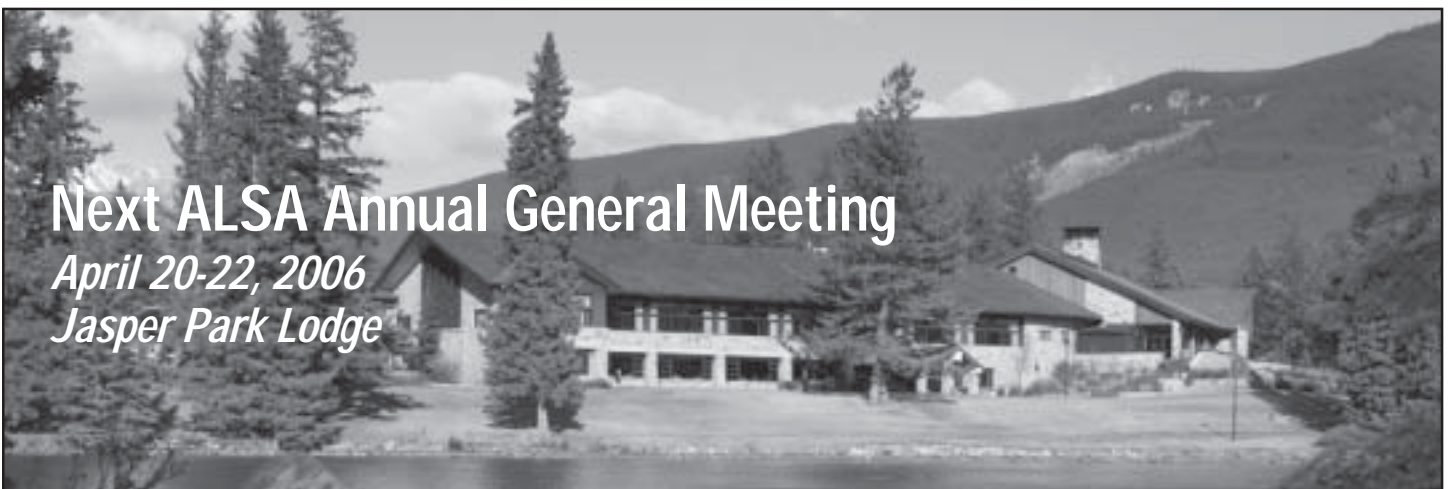
mentoring. Informal mentoring takes place on a day-to-day basis in the work place.

There are no set guidelines for informal mentoring. Criteria for establishing mentoring relationships could include:

- similar values concerning achievement;
- complementary factors in skills and knowledge;
- experience in day to day requirements on the part of the mentor;
- openness to experimentation with many options (a spirit of seeking answers rather than 'the answer');
- inclination on the part of each individual to rejoice in the success of the other;
- sense of eagerness of learning and new ideas;
- willingness to listen;
- ability to ask questions."

Informal mentoring is important in our busy professional lives. We need to continue to develop positive mentoring relationships in our workplaces. This will ensure our profession provides a constructive learning environment for our new incoming professionals.

Hoping the new year will bring you continued success.



Next ALSA Annual General Meeting  
April 20-22, 2006  
Jasper Park Lodge





# public relations

by Art Miller, ALS

Faithful readers of the public relations column in *ALS News* may remember Lew Rodney's article from a year ago that highlighted a few of the programs the Public Relations Committee was using (through the efforts of individual members) to raise the public's awareness of Alberta Land Surveyors and enhance our image in today's society. The article touched on the fact that many of our practitioners will soon be retiring and, if we are to keep our numbers up, effort must be put into attracting and recruiting new individuals into the field of surveying. Programs currently in use by ALSA members, such as the Science Alberta Foundation's "Made-to-Measure" crate and the annual barbecue with the University of Calgary's engineering students, as well as participation in the annual Scout's Jamboree (which you can read about in detail in Scott Partridge's September public relations column), are serving to do just that.

While the aforementioned programs, along with a few other Public Relations Committee initiatives are making some headway in terms of raising public awareness, there is still a lot of ground to gain in defining our purpose and enhancing our image to the general population. For instance, when I am asked what it is that my wife does for a living and respond that she is a professional engineer, I am generally met with a variety of responses such as, "wow, what kind of engineer? Does she work at one of the plants up here?" or "oh, my brother/cousin/best friend/aunt is an engineer." On the other hand, when my wife is asked the same question and responds that her husband is an Alberta Land Surveyor, the general response is either a confused look, or "oh, you mean the guys on the side of the road taking pictures of stuff? Is he away from home a lot?"

There are a number of ways that individual members of the ALSA can

## Finding opportunities to participate is easy.

get involved to help ensure the public understands who we are and what it is that we do. The most obvious way to get involved is to join the Public Relations Committee and, if we are to succeed in our efforts to carry out the most recently prepared five-year plan, a number of Alberta Land Surveyors will need to do just that. Getting involved directly with the Committee is a great way to have direct input into the methods used to get our message out to the public and to gain opportunities to interact with the public in the capacity as a spokesperson for the Association. It also proves an opportunity to network with other ALSs and articulated students and to keep up to date about what is going on in industry. Furthermore, for those new to the Association, or those looking to get more involved in Association activities, the Public Relations Committee is an excellent stepping stone, allowing you to gain an understanding of Association activities from the inside.

Another way that members can get involved is to participate in programs like those previously mentioned. Activities involving high school and university students are particularly easy to get involved with and may have a direct impact on the number of future Alberta Land Surveyors we are able to recruit. Participation in math and science-based activities (of a nature similar to the National Engineer & Geoscience Week put on by the Canadian Council of Professional Engineers), speaking at high school career days and attendance at university career days and student receptions, can go a long way towards making our presence known and generate interest in our profession. Furthermore, these activities allow us an opportunity to interact with the bright, young students

of today and remind us of why we became interested in surveying ourselves. Look around, I am sure you will find there are plenty of opportunities in your local community to get involved in a suitable science fair, career day, or likewise activity, with a minimal amount of time and effort.

In addition to those efforts that are directly related to promoting what it is that Alberta Land Surveyors do, we can more subtly enhance the image we present in today's society by becoming directly involved in our communities. Each of us has something that is close to our hearts, be it a sport in which our child participates, a charity or foundation that we feel strongly about or even just community events in which we like to be involved. Direct involvement in these types of activities is something that can be accomplished by each and every member of the ALSA. The greater presence at such events, the stronger our image will be in the public eye.

I realize that December is in the middle of what many of us refer to as our "busy" season and there is precious little time available. The fact that we have a busy season, itself, is an indicator of how fortunate we are to be healthy enough to go to work every day, gainfully employed in our chosen profession. Therefore, the onus is on us to give back to our communities.

Finding opportunities to participate is easy. Look no further than your local paper or newscast and a number of options are available. In fact, many of our employers provide us with various opportunities to get involved in events that include athletic endeavours such as marathons and relays, academic ventures like supporting the University of Calgary solar car race, direct charity activities such as annual United Way campaigns and other sponsorship activities and, finally, involvement in trade shows and other community events.

# The Art of Surveying . . . . .

Ken Allred, FIG Vice-President, recently made a presentation on *The Art of Surveying* at Rendezvous 2005 in Spokane Washington. Rendezvous 2005 was organized by the Surveyors Historical Society to commemorate "Surveying the Northwest with David Thompson." The three-day conference had presentations on the surveying of the Canada-United States boundary including a special presentation on the determination of the "Northwest Corner" of Lake of the Woods. Other presentations included presentations on the survey instruments used by Thompson in his exploratory surveys of Western Canada and the northwestern part of the United States and a comparison of David Thompson expeditions and accomplishments versus those of the Lewis and Clark expedition.

Features of the conference included the opening of an exhibit of the *Northwest Museum of Arts and Culture*, which featured the exploratory surveys of David Thompson, who has been labelled "*the greatest land geographer of all time*," in recognition of his survey and mapping of 1.2 million square miles of largely uncharted Indian lands. This exhibit will run until September 2006. Also included were displays and demonstrations of the sextant and other instruments and items from early exploration and the fur trade in the early 19<sup>th</sup> century. A hands-on demonstration of the use of a solar compass was the subject of a half day seminar.

Jack Nisbet, author of *Sources of the River—Tracking David Thompson across North America*, was also a featured speaker. Jack is a passionate researcher of David Thompson and released his second book *Mapmaker's Eye – David Thompson on the Columbia Plateau* during the rendezvous.

Allred's presentation on *The Art of Surveying* featured a series of slides of historical and modern day survey art ranging from Babylonian boundary stones and the Rope Stretchers to the



*David Thompson Monument, Lac La Biche, Alberta*

The Surveyors Historical Society is ...dedicated to the public purpose of preserving historical surveying instruments, artifacts, records and memorabilia. SHS is also dedicated to educating the general public about the history of surveying.

Canadian Centennial monuments and monuments of David Thompson and Peter Fidler. Several paintings of survey scenes and historical snapshots relating to surveys and surveyors were also included. His narrative portrayed the role of the surveyor as an explorer, creator and preserver of events that have great importance to society.

The Surveyors Historical Society is a society based in Indiana, dedicated to the public purpose of preserving historical surveying instruments, artifacts, records and memorabilia. SHS is also dedicated to educating the general public about the history of

surveying. The Society has developed programs to honour historical surveying points, and the surveyors who have made significant contributions to the profession through the implementation of a public marker program. SHS cooperates at all opportunities with persons and organizations that share the public benefit purpose of education concerning the history of all branches of the science of surveying. SHS holds an annual rendezvous to commemorate some historical aspect of the surveying profession.







# education news

## University of Calgary . . . . .

### **Dr. Elizabeth Cannon Appointed to Canada Foundation of Innovation (CFI) Board of Directors**

The Honourable David L. Emerson, Minister of Industry and Minister responsible for the Canada Foundation for Innovation (CFI), today announced the appointment of Dr. M. Elizabeth Cannon to the Board of Directors of the CFI for a three-year term.

“Dr. Cannon’s extensive academic background and active involvement as a director on several industry and government advisory boards, including the Alberta Ingenuity Fund Board of Trustees, the Calgary Science Centre Board of Directors, the Alberta Research Council Board of Directors and the Advisory Board to the Minister of National Resources Canada on Earth Sciences, will be of great benefit to the CFI Board as a whole,” said Minister Emerson.

“Dr. Cannon brings to the table an impressive track record in scientific research that will serve us well,” said Dr. John Evans, Chair of the Canada Foundation for Innovation (CFI). “Her appointment to the Board ensures that the CFI will continue to deliver on the objectives set out by the Government of Canada.”

Dr. Cannon is currently Head of Geomatics Engineering at the University of Calgary, a position she has held since 2004. She is a leading researcher and educator and has authored over 300 publications, conference papers and technical notes throughout her distinguished career. Dr. Cannon is the recipient of many awards for teaching, leadership and for her national and international research efforts. Dr. Cannon received her PhD in Geomatics Engineering from the University of Calgary in 1991.

The CFI is governed by a Board of Directors which makes final decisions

on infrastructure projects to be funded based on a rigorous merit review process. Directors are appointed for a three-year term and determine the strategic objectives of the CFI in the context of the funding agreement with the federal government. It approves annual plans and is responsible for formal evaluations of its programs whose results are posted on the CFI website. The Board of Directors signs a “statement on ethics” to deal with any conflict of interest issues.

The Canada Foundation for Innovation is an independent corporation created by the Government of Canada to fund research infrastructure. The CFI’s mandate is to strengthen the capacity of Canadian universities, colleges, research hospitals, and non-profit research institutions to carry out world-class research and technology development that benefits Canadians.

OCTOBER 4, 2005

### **Department of Geomatics Engineering Has Strong Showing at ION GNSS-05**

The Department of Geomatics Engineering, Schulich School of Engineering at the University of Calgary, continued its strong showing at the annual US Institute of Navigation’s (ION) GNSS Conference. At GNSS-05, held in Long Beach, California, from September 13-16, six faculty members and over twenty graduate students and research staff attended the conference. Two students were awarded Student Sponsorship Awards which supported their travel to the conference to present their research work. Olivier Julien, a recent PhD graduate supervised by Drs. Gérard Lachapelle and Elizabeth Cannon, presented his paper titled “Carrier-Phase Tracking of Future Data/Pilot Signals” while Minmin (Belinda) Lin,

an MSc student supervised by Dr. Lachapelle and Dr. O’Keefe, presented her work on “RTCM 3.0 Implementation in the South Alberta Network.” In addition, six papers presented by Geomatics Engineering researchers were awarded Best Presentation Awards and these are listed below. Dr. Elizabeth Cannon is Chair of the ION Satellite Division which organizes this annual conference attended by over 1,700 people.

#### ***GPS Software Receiver Enhancements for Indoor Use***

B. Zheng, G. Lachapelle, University of Calgary

#### ***The Development of a GPS/MEMS INS Integrated System Utilizing a Hybrid Processing Architecture***

C. Goodall, N. El-Sheimy, University of Calgary; K-W. Chiang, National Cheng-Kung University, Taiwan

#### ***Development of a Low-Cost MEMS IMU/GPS Navigation System for Land Vehicles Using Auxiliary Velocity Updates in the Body Frame***

X. Niu, N. El-Sheimy, University of Calgary

#### ***Field Results of a GPS/INS-Based Approach to Measuring Ship Flexure Onboard an Aircraft Carrier***

M.G. Petovello, K. O’Keefe, G. Lachapelle, M.E. Cannon, University of Calgary

#### ***Integrating Photogrammetry and GPS at the Measurement-Level***

C. Ellum, N. El-Sheimy, University of Calgary

#### ***GPS Network RTK Performance Under Very Active Ionospheric Conditions***

N. Luo, D.T.H. Dao, G. Lachapelle, E. Cannon, University of Calgary

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## University of New Brunswick . . . . .

### **Eighteen GGE Undergraduates Make Dean's List**

Eighteen students from Geodesy and Geomatics Engineering have made the Dean's List for 2004-2005. The dean of engineering, David Coleman, announced that the students who qualified for the list attained a sessional grade-point average of at least 3.7 or A- for the academic year.

### **Dr. Adam Chrzanowski Co-organizing IAG Symposium**

Dr. Adam Chrzanowski and UNB's Canadian Centre for Geodetic Engineering along with Prof. Heribert Kahmen of the Institute of Geodesy and Geophysics Engineering at the

Vienna University of Technology in Austria are organizing a symposium for the International Association of Geodesy. The 3rd IAG Symposium on Geodesy for Geotechnical and Structural Engineering and the 12th FIG Symposium on Deformation Measurements will take place May 22-24, 2006 in Baden, Austria. For more information go to <http://info.tuwien.ac.at/ingeo/sc4/baden/index.htm>

### **UNB GGE Earns Two Best Paper Awards at ION GNSS 2005**

Two of the papers presented by GGE authors at the Institute of Navigation

GNSS 2005 meeting in Long Beach, California, last month won "best paper" awards. The paper "Range-Extended Post-Processing Kinematic (PPK) in a Marine Environment" by Marcelo Santos, Karen Cove, Robert Kingdon, and Dave Wells was selected as the best paper in Session E2, Marine Applications. The paper "High-Accuracy Point-Positioning with Low-Cost GPS Receivers: How Good Can It Get?" by Tomas Beran, Richard Langley, Sunil Bisnath, and Luis Serrano was selected as the best paper in Session B4, Precise Point Positioning.

## Northern Alberta Institute of Technology . . . . .

### **Major Equipment Donation – Spatial Technologies Inc.**

The NAIT Geomatics Engineering Technology program is pleased to announce to the membership that a significant contribution has just been made that will help us in our ongoing mandate to integrate the latest technology into the classroom. One of our goals is to be able to provide quality education using state of the art equipment that is commonly used in industry. One of the most difficult challenges that we face is to provide students with access to expensive RTK-GPS units. It has been difficult for NAIT to purchase enough of this very accurate and expensive equipment and to also keep it current.

Spatial Technologies Inc. has recognized this and recently approached NAIT with an innovative idea, fostered out of their commitment to education. Their offer was to provide NAIT with eleven Leica System 1200 Dual Frequency geodetic-grade RTK-GPS receivers on a no-charge rental basis for our academic

term. Furthermore, Spatial Technologies Inc. has committed to providing us with the same arrangement for at least two more academic terms.

Included in this commitment to education is technical support and training for our instructors. As well, Spatial has coordinated with others who have also provided donations which directly relate to the use of RTK-GPS. Leica Geosystems has provided NAIT with a network license for Leica Geo Office processing software, and Pleiades Data Corp. has generously provided NAIT with three years of DGPS data supplied from one of their reference stations.

As you can all imagine, we agreed to this arrangement and students and staff are very excited about using this new technology. It will be introduced to the first-year students in second semester, so by the time they are ready for a summer job, they will have had some exposure to the both the concepts and the use of the equipment. In our second year, students will gain more insight into the use and application of this tool. Our second-year class will be starting to use this equipment by the time you read this article.

### **Staff/Student/Industry Open Golf Tournament**

The Geomatics Engineering and Civil Engineering student clubs hosted the Third Annual Staff/Student/Industry Open Golf Tournament this September at Dragons Head Par 3 Golf Club in Edmonton. The event was strongly supported by the geomatics industry. Members from All West Surveys, The Cadastral Group, Focus Surveys, IBI Geomatics, McElhanney Land Surveys, Midwest Surveys, Stantec Geomatics, Stewart, Weir & Co. and Westacott Consulting participated and/or contributed prizes. We wish to thank the Association for helping to publicize this annual event.

### **National Accreditation Status**

We wish to report that the NAIT Geomatics Engineering Technology Program has successfully passed a biennial review. As a result, the Canadian Technology Accreditation Board has extended our National Accreditation Status to June 30, 2007.

*ALLAN THERIAULT, ALS, P.ENG.  
PROGRAM HEAD, GEOMATICS  
ENGINEERING TECHNOLOGY, NAIT*

The Surveys and Technical Services Section of Alberta Sustainable Resource Development is working on several initiatives designed to improve and update our services to you and all Albertans.

## 1) Director of Surveys Approves and Confirms Official Surveys

Since April 1, 2005, the Director of Surveys has approved and confirmed five official township plans in accordance with Section 33 of the Surveys Act. The five plans involved, Township 70-14-5, Township 70-15-5, Township 71-14-5, Township 71-15-5 and Township 101-22-5, were prepared as a result of major township subdivision surveys within the East Prairie and Paddle Prairie Metis Settlements. These new township plans are available from Alberta Government Services and the Alberta Registries online Spatial Information (SPIN) System website at [www.spin.gov.ab.ca](http://www.spin.gov.ab.ca).

## 2) NAD83(CSRs) - New ASCM Subset Markers Available

A revised set of Canadian Spatial Reference System (CSRs) ASCM subset markers based on the NAD83V4.0.0.AB.1 provincial readjustment is now publicly available. The subset has been expanded to

include markers for the Leduc and Red Deer High Precision Networks (HPNs), expansion to the Calgary HPN, and various GPS base stations established in the province since 1999. For further information, go to the Director of Surveys website at [www3.gov.ab.ca/srd/land/dos/NAD83list.html](http://www3.gov.ab.ca/srd/land/dos/NAD83list.html).

## 3) New Transformation Grid Developed [NAD83(Original) vs. NAD83(CSRs)]

A new provincial grid to transform coordinates from NAD83(CSRs) to NAD83(Original) and vice-versa has been developed. This new grid is based on coordinates derived from the NAD83V4.0.0.AB.1 provincial readjustment on CSRs. The grid is compatible with the NTV2 software suite and is available directly from the Geodetic Control Unit. Contact the Unit at (780) 427-3143 or email [Geoff.Banham@gov.ab.ca](mailto:Geoff.Banham@gov.ab.ca) for further information.

## 4) Revised Geodetic Fact Sheets Available

A revised set of Geodetic Fact Sheets is available from the Director of Surveys website at [www3.gov.ab.ca/srd/land/dos/factsheet.html](http://www3.gov.ab.ca/srd/land/dos/factsheet.html). This series of ten fact sheets discuss various issues related to surveying and map-

ping in Alberta. In general, the revisions relate to changes due to the 2<sup>nd</sup> provincial readjustment (NAD83V4.0.0.AB.1) on NAD83(CSRs).

## 5) Standards and Procedures for Digital Plan Submissions Updated

Section 3.1.2 of the Plan Submission Standards and Procedures Document has been updated to reflect the requirements of multi-page PDF files. Details can be found on department website at [www3.gov.ab.ca/srd/land/pdf/Plan\\_Submission\\_Standards\\_and\\_Procedures.pdf](http://www3.gov.ab.ca/srd/land/pdf/Plan_Submission_Standards_and_Procedures.pdf).

## 6) Fred Cheng, ALS, Joins the ALSA

Fred Cheng, ALS, formerly of the Land Surveys Unit, commenced his appointment as Director of Practice Review, Alberta Land Surveyors' Association on December 1, 2005. The Land Surveys Unit will be actively pursuing a replacement for Fred through a recruitment competition open to all Alberta Land Surveyors. We congratulate Fred on this appointment and look forward to working with him on related land surveying issues.

## Theme Night for the 2006 AGM

Join in the fun at the pub night with darts, foosball, top shot hockey, free throw basketball and an electronic golf challenge.

There will also be a silent auction with the proceeds going to the J.H. Holloway Scholarship Foundation.

This is a family night - so youngsters are welcome!



# legal notes

## Sixty Six Days and Nights

by Richard Steinecke

Can you imagine sitting through a hearing that lasts 66 days? The Discipline Committee in the case of *Sigismund v. Royal College of Dental Surgeons of Ontario*, 2005 CanLII 27325 (ON S.C.D.C.) did just that. The 66 days were spread over a period of four years. Of the hearing days, 44 were devoted to hearing the evidence of the regulator's expert witness and 16 days were spent hearing the defence expert.

The main issue was whether Dr. Sigismund had complied with the regulator's published guidelines on treating temporomandibular joint disorders. As a result of previous complaints, Dr. Sigismund had given an undertaking to comply with that guideline. The regulator now alleged that he had breached the guideline and, thus, his undertaking.

### Regulatory Guidelines

Three issues arose on the appeal to the Divisional Court. Perhaps the issue of most interest relates to the discussion by the court on how published guidelines of a regulator can be used. The court first noted that the guideline was not enacted through a regulation. It stated:

*However, the Guidelines in question in this proceeding have never been given such regulatory force. The Guidelines are simply non-binding recommendations created to inform and guide dentists in Ontario on the treatment of TMD [temporomandibular disorders]. In the absence of prescribed written standards of practice, a Discipline Committee panel is left to rely on expert testimony to determine what constitutes the standard of practice for the profession when allegations are made relating to a breach of those standards. Dr. Mock's [the College's expert witness] testimony did not specifi-*

*cally and expressly address that issue but, rather, seemed to assume that non-compliance with the Guidelines was, in and of itself, a breach of the standard of practice. In our view, Dr. Mock and the Discipline Committee panel were entitled to make that assumption based on the Guidelines themselves.*

*The Guidelines are a detailed document. The preamble states that the Guidelines constitute the College's accepted standard of practice: "College Guidelines contain practice parameters and standards which should be considered by all Ontario dentists in the care of their patients. It is important to note that these Guidelines may be used by the College or other bodies in determining whether appropriate standards of practice and professional responsibilities have been maintained."*

*The Discipline Committee panel did not bring its own standards to the decision. The Guidelines were used by the panel as the accepted standard of practice. Dr. Sigismund had ample opportunity to challenge the Guidelines as the appropriate benchmark or standard but did not do so, except for the first time, on this appeal.*

Thus, in developing guidelines it is important for regulators to differentiate between "setting" standards, which generally should be done through a regulation and "describing" a standard which can be supported by expert opinion evidence. It is also useful to set out in the preamble to the guideline the development process that was followed and how the guideline may be used. The language chosen in such a preamble is crucial.

### Waiver of Bias

Another issue was whether a panel member had an appearance of bias because he sat on a committee that had approved the guideline when it was made a number of years before. The panel member declared his involvement on that committee at the time and Dr. Sigismund had waived any

appearance of bias. However, after the hearing, Dr. Sigismund learned that the panel member had been exposed to correspondence from the regulator's expert when the guideline was being approved. Dr. Sigismund now argued that the declaration by the panel member had not been sufficiently complete and thus the waiver of bias had not been informed.

...this analysis illustrates the importance of regulators carefully screening hearing panel members to determine if they have any prior involvement in any matter that might become an issue at the hearing.

The Court found that the issue at this hearing was not the validity of the guideline, but its application. It found that the declaration of the panel member was sufficient to alert the member that he would have been exposed to this type of correspondence. There was no evidence to suggest that this involvement by the panel member resulted in any fixed opinion on any issue at the hearing. The Court did not permit the member to now argue that the waiver was invalid.

However, this analysis illustrates the importance of regulators carefully screening hearing panel members to determine if they have any prior involvement in any matter that might become an issue at the hearing. Simply determining that a panel member did not have an involvement in the particu-

lar investigation against the defendant will not avoid all problems. Also, when an unanticipated connection arises during the hearing, the panel member should be as clear and complete as possible in identifying the details to ensure that any waiver of bias is considered to be informed and binding.

### Excluding Evidence

However, on the third issue most of the discipline decision was set aside.

The member had tendered a second expert to give opinion evidence on the core issues at the hearing including the appropriate interpretation of the guideline and whether Dr. Sigismund met accepted standards of practice. The discipline panel concluded that the expertise of the proposed witness was insufficient to add materially to the hearing. The Court disagreed and set aside the related findings.

While one can sympathize with the panel wishing to avoid prolonging an

already excessively long hearing, the lesson for regulators is that it is often better to hear questionable evidence and decide later what weight to put on that evidence than to exclude it entirely.

The *Sigismund* case can be found at: [www.canlii.org/on/cas/onscdc/2005/2005onscdc10161.html](http://www.canlii.org/on/cas/onscdc/2005/2005onscdc10161.html).

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## Plaintiff Given Time to File Claim on Municipal Easement's Access Road

by Deana Driver - Regina

In *Wach v. Rural Municipality of Alexander, Grand Beach Entertainment Centre Inc. and Lawrence Hadiken*, a rural municipality which sold an easement used for many years as an access road by one family has been denied in their bid to block an extension of time to serve a claim on that land and has been ordered to pay costs. Senior Master F.A. Lee of Manitoba Court of Queen's Bench said an extension should be granted to plaintiffs Maryan and Helen Wach because their counsel's initial failure to serve the claim was "a mere oversight" and the defendant municipality "was aware of the action being commenced..."

Master Lee noted "the plaintiffs had filed a caveat against the property owned by the Municipality and the Municipality caused a 30 day notice to be issued by the Winnipeg Land Titles Office.

"The Municipality was clearly aware that the plaintiffs had responded to the 30 day notice, the plaintiffs having obtained a pending litigation order and having filed same in the Winnipeg Land Titles Office. This could only have been obtained by the plaintiffs commencing this action.

"The transfer of the servient tenement was completed within days

of the pending litigation order being registered, and the Municipality had, or ought to have had notice of the registration of the pending litigation order at the time of transfer, and would certainly have had it brought to their attention by the purchaser's lawyer." He said there is evidence that counsel for both the plaintiffs and the Municipality were in active negotiations before and after the claim, "there is no prejudice whatsoever to the Municipality," he said.

Master Lee accepted the plaintiffs' explanation that the delay in serving the statement of claim owed to "inadvertence of counsel...", adding, "the parties in this case have been attempting to negotiate a settlement throughout..."

Michelle Pollock-Kohn of Levene Tadman Gutkin Golub of Winnipeg was counsel for the defendants.

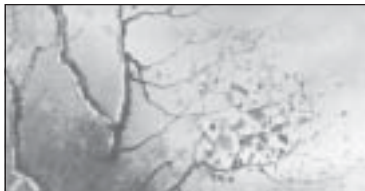
Kara Crawford of Thompson Dorfman Sweatman LLP in Winnipeg is counsel for the Wachs. "Our firm inadvertently failed to serve the statement of claim on the defendant within six months of it being filed with the court...so we will, once the order is taken, formally be serving the statement of claim and pending litigation order on the defendants. They now

have two motions outstanding...to have the pending litigation order and the statement of claim dismissed. The issues in our requesting an extension are very similar or overlap greatly with the issues that will be before Master Lee related to their motion and Master Lee found in our favour and awarded us costs, so I would think that might foreshadow what might happen," Crawford said.

"The issue in the main action is unique i.e. the Wach's claim to a prescriptive easement over land owned by the Municipality and then transferred to Grand Beach... There's legislation that says if you used a right-of-way on somebody else's land for 20-plus years, you have an existing right and it exists whether it's registered on title to provide notice or not. So that fact scenario in today's world is uncommon because generally now people use a municipal road system, but in some of the rural municipalities there may still be situations where farmers like the Wachs use two quarter sections...They've always just crossed somebody else's property," said Crawford.

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# a moment of silence

## Kiel, Herbert E.

1949 - 2005

Herb Kiel was born May 13, 1949. Herb graduated from high school in 1967.

After obtaining a B.Sc. in Mathematics and an Education Diploma from the University of Alberta, he received his commission as Alberta Land Surveyor (#461) in June 1979. Articles were served under Walter Kiriak, ALS.

Herb served on many committees including the Registration Committee and the Practice Review Board. He was also a Canada Lands Surveyor (#1351) since 1987.



Herb operated his own firm from 1980 to 1988 called Yellowhead Surveys. In 1988, He joined All West Surveys where he became president in 2002.

Herb was an active member and supporter of IRWA Chapter 62 and took the time to attend most luncheon meetings. Herb and his wife Pat attended many Chapter 62 golf tournaments and international conferences.

Herb was hard-working, intelligent and demonstrated integrity in his profession. He was a fun loving man who loved golf, hunting and fishing.

On October 26, 2005, Herb Kiel passed away after a battle with cancer. He will be dearly missed and lovingly remembered by his wife Pat, his daughters Kim and Kathy and by his family and many friends.

*DANIEL LACHANCE, ALS*

## Tarczynski, Michael T.

1915 - 2005

Mieczyslaw (Michael) Tadeusz Tarczynski passed away on September 19, 2005 at the age of 90 years.

He served articles under Alberta Land Surveyors C.W. Lester and J.F.B. O'Sullivan and received his ALS commission (#243) on May 21, 1958.

He was predeceased by his wife, May and is survived by daughter, Nina and son-in-law, Jerry Eisinga of St. Albert as well as grandson, Michael and his wife Rachel of Fort McMurray.



## JARDINE LLOYD THOMPSON CANADA

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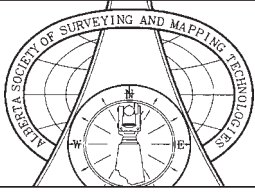
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# assmt notes

by Ken Revoy, CST — President, ASSMT

This has been a very busy and exciting year for all of us in the geomatics and surveying industry. As my second and last year as president of ASSMT draws to a close, I am very pleased to report that ASSMT has grown over the past two years. Membership, based on certifications, has risen from 220 members in 2004 to 262 members as at November 2005.

There has been a great deal of interest stirred in certifications; we have had five in the past month alone! A good portion of this interest has come through a memorandum of understanding signed with the Alberta Geomatics Group—AGG. The sharing of invitations, events and job opportunities with AGG has resulted not only in new certifications, but a tremendous rise in our student membership. This MOU has also provided a benefit for ASSMT members—they may attend all AGG events, including monthly information seminars, at the member rate.

ASSMT has, for the past two years, approved bursaries for ASSMT student members at three of Alberta's educational institutions: SAIT, NAIT and Olds College. This has increased the student membership figures and, as a result, increased the certifications.

Our AGM last year was held in Red Deer and, though attendance wasn't as high as we would have liked to see, it was a good turnout. Our AGM this year is being held in Drumheller on

We are extremely proud, to be associated with the Alberta Land Surveyors' Association, and would like to thank them and all the employers who have supported us over the years...

May 12 and 13<sup>th</sup> and we hope to see a great turnout and be as successful. I would also like to take this opportunity to ask all members to get involved in the Society. We will be looking forward to some new members on Council this year...so if you would like to be a part of the direction and decision making for our growing group, please email us at [info@assmt.ab.ca](mailto:info@assmt.ab.ca) and let us know. Information on the 2006 AGM will be sent out shortly, and will be available on our website.

We have also increased the number of job opportunities we post to our website, especially over the past year. More and more companies are recognizing ASSMT as a useful partner for recruitment—yet another indication that ASSMT is a growing, vibrant Society.

Our website, at [www.assmt.ab.ca](http://www.assmt.ab.ca), was reconstructed and is now more easy to navigate and more informative.

I would like to thank the 2005-06 Council (Barry Bleay CST, Vice President, David Allen CST, past President, Wayne Latam CST, Executive Manager and Council members Kevin Laiss CST, Brian Ball CST, Darryl Larson CST, Cathy Sproutt CST) for their hard work, dedication and attention to detail these past two years. They have taken time away from their work and family to lead our group to new heights and in new directions, enhancing the ASSMT. Special thanks this year goes to Hugh Furber, our Registrar who also stepped up in the absence of a treasurer for part of the year, putting together the year end statements and returns. Last, but definitely not least, our Executive Assistant Cathryn Gramolini for all her hard work and dedication to the Society, Thank You!

We are extremely proud to be associated with the Alberta Land Surveyors' Association, and would like to thank them and all the employers who have supported us over the years and who also allow members the time to attend monthly meetings and our annual general meeting.

As the Society moves forward, we are looking to 2006-07 with enthusiasm, more growth and more benefits for you, the members.

Have a safe and festive holiday season.

## Dennis Hull Appearing at the AGM Members' Lunch

The younger brother of Bobby Hull, and a former NHL star in his own right, Dennis draws from a wealth of anecdotes and stories, the topics ranging from sports to family to life in general.

A fourteen year veteran of the NHL, his career spanned 13 seasons with the Chicago Blackhawks and one with the Detroit Red Wings, playing in over 1000 games. Dennis was selected to play on six All-Star teams and starred with Team Canada in 1972.

***Don't miss it—Dennis Hull is a very funny man!***





# history

*This is the ninth in a series of articles on the history of the ALSA and its members. For more information, check out [www.landsurveyinghistory.ab.ca](http://www.landsurveyinghistory.ab.ca).*

## 1922-1923—Growing Enthusiasm

Notwithstanding the sorry state of the Association's finances and the continuing depressed economic conditions of that time, the 1922 Annual Meeting seems to have approached the level of enthusiasm that had marked some of the early meetings of the pre-war years. Only twenty-three members were on hand, but the discussions were vigorous, three papers were read, and a handsome report of the proceedings, embodying the long-promised memorial report, was later printed.

The expected transfer of the natural resources loomed large again at this meeting. Mr. William Pearce spoke at some length about the province's water and coal resources, predicted the eventual commercial development of Alberta's deposits of iron ore, advocated the establishment of a provincial scientific research organization, and said he hoped the province would never get control over water as he feared that this would lead to the same kind of disputes in Canada as those which had arisen in the United States between state and federal governments. Mr. Knight described the extent and potential value of the Athabasca tar sands, and gave an estimate that the amount of oil they contained would fill a lake as long as that from Edmonton to Saskatoon, five miles wide and fifteen feet deep. Col. Saunders reported that he had ten tons of tar sands at home and was having them run through a commercial machine and hoped soon to be able to tell what they would produce. The Annual Report manages to convey the impression that this operation was being carried out in his living room. Mr. Charlesworth gave the members a rundown on the irrigation developments that were proceeding in southern Alberta, and Mr. Pearce outlined the scheme he had conceived some twenty years earlier for the impounding of water from the Red Deer and

There is a wealth of interesting material in both these addresses which, along with other papers produced in earlier days of the Association, would be well worth reprinting for the benefit of today's generation of land surveyors.

North Saskatchewan rivers in Buffalo and Sullivan lakes for the purpose of bringing under irrigation some three million acres of land in eastern Alberta and western Saskatchewan. This was the famous William Pearce Irrigation Project which, although generally admitted to be technically feasible, has never materialized because of the great capital costs it would involve. Two years previously, in 1919, official surveys had been commenced and had now shown that the scheme was practicable and Mr. Pearce was obviously hopeful that he would live to see it get under way.

Mr. Johnson read a paper on "The Rights of Possession" and Mr. Pearce was again to the fore with a dissertation on his experiences as a surveyor from 1869 to 1881 and later as a member of the Land Board that dealt with half-breed settlement claims in Manitoba and the North-west Territories. There is a wealth of interesting material in both these addresses which, along with other papers produced in earlier days of the Association, would be well worth reprinting for the benefit of today's generation of land surveyors.

The committee set up in 1921 had arranged with the Board of Examiners

the addition of an oral examination to the syllabus, and the examination subjects as a whole were reviewed at the annual meeting. No other changes were proposed but the discussion led to an expression of the need for both an Association reference library and provision of a surveyor's handbook, and a Library and Publications Committee was set up to see what might be accomplished in those directions. This committee later made a deal with the Provincial Librarian whereby \$75.00 worth of books, to be selected by the Director of Surveys, would be purchased by the Provincial Library Committee and made available for loan by mail to members of the Association through the office of the Director. It seems doubtful whether this arrangement was actually carried through, however, for the only book on surveying that the Provincial Library had in 1931 was an ancient general textbook that had been acquired some twenty years earlier. Neither do the minutes of subsequent proceedings show that this offer was ever accepted by the Association. The committee reported it to the Annual Meeting of 1923, and the minutes state that considerable discussion followed, but the members seem to have got side-tracked by a proposal that the Association should take out membership in the Champlain Society. The whole matter was finally referred to the incoming Council, after which nothing more was heard of it.

As for the proposed surveyor's handbook, the committee reported in 1923 that a compilation of the portions of various acts affecting the work of surveyors, with certain technical material such as slope conversion tables, all comprising about one hundred pages in a loose-leaf binder, would cost an estimated \$6.45 per copy. The opinion of the membership was that this cost was too high, and the annual meeting voted against proceed-

ing further with the handbook.

Meanwhile, there had been some unrest in connection with the tariff of fees, the new Cemeteries Ordinance and the Drainage Districts Act. The Edmonton members in private practice who had felt that some of the tariff rates were too low, had settled that problem by agreeing on a special local tariff which provided for a minimum charge of \$50.00 for any city subdivision comprising less than one acre and the division of the City into an inner and outer zone in which the minimum charges for residential lot surveys involving the staking of four lot corners would be \$20.00 and \$15.00 respectively. This was given the blessing of the 1923 Annual Meeting.

The Committee on Legislation...prepared a re-draft of the Cemeteries Ordinance...and the Annual Meeting of 1923 approved it and instructed the Council to take the matter up with the Department of Public Works.

The Cemeteries Ordinance was a measure promulgated by the provincial departments of Health and Public Works, requiring the ownership of cemeteries, whether municipally and privately owned, to be properly recorded in the Land Titles Office, and containing regulations governing the location of cemeteries in relation to public roadways and watercourses. The members of the Association thought that cemetery sites and the plots they contained should be properly surveyed, that a plan of each such survey should be prepared for approval by the Director of Surveys, and that this should all be done in accordance with the provisions of the Alberta Surveys Act by registered Alberta Land Surveyors. The Committee on Legislation

The Drainage Districts Act, caused dissatisfaction because it contained no provisions, similar to those in the earlier Drainage Act, authorizing the employment of land surveyors as engineers on the land reclamation projects which the new Act was intended to facilitate.

therefore prepared a re-draft of the Cemeteries Ordinance to provide for this, and the Annual Meeting of 1923 approved it and instructed the Council to take the matter up with the Department of Public Works. As to what the outcome was, the record is silent, but it does not appear that the Ordinance was later changed.

The Drainage Districts Act, caused dissatisfaction because it contained no provisions, similar to those in the earlier Drainage Act, authorizing the employment of land surveyors as engineers on the land reclamation projects which the new Act was intended to facilitate. The Association expressed some concern about this, and the omission was soon remedied by an appropriate amendment.

At that time, drainage schemes under The Drainage Districts Act and The Private Ditches Act were stirring up a good deal of interest, and in 1922 and 1923, papers on the operation of these acts were read at the annual meetings by Mr. Charlesworth and Mr. A.E. Farncomb. Under the former Act, some large-scale drainage operations were carried out in the country east of Camrose, and the other Act represented an attempt to encourage small groups of neighbouring farm owners to carry out simple drainage works that would bring more land into productive use. Although the country was becoming dryer and water-tables were generally falling, there seems to have been a general conviction that there would be a recurrence of the wet years experienced in 1900 to 1904 when much farm land in the central part of the province had been repeatedly flooded. These conditions never did recur—in fact, the long-term trend was in the

opposite direction, and the early thirties were years of drought and dust – and it was not long before both these acts relapsed into disuse.

At the 1923 meeting, two other interesting papers were read. The gospel of town planning was propagated once again by Mr. A.W. Haddow, Edmonton's City Engineer, in an address on the relation between the work of the land surveyor who, said Mr. Haddow, plans and lays out a town or city, and the municipal engineer who constructs, maintains and operates it and in so doing has to live with the mistakes made by the surveyor. An interesting point made in Mr. Haddow's paper was that at that time the population density of Edmonton was 2.15 persons per acre, as compared with an average of 7.5 persons per acre for all Canadian cities. He deduced from this that the area of the City was about three and a half times too big for its population, and pointed out that one consequence was that it cost about twice as much per capita to provide Edmontonians with sewer and water lines and roads and sidewalks as it cost in other cities.

The other paper dealt with the early fur-trading posts in Alberta and was presented by Mr. J.N. Wallace, of Calgary, an ex-Inspector of Dominion land surveys and an amateur historian of the early West who knew his subject thoroughly. His paper, which contained some references to Peter Pond, drew an interesting comment from Mr. Hugh Pearson, who said that Pond, a fur trader of the 1770s, was the first white man to see Lake Athabasca and the first man to attempt a map of northwestern Canada in which he placed that lake not far from the

Pacific Ocean. After returning east, where he was tried in Quebec and acquitted for undoubtedly having murdered a couple of rival traders in western Canada, he retired to his hometown of Boston where, from his knowledge of the north country, he persuaded the Boundary Commissioners for the United States to insist on an international boundary following the middle of the St. Lawrence and the Great Lakes and thence along the 49th parallel. But for this, said Mr. Pearson, they would have been content to settle for a line drawn due west from Lake Champlain along the 45th parallel. This would have cut off the peninsula of southern Ontario but would have given Canada the whole of the States of Montana and Washington and large slices of the other northern States. Mr. Pearson concluded that Peter Pond was clearly an undesirable character, but the residents of Toronto might beg to differ.

### Alfred Ernest Farncomb

At the ripe age of 80 the subject of this sketch died in London, Ontario on February 16th, 1952. Mr. Farncomb was born in London Township, Middlesex County in Ontario, his parents being Thomas and Jane Elworthy Farncomb.

His primary education was obtained at a private school in London Ontario and his secondary education at London Collegiate Institute. Following graduation from the latter he entered the London office of his brother Frederick William Farncomb, OLS and on April 9th, 1895 at the age of 22 he received his admission to practice as an Ontario Land Surveyor.

Subsequently he secured his DLS degree and for some years thereafter made Fort William his home. He heeded the call the Canadian West was making and for some years then succeeding he was engaged on township subdivision work for the Dominion Government, living in Regina, Red Deer and Edmonton.

About 1915 he returned to Ontario and was professionally engaged at

Iroquois Falls, then at Windsor, finally in 1929 locating at Stokes Bay in the Bruce Peninsula where he acted as engineer for a number of townships while also maintaining an office in London.

Mr. Farncomb was an ardent curler, fisherman and hunter. His death was sudden and tragic, as he died while entering his garage to motor on a hunting trip. He had never married and had spent the latter years of his life with Miss Alice Farncomb who kindly supplied the foregoing information. Throughout his life he had been a devout Anglican.

*SOURCE: ASSOCIATION OF  
ONTARIO LAND SURVEYORS*

### Hugh Pearson

Mr. Pearson was born at Glendale, Manitoba on October 17th, 1887 and educated in Minnedosa, Manitoba, where he received public and high school education.



In the spring of 1906, he joined a survey party headed by L.T. Bray, DLS, at Macleod, Alberta. During 1906, the party performed subdivision surveys in the foothills west of Macleod, Crowsnest Pass and at Oil City west of Waterton Lakes.

In the spring of 1907, he joined Mr. Bray at Edmonton and the party was engaged on the survey of road diversions for the Government of Alberta in the Edmonton district under instructions from L.C. Charlesworth, Director of Surveys. In the fall of 1907, Mr. Pearson started to work for J.L. Cote, DLS doing land survey work. Mr. Cote became a Member of the Legislature of Alberta in 1909 and later became Provincial Secretary in Honourable Arthur L. Sifton's cabinet which succeeded the Liberal Government elected in 1905.

Mr. Pearson articulated to Mr. Cote in 1909 and received his commission as a

Dominion Land Surveyor March 25th, 1912 and registered in the Alberta Land Surveyors' Association June 29th, 1912. Mr. Pearson became a partner later in the Cote, Tremblay and Pearson firm of surveyors and engineers whose office was in the old Crystal Block on Jasper Avenue in Edmonton.

Hugh Pearson was active in the formative years of the Alberta Land Surveyors' Association before the First World War, attending annual meetings in Calgary and Edmonton. He contributed to lively debate during the sessions after the war and served as a member of Council in 1922.

Mr. Pearson enlisted with the 138th Battalion in the First World War November 29th, 1915 which was drafted into the 10th Battalion overseas. He was wounded twice; August 18th, 1917 (Hill 70) and September 27th, 1918 (Cambrai) and was in hospital on Armistice Day, November 11, 1918. He was discharged with the rank of captain and was adjutant of the battalion at the time. He was awarded the Military Cross.

He returned to Canada in January 1919 and went to Manitoba late in the year to do some day work on land surveys. In 1920, he subdivided land in the Clear Hills, north of Peace River. In 1921, 1922, 1923 and 1924 he did miscellaneous jobs for the Surveyor General of Canada and in the fall of 1924 went to Ottawa to plot maps from his notes. In the spring of 1925, he resigned from the staff of the Surveyor General.

During the later years, Mr. Pearson had been investing in the Radio Supply Company Limited which had been started in Edmonton by his friend Mr. J.M. Taylor. In the spring of 1925, he became a partner in this organization and took on full-time duties. This business expanded into wholesale and retail dealing in automobile parts and accessories, radios and household appliances. After the Second World War, a Mr. Carson joined the business and the name was changed to Taylor, Pearson & Carson Limited, which also

became involved in radio broadcasting and television. Branches were established in Edmonton, Calgary and Lethbridge. Mr. Pearson was president of Taylor, Pearson & Carson until his retirement in 1960. He was chairman of Selkirk Holdings until 1970, with interests in several radio and television companies, one of which was CJCA Edmonton.

A lifetime of activity, such as this, could not be sustained without assistance. That assistance was Constance Pearson, wife and mother to their three children. Hugh and Constance were married November 16th, 1918 in England, just after Armistice Day. They celebrated their 60th wedding anniversary in November 1978 in Edmonton.

Mr. Pearson and his wife were largely responsible for the restoration of the post office clock which stands in front of the Edmonton Plaza Hotel.

Mr. Pearson was made Member of the Order of Canada in October 1976. He was active in the Anglican Church, the Edmonton Club, the Mayfair Golf and Country Club and the Salvation Army. He held directorships with the Toronto-Dominion Bank, National Trust and Inland Cement Ltd. He was also founder of the Bishops Men and served as a governor of the University of Alberta and Trinity College School.

Pearson Crescent (West of 199 Street, south of Potter Greens Drive, Edmonton) and Pearson Lake (22-103-8-W4) were named after him.

Mr. Pearson and his wife were largely responsible for the restoration of the post office clock which stands in front of the Edmonton Plaza Hotel.

The Edmonton business pioneer remained active until his death and often visited his office and the Edmonton Club. Mr. Pearson died December 26, 1980.

MONROE KINLOCH

## ALSA Trivia

Over the years, members have questioned the origin of the various traditional events that take place each year during the annual general meeting. The Historical and Biographical Committee recognized that these, and a number of other significant happenings and events, have been introduced into the Association since incorporation. These events have a place in the Association's history as much as the one recorded and should be researched and set down in the chronicles of the Association.

In an attempt to determine where and how the various events originated and who was responsible for their existence, a number of questions on "traditional events" will appear in this and the following issues of *ALS News*. The members are encouraged to provide the Historical & Biographical Committee with their interpretation of dates, persons and places. Also, members are encouraged to forward their questions on other Association events that should be recorded in our history. The responses to the eight questions listed below, along with questions on more traditional events, will be published in the next issue of *ALS News*:

1. Which president of ALSA was the first to wear the Alberta Tartan cummerbund and bow tie? In what year? What year was the Alberta Tartan vest added? Who was the first lady to wear the Alberta Tartan sash at the AGM? What was the year?
2. What was the first year the ladies attended the AGM?
3. What was the first year the head table was "piped in" at the AGM? Where was that AGM held?
4. What was the first year the "perambulation" of the president took place at the AGM? Where was the AGM held?

5. What was the first year the hockey game between the north and south held prior to the AGM? Where was it held and who won?
6. What was the year the AGM was moved from the MacDonald Hotel (where they were historically held in January for many years) to another hotel in Edmonton? What was the name of the hotel?
7. What was the first year the AGM was held outside of the City of Edmonton? Where did the AGM take place and what month?
8. What year was the first past president's plaque awarded? Who was the first recipient?

Members may forward their responses directly to the writer Bob Baker at [bob@bokamura.com](mailto:bob@bokamura.com)

ROBERT F. BAKER, ALS

### Upcoming Seminars

**Boundary Re-establishment**  
January 19, 2006 - Red Deer

**Land Use Issues in Resource Development**  
February 7, 2006 - Calgary

**Getting It Right**  
March 16 and 17, 2006 - Red Deer

**Exam Preparation**  
March 18, 2006 - Red Deer

**Ethics and the Land Surveyors Act**  
April 20, 2006 - AGM

**Getting It Right**  
June 2006 - Edmonton