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MISSION
The Alberta Land Surveyors’ Association is a self-governing professional regulatory association dedicated to providing the highest quality leadership to its members in the best interests of the public and the profession.

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Objectives
The Alberta Land Surveyors’ Association achieves its mission through:
• Educating the public (including landowners, government and industry) aware of the role of land surveyors and the Alberta Land Surveyors’ Association and the importance of well-defined boundaries
• Attempting to resolve boundary uncertainties and alleged errors in surveys so that the public may rely on their boundaries.
• Ensuring practitioners demonstrate competency while they are licensed.
• Ensuring students demonstrate competence in the practice of land surveying before receiving their license as a land surveyor.
• Maintaining and enhancing the professional practice of Alberta Land Surveyors.
• Providing continuing professional development opportunities to Alberta Land Surveyors on subjects specifically related to the practice of surveying.
• Disciplining practitioners who are found to be unskilled or unprofessional.

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From the President
From a Councillor
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What the oil & gas survey industry had hoped would be a “blip” appears to be turning into something of far more significance. A year ago the economy in Western Canada, particularly in Alberta, was growing at a rate not seen since the world wide 2008-2009 financial crisis. Last year, finding qualified manpower was incredibly difficult and new staff were being brought in from around the world to satisfy our clients’ project demands. What a difference a year makes! With commodity prices decreasing by 50 to 60% from last year’s highs, most of our clients’ budgets were cut back and will be further trimmed this fall. Alongside these budget cuts comes the mass layoffs within our clients’ industry and within our own. New research suggests that up to 40,000 individuals in Alberta have lost their jobs since last October.

Most of us will be part of a business which already has or will face tremendous financial challenges over the next few years. Economic hardship also brings with it unpleasant business practices not normally seen during times of prosperity: bidding on professional projects to break even or at a loss just to keep your manpower around and employed. Going aggressively after work other survey companies are already actively working on without providing them notice. Moving into areas of expertise for which your firm has no previous experience. As fellow professionals, we should remind ourselves regularly of our code of ethics both in how we deal with each other professionally, how we serve our clients and how we ultimately serve the public.

The financial pain felt by many of our practitioners will almost certainly spill over into pain for the Association in the form of decreased post sales. Iron posts and marker posts sales fund 70% of our Association’s activities. Last spring, Council budgeted a 20% decrease to last year’s post sales numbers making it the lowest in the two decades. While we are currently on track to meet our budget, the next nine months of the Association’s fiscal year could see us fall well below budget. Possibly exacerbating the issue of declining post sales has been the introduction of the hybrid cadastre pilot project. Our Director of Surveys has told Council that this “pilot” will be reviewed in March of 2016 with every indication that the acceptance of coordinates on Crown (surveyed and unsurveyed territory) Lands will become a fully-mandated hybrid cadastre. Our Association has discussed coordinate based cadastres for many years, always coming away with the same answer. We are “not quite there yet!” Economics of the oil & gas industry, the forestry industry and the drive for professional surveyors to stay at the forefront of technological developments suggest that yes, now is the time. The Council of the Alberta Land Surveyors’ Association has discussed the hybrid cadastre at length and believe that three things must be done over the next nine months.

First, our general membership needs to attend educational seminars on the implementation of the guidelines. More so along the lines of “what to do” when you come across a certain situation as the hybrid cadastre pilot project guidelines are relatively straight-forward. The guidelines now state that a coordinate can and will govern a specific location and that changes 130 years of survey evidence hierarchy. A lack of practitioner’s knowledge could create our worst fear when we get disposition rejections!

Second, the ALSA often finds itself responding to implementation of something rather than being involved in the development of the project. We must be involved in the hybrid cadastre future planning and ultimately set the standards for acceptance of them.

Third, with post sales diminishing even further as a result of the coordinate cadastre there is a perfect opportunity for the “alternate funding model” the Association has been looking to find for a number of years; that being a coordinate fee. The Director of Surveys has agreed to work with the ALSA towards this end.

Lastly, we as an Association must work with and endorse change. We are not the first province or country to move to a coordinate or hybrid coordinate cadastre. Israel, Northern Territories of Australia, Greece, Singapore and others have all undertaken 2D and 3D coordinate survey systems in the last twenty years. Many of these countries operate a Torrens Land Titles system. I believe what we fear most is that such a change will limit or diminish our livelihoods as land surveyors. We need to turn that thinking around and see the possibilities this change will bring. The most important thing, I believe, is that the ALSA needs to be leading the conversation so that what we are mandated to do as professionals in protecting the public is placed forefront! The Director of Surveys mandate to “co-ordinate the establishment, maintenance and preservation of the land survey system…” can also be accomplished through a good working relationship with the Alberta Land Surveyors’ Association. Time is of the essence! The ALSA has a lot to accomplish before next April. If you are interested in participating in this discussion I’d be pleased to hear from you.
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I started surveying in Alberta around the year 2001. Most of the work at that time was conducting legal surveys for conventional oil & gas clients. The safety program was just in the beginning stage. Most of the land surveyors did not want to get involved in oil sands and construction work. The Director of Surveys was advocating higher surveying standards and more monuments. We still used fax machines to send in field notes. It was common to send plans and maps via courier or bus. GPS was used in static mode to set control while most of the work was done with a total station. A GPS RTK system was relatively new technology. Only the privileged survey crews had RTK systems. Google Earth was not available. Aerial photography was not rectified or readily available.

Roughly fifteen years later, the conventional oil & gas work has dropped off to a small percentage of the work. Construction and oil sands work is where the majority of survey work takes place. A safety program is now a big part of operations. Quality management is the new focus of many clients. The Director of Surveys is now advocating fewer monuments and more GIS-related solutions. Email correspondence and web-based solutions are now used to communicate information. Rarely do we use fax machines or couriers. Every crew has a GPS RTK system and may require training to operate a total station. We now use Google Earth to plan surveys. Accurate remote sensing data in the form of LiDAR and aerial photography are readily available.

As a profession, I think land surveyors have been lagging in their management of change.

As a profession, I think land surveyors have been lagging in their management of change. In my opinion, there have been many changes in the way land surveyors do business and conduct surveys. I do not see the pace of change slowing down in the future.

As a profession, I think land surveyors have been lagging in their management of change. We tend to protect the practices that are in place as most people would naturally do. We normally change at the request of our clients or the government. This seems to be a reactionary approach.

I would like to see land surveyors take a more proactive approach. Forming the Future Committee is one step in the right direction. I believe land surveyors should be strategically planning their future. Land surveyors should have processes in place prior to the client or government request. Land surveyors should be canvassing clients, government, and other interested parties to see where we can improve our services and profession in general. Lead the charge and do not follow the crowd.
REGIONAL MEETING DATES

GRANDE PRAIRIE
MARCH 22, 2016

EDMONTON
OCTOBER 1, 2015
MARCH 23, 2016

LETHBRIDGE
MARCH 16, 2016

CALGARY
OCTOBER 8, 2015
MARCH 17, 2016

AGM RECOMMENDATIONS WILL BE DISCUSSED AT THE MARCH MEETINGS.

Use your smartphone to access the mobile member page
www.alsa.ab.ca/mm/
What Would You Do?

BRIAN MUNDAY, Executive Director

This past May, headlines screamed out across the country about a school bus driver in Edmonton who kicked a student off the school bus. The headlines and articles used words like “shocking,” “anger” and “disbelief.” The incident was captured on someone’s phone. The comments section of the websites where the story was reported had all but strung up the bus driver. Edmonton Catholic Schools said, “We will not tolerate abuse of any form and will investigate to ensure this does not happen again.” The school bus company said they would look into the incident but this was not good enough for one of mother of two kids on the bus. “I think he should not be driving a bus,” she was reported as saying.

Many of you will be aware of what happened next. Fortunately, the bus driver had his own video camera and it showed one boy, sitting behind the driver, jump to the neighbouring seat, hit and kick the student sitting there. “The video also shows a second boy walking up from the back of the bus carrying a large sports bag. The bus stops, another student gets off and it starts to drive away, which appears to upset the boy. He swings his bag and hits the driver in the side of the head, knocking his glasses askew. The driver holds his face, takes a moment, and then says something as the boy gets off the bus.” With this information available to it, the school bus company decides to not fire the driver and the website message boards now support the driver and question the parenting ability of both boys.

Here is another situation.

A female television reporter is standing on the street doing a live report on some local event or sporting activity. A man who obviously has had too much to drink says something entirely inappropriate and vulgar to the reporter. It shocks the reporter. It shocks the audience watching the incident unfold on live television. It will likely embarrass the man once he sobers up.

On May 10, 2015, a heckler outside of a Toronto FC Major League Soccer match interrupted a live report by a female reporter with the phrase. Provoked by the obscene language, the reporter confronted nearby men and asked them about the phrase, which they felt was funny and commonplace. One of the men approached by the journalist was identified as an assistant network management engineer at a utility company. On May 13, 2015, the employee was fired for violating the utility’s employee code of conduct.

So, as an Alberta Land Surveyor running several crews or your own company, what is your company’s code of conduct and what would you do in either of these situations?

In the first case, the school bus driver perhaps could have handled the situation better but there was more information which the media, the school board and the audience did not have at first. To me, what is scary is the mob mentality. In this internet age and the demand for instant gratification, if someone feels like someone has offended them or finds something offensive, there is a website or a blog or a Twitter feed that will fuel their offense (including names and phone numbers) before anyone has had a chance to say “due process.”

A 2013 article from the magazine, Wired (a great magazine about technology trends that everyone should read in either hard copy or digital form) entitled, “Why You Should Think Twice Before Shaming Anyone on Social Media” talks about a situation where a female consultant at a tech conference overheard two men having a conversation using language which one would expect from teenage boys. She tweeted a picture of the culprits and things went viral from there. The company recognized one of its employees in the tweeted picture and he was fired. There was a backlash over the severity of the response and she lost her job. No one won.

The article goes on to state, “we despise racism and sexism because they bully the less powerful, but at what point do the shamers become the bullies? After all, the hallmark of bullying isn’t just being mean. It also involves a power differential: The bully is the one who’s punching down.”

As land surveyors, as professionals, how do you deal with this internet minefield?

The sidebar article entitled “Being Liked is Serious Business: Ten Steps for Repairing and Protecting Your Online Reputation” is a good place to start.

Another excellent resource is a one hour webinar presented by the Association of Ontario Land Surveyors entitled “Dealing with Off-Duty Misbehaviour.” It is available on the GeoEd website at www.geoed.ca. There are some other good professional development opportunities there too.

As the Being Liked article says, the first step is to take a deep breath. The second step, in my opinion, is to gather all the information you can about what happened and take as rationale (as unemotional) an approach as possible even though everyone else may be up in arms.

The Alberta Land Surveyors’ Association is sometimes criticized, like other professional bodies, for taking too long to come to a decision on a disciplinary matter when the guilt (or innocence) is “obvious” to everyone else. It may be frustrating
but taking the time to get as much information as possible usually leads to a new perspective and a better result.

A company code of conduct, like the one the utility company had, can certainly help things but does everyone have a corporate code of conduct? It is one of those things that can be difficult to find the time to get to if you are a small land surveying company – until you are faced with a situation where someone does something that you never thought they would ever do.

The Association’s Code of Ethics states, “An Alberta land surveyor has a duty to maintain the dignity of the profession…” In the context of the Code of Ethics, an Alberta Land Surveyor refers not only to the individual but also the surveyor’s corporation and surveyor’s partnership. It is entirely possible that an employee could say or do something online or in the real world and a complaint could be made to the ALSA against the surveyor’s corporation. Thankfully, it has never happened. Hopefully, it never does happen. However, everyone has a video camera on their phone and can easily capture what a survey crew is doing in the field. Maybe they contact you. Maybe they post it directly to YouTube.

This is not something that land surveyors of yesteryear had to deal with when they working in remote locations. Nowadays, everyone is just a moment away from having anything they say or do posted for anyone in the world to see.

We need to be prepared.

"...what is your company’s code of conduct..."

AHEFLS Adopts New Moniker

The Alberta Historical & Educational Foundation for Land Surveying recently adopted a new ‘working name’ as the Surveyors’ Historical Foundation. The legal name was considered by the Board of Directors of the AHEFLS to be ‘just too cumbersome’ to quote Ken Allred, President of the Foundation in a presentation to the Foundation’s annual meeting. In the view of the directors the legal name, while it conveys all of the objectives of the organization, was not recognized either by the general public or the land surveying community.

The Foundation was incorporated as a charitable foundation in 2006 as a non profit entity with the purpose of collecting and preserving historical artifacts and promoting the history of surveying in the Province of Alberta. All donations of artifacts as well as cash donations are eligible for charitable tax receipts. The organization operates as an independent body separate from the Alberta Land Surveyors’ Association but works closely with the Historical & Biographical committee to collaborate on joint projects and to eliminate duplication of efforts.

To date the Surveyors’ Historical Foundation has been a major contributor to the 2008 David Thompson Canoe Brigade which went from Rocky Mountain House to Fort William on Lake Superior. Several members of the Board also participated in that Brigade as well as the 2011 brigade which went from Invermere, BC to Fort Astoria on the Pacific Ocean.

The Foundation hosted an Oldtimer’s Luncheon with about 20 senior surveyors and spouses in attendance. Members also participated in the erection of an historic survey monument at the Ukranian Village just east of Elk Island National Park.

Current projects include working with Parks Canada on the erection of a monument in Banff National Park. to commemorate the work of A. O. Wheeler, ALS, BCLS, CLS, Alberta/BC Boundary Commissioner and founder of the Alpine Club of Canada. A second project is currently being finalized to commemorate the work of the late Ken Pawson, ALS, who was the City Surveyor for the City of Calgary from 1961 to 1988. Ken Pawson established the first survey control system in the City of Calgary in 1962 and was a pioneer in the establishment of survey control systems in several other Alberta cities and was a key player in the eventual adoption of the program in the Province of Alberta. The Foundation has also commissioned a unique piece of artwork by Jim Clark, ALS which will be unveiled in the near future.

The Foundation invites surveyors to submit proposals for other worthy historical and/or educational projects that the Foundation might participate in. Please feel free to contact any of the following members of the Board – President Ken Allred; Vice-President, Dave Williams, Treasurer, Jim Halliday; or Directors – Dave McWilliam, Gordon Olsson or Monroe Kinloch.

The Surveyors’ Historical Foundation invites all land surveyors, as well as other interested parties to help support these worthy endeavors of publicizing our unique history through financial contributions and/or the donation of historical survey artifacts such as old survey equipment, drafting instruments, survey books, etc. Legacies created through wills and estates are also invited. All donations will receive a tax receipt.

Donations can be made to:
Surveyors’ Historical Foundation (AHEFLS)
#1000-10020-101A Avenue
Edmonton, Alberta. T5J 3G2

Ken Allred, President
Surveyors Historical Foundation
“The worst customer service experience ever! The bed was dirty, and the bathroom had hair on the toilet seat. My dog refused to enter the room. He slept in the car. I don’t know why I didn’t do the same thing. Do not EVER stay here!!!!”

“If you are offered a job at this place, run! Do not walk to the nearest exit. This company is an asylum. I have never worked with a more dysfunctional group of people in my life.”

“There are a lot of fake reviews on this site. Anyone who has ever been here knows there is no possible way on earth a real customer would say this place was anything but a pit. Enter at your own risk. You have been warned.”

Ouch! Those hurt.

And there it is, right there in black and white for anyone and everyone to see—the naked truth: what someone thinks of your product, your service, or your organization.

Bad reviews can bite, wound, and sting. Worst of all, a mountain of them can appear in a matter of seconds. Social media, it’s a wonderful thing, until it turns against you.

So, what’s a person to do when his or her online reputation is suffering at the hands of others? Plenty.

**Step One:** Take a deep breath. You can fix it. Not overnight, but you can fix it.

**Step Two:** Get over any hurt feelings or embarrassment, and do it quickly. The people who complain have done you a great favour. It’s now up to you to decide if negative reviews are going to be the kiss of death or a wakeup call.

**Step Three:** Uncover everything that is being said about you. If you found a bad review in one place, there are probably others. You will need to spend a few hours researching yourself online. Start Googling, and take a notes of what you find and where.

A word of caution: resist the urge to respond to anything. Be strategic, not impulsive. You will need a game plan before typing a word.

**Step Four:** Automate. Sign yourself up for Google Alerts at www.google.com/alerts. If new content mentioning your company shows up online and Google sees it, the search engine will send out an automatic alert letting you know. There are also a variety of free and paid services that will monitor online search terms and any major review sites for mentions, and will quickly notify you if new information about you is posted. If you are serious about managing your online reputation, these services are extremely valuable.

**Step Five:** Once you have a good picture of your online grade, get ready to roll up your sleeves and start problem solving. If your employees are rude, train them. If your establishment is dirty, clean it. If people hate working for you, investigate. Unless you are the victim of competitor sabotage, what you are reading is probably based in truth. If needed, revisit step two.

**Step Six:** Involve your team and communicate your improvement plan. You will reach your goal faster if everyone in your organization understands what it is and is working toward it.

**Step Seven:** When you are interacting with people, ask them what they think. You already know some of them have no problem sharing their opinions with the world, so they will probably be willing to candidly tell you the good, bad, and ugly. Asking your customers or clients for help can prove extremely beneficial.

“We are working hard to improve. Would you be willing to talk to me for a few minutes? Thank you. What two or three things could we have done differently in order to make you experience with us better?”

If at all possible, have these conversations verbally. You may be surprised by the quantity and quality of information you are able to quickly gather.
Step Eight: Once you have a clear sense of what is going on with your business and are on the road to smoothing out the rough spots, get back to the reviews. It’s time to answer them.

First, thank the reviewer for letting you know about a problem and include something good about yourself, too.

“I’m sorry your son’s birthday experience with us wasn’t what you expected. We’ve hosted over a thousand birthday parties for children in our five years of business, and we strive to delight each of our guests.”

Second, describe what you have done to prevent the issue from occurring again.

“We’ve taken a few steps to prevent what happened to you from happening to another parent of a birthday boy or birthday girl. Since your visit, our staff has taken several classes to improve their service skills. They’ve focused specifically on techniques for positively engaging with children.”

Third, ask the person to give you a second chance.

“Please celebrate with us again. I believe you will be pleasantly surprised. My name is Kate. If you ask for me when you make your reservation, I will take care of you personally.”

Resist the urge to be snarky, judgmental, or to correct your customers. Yes, some customers are wrong—however, pointing that out will not help. Lots of people are going to be watching how you respond to others. Take advantage of the opportunity to be polite, helpful and solution-focused. People who rely on the reviews can often tell when other customers are being difficult. If you are gracious in your dealings with them, you will win in the long run.

Step Nine: Ask your happy customers to post reviews. Over time, your average will improve. Obviously this approach only works if you are indeed making changes and removing the causes of bad evaluations. If you are not, prepare for more of the same reviews you’ve gotten in the past because they’re coming. You simply cannot turn off the social media tap.

Step Ten: As tempting as it may be, do not post fake reviews or go to a service to get others to do the same. Apart from the fact that it’s dishonest, it’s also dangerous. If you get caught, you will look even worse than you did before. Instead, get busy writing more content to post on your site, press release sites, and other appropriate places. The more that’s out there, the less visible a bad comments be.

Followed closely, this ten step plan for a reputation overhaul could earn you five stars. What do you think?

Kate Zabriskie is the president of Business Training Works, Inc., a Maryland-based talent development firm. She and her team help businesses establish customer service strategies and train their people to live up to what’s promised. For more information, visit www.businesstrainingworks.com.
Field Data from Total Stations: When is Interpretation Needed?
The Boundary Point is published by Four Point Learning as a free monthly e-newsletter, providing case comments of decisions involving some issue or aspect of property title and boundary law in Canada.

The measurement tools used by today’s geomatics professionals can automate data collection, resulting in an exponential growth in the volume of recorded observations. When used in court, we may face new challenges in presenting this information. Seldom do we have the benefit of a single point-to-point direct measurement recorded manually in analog field notes. In this issue: Field Data from Total Stations: When is Interpretation Needed? We consider a case which offers a glimpse into the possible treatment of the results from a total station data collector when tendered as evidence—and how to prepare.

http://4pointlearning.ca/4PL/TheBoundaryPoint_vo13%289%29.pdf

Farmers’ Advocate Office Undertakes Surface Rights Mapping Project

The Farmers’ Advocate Office (FAO) is currently collecting surface lease, transmission line, seismic, and pipeline right-of-way agreements from landowners for the Surface Rights, Land, and Energy: Pricing Transparency Mapping Project.

“This fall the FAO will launch four interactive online maps depicting project details and the compensation values paid to landowners under the heads of compensation,” says Jeana Les, research and communications specialist for the FAO. “There is currently no central repository where this type of information is compiled and accessible to landowners.”

“When negotiating with energy companies, landowners want to know if the compensation offer made by the land agent is within the range offered to other landowners,” says Les. “The Pricing Transparency Maps will provide a starting point for rural landowners who are negotiating with energy companies.”

Les says landowners were positive about the compensation maps the FAO produced from 2007-09. The new maps will be more robust and interactive, including a greater number of details and better sorting functions. In addition, the new maps will be updated on a continuous basis.

The FAO is currently accepting seismic and pipeline right of way agreements no older than 2011, and surface lease and transmission agreements no older than 2010. Please note that originals should not be submitted, as they will not be returned. No agreements containing a privacy clause will be accepted. Participants will be required to sign a release pursuant to the Freedom of Information and Protection of Privacy Act. Names and contact information will not be released through the maps. Legal land description to the section will be depicted.

Jeana Les
Alberta Agriculture and Rural Development

Three Things You Should Know About GeoAlliance Canada

1. What is GeoAlliance Canada?
GeoAlliance Canada is a new umbrella organization that will provide leadership to fuse together the energy and resources of existing geospatial business, non-profit, education and government organizations. GeoAlliance Canada will create a neutral platform for members of the geo community to network and collaborate on projects of mutual interest. Together we will measure, monitor and promote our value both within and outside the geo community in order to improve opportunities, awareness and understanding of our role in the Canadian economy. Our activities will elevate public awareness of the value of the geospatial information supply chain.

2. Who will benefit?
Everyone whose activities can be placed along the geospatial information supply chain will benefit from the presence of a strong alliance with a diverse member base. Our work will raise the profile of geospatial knowledge, tools, data, and technologies, and brand “geo” as a vital part of the Canadian economy. The presence of a unified voice and platform will foster the development of a strong, sustainable community, defined and executed by our membership and reflecting the concerns of the entire community of practice.

Here in Canada, this unified approach is a new one, but it is one that has already seen a lot of success elsewhere in the world. We understand that work supporting one link in the chain is not at the expense of the others, but rather to strengthen the whole. GeoAlliance Canada will focus on this bigger picture and draw members from within and outside the traditional geomatics sector.

3. How can we get involved?
Registration will be open this fall for groups and organizations who wish to join GeoAlliance Canada. The membership rate is a flat fee of $1000/year, regardless of the size or mandate of your organization. Because our year-end date is March 31, we will be offering pro-rated membership for 1.5 years (until March 31, 2017) for $1500.

There is no individual membership option, as GeoAlliance Canada does not wish to compete with other regional professional associations. If you are a member of another group or association, we hope you will encourage and support their involvement with GeoAlliance Canada.

Service Alberta

Thank you for your kind works regarding my recent appointment as Minister of Service Alberta. It is an honour and a privilege to service this great province as a member of the Premier Notley’s Cabinet.

Although my schedule does not permit me to meet with you at this time, I have asked Tim Grant, Deputy Minister of Service Alberta, to meet with you on my behalf.

Hon. Deron Bilous
Minister of Municipal Affairs
Minister of Service Alberta
New Alberta Land Surveyors

#959 - Lianqiu Gao
August 10, 2015
Lianqiu is currently employed with Geodetic Surveys & Engineering Ltd. in Edmonton. His experience is in the oil & gas, municipal and construction sectors.

Articles were served under Alberta Land Surveyors Doug Cloake, Steven Van Berkel and Paul Chan.

He has a degree in Geomatics from the University of New Brunswick.

He is married to Yanfei and they have two children: Sophia (3 years) and Ryan (1 year).

Hobbies include swimming, photography and the outdoors.

#960 - Matthew Heffernan
August 10, 2015
Matthew is currently employed with Challenger Geomatics Ltd. in Calgary. He has worked at IBI Group and Can-Am Geomatics in a wide range of disciplines.

Articles were served under Alberta Land Surveyors Barry Fleece, Robert R. King and Jason Deschamps.

He has a Geomatics Engineering Diploma from SAIT.

He is married to Denise and they have three children: Claire (8 years), James (5 years) and William (3 years).

Hobbies include running, biking and softball.

#961 - Ryan Delaurier
August 21, 2015
Since graduating with a degree from BCIT, Ryan has worked for Midwest Surveys Inc. in Medicine Hat dealing primary in the oil & gas sector.

Articles were served under Nathan Denison, ALS.

He is married to Farrah.

Hobbies include football, golf and camping.

Updates . . . .
For up-to-date contact information, log on to the ALSA website.

ACTIVE

Brian Ball is now employed with Allan W. Nelson & Associates Inc.

Rheal Bourgouin is now employed with Arc Surveys Ltd.

Real Comeau is now employed with Centerline Geomatics (AB) Ltd

Ryan Delaurier was commissioned as ALS#961 on August 21, 2015.

Reid Egger has moved to the Edmonton office of Universal Geomatics Solutions Corp.

Lianqiu Gao was commissioned as ALS#959 on August 10, 2015.

Matthew Heffernan was commissioned as ALS#960 on August 10, 2015.

Roberta Holtner is now listed as a sole practitioner.

Steve Keddy is no longer employed with Universal Geomatics Solutions Corp.

Brent Murray is now employed with Explore Surveys Inc. in Athabasca.

Jeffrey Skelton is now listed as a sole practitioner.

Greg Stromsmoe has moved to the Edmonton office of Altus Geomatics Limited Partnership.

Bruce Tattrie is now employed with Bearis & Associates Engineering Ltd.

Gerald Whaley is now employed with Baseline Geomatics Group Ltd.

CORPORATIONS

Explore Surveys Inc. has opened branch offices in Drayton Valley and Athabasca. Katie Hunter is the ALS responsible for the Drayton Valley office and Brent Murray is the ALS responsible for the Athabasca office.

MMM Geomatics Limited has closed its Fort McMurray branch office.

Universal Geomatics Solutions Corp. has closed its Cold Lake and Grande Prairie branch offices.

ARTICLED PUPILS

Christian Sanchez transferred articled to Jeffrey Olsen on September 10, 2015.

Cori Gagne signed articles with Greg Boggs, ALS on August 10, 2015.

Matthew Hamilton transferred articles to John Byrne on September 15, 2015 and is now employed with IBI Geomatics Inc. in Edmonton.

Mark Hickaway transferred articled to Stephen Hyatt.

Bradley MacDonald signed articles with David Young on August 28, 2015.

Blake Lange signed articles with Bruce Tattrie on September 8, 2015.

Kim Mehr signed articles with Byron Laurie, ALS on June 4, 2015.

Justin Maunder signed articles with Robyn Graham on August 31, 2015.

Zachary Prosper signed articles with David Amantea, ALS on July 16, 2015.

Willem Smienk signed articles with Nathan Prins on September 14, 2015.

Danu Vandermark in now located in the Edmonton office of AMEC Geomatics Limited

Grant Wallace is now employed with Ace Surveys Ltd. and transferred articles to Andrew Cammaert on June 10, 2015.

AFFILIATE

Terry Simmonds is now employed with ATCO Electric

ASSOCIATE

Katly Axani is now employed with Axis Surveys in Cold Lake.

Thomas Hoppe is now employed with Eclipse Geomatics & Engineering Ltd.

Matthew Larocque is no longer employed with Universal Geomatics Solutions Corp.

DECEASED

Jack Cheetham passed away on February 23, 2015.

Christopher Everett passed away on August 6, 2015.
Corporate Specialties

The public finds it very helpful to be able to narrow down their search for a land surveyor by picking a particular specialty on the search form. Unfortunately, there are a number of companies that have not taken advantage of the ability to assign specialties to each of their offices (head and branch). Please ensure that your office has indicated which specialty(ies) should be assigned so that contact information will appear when a search is done for that particular specialty.

The specialties to choose from are:
• Fenceline Survey
• Lot Grading
• Pipeline Survey
• Real Property Report (Comm)
• Real Property Report (Res)
• Subdivisions
• Well Site Survey

This list of specialties was chosen to represent the majority of inquiries that the Association office receives. Please provide your selection(s) to Dawn Phelan (phelan@alsa.ab.ca) and she will update the Association’s records accordingly.

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Don Taylor, Business Development  (403) 298-4321
www.jonesbrown.com
This year marks 200 years since Joseph C. Brown, Prospect Robbins and their surveying teams located the initial point for the land survey of the history-making Louisiana Purchase.

To commemorate the setting of the initial point of the 5th Principal Meridian and its baseline, the Arkansas Society of Professional Surveyors is working in conjunction with the Arkansas Department of State Parks and others to coordinate a celebration. It will take place October 17 from 9 a.m. to 5 p.m.

Attendees will learn how Brown and Robbins completed the historic surveying project in 1815 through recreations of villages from the time period, re-enactments of the survey and more. Four venues—the Mississippi River State Park, Louisiana Purchase State Park, Mississippi River State Park Base Line Trail, and Confluence of the St. Francis and Mississippi Rivers—are scheduled to participate in the memorial. Modern surveyors and equipment will be present at each location to answer questions.

The first 200 visitors to have their field note card signed by the Arkansas Society of Professional Surveyor representative at all four destinations will be awarded a free commemorative patch.

http://www.pobonline.com

The Louisiana Purchase is considered the greatest real estate deal in history. The United States purchased the Louisiana Territory from France at a price of $15 million, or approximately four cents an acre. The ratification of the Louisiana Purchase treaty by the Senate on October 20, 1803, doubled the size of the United States and opened up the continent to westward expansion.

The extent of the Louisiana Purchase was left undefined. The French preferred it that way. According to the treaty, America bought “Louisiana with the same extent as it now has in the hands of Spain, and that it had when France possessed it.” Noted Merrill Peterson: “these were very different things” since the size of the territory and what it encompassed changed over time. Certainly, the Spanish had very different ideas of the size of Louisiana than did the Americans. From the French point of view, ambiguity was desirable because it made the purchase palatable to both the Spanish and the Americans in the short term and increased the potential for conflict between the Spanish and the Americans in the long run. “If an obscurity did not exist, perhaps it would be good policy to put it there,” said Napoleon. Napoleon, after all, wanted a quick deal for quick cash. An inspection of the perimeter could come later.

Historian Harry Ammon wrote: “The only portion of the treaty presenting a serious difficulty was that defining the boundaries of Louisiana. Since the American envoys were convinced that West Florida was part of Louisiana, they were anxious to include a specific statement to that effect in the treaty. They quickly discovered, however, that there was no hope of obtaining either a description or a guarantee of the boundaries of the purchase – no one in fact seemed at all certain of the exact limits of France’s ancient colony. They had to be content with Marbois’ vague verbal assurance that France would support the United States in negotiations with Spain for Florida.” Talleyrand replied to questions by the American commissioners by saying, “you must take it as we received it.”

http://www.loc.gov
http://lehrmaninstitute.org

Charles-Maurice de Talleyrand, prince de Bénévent, in full Charles-Maurice de Talleyrand-Périgord, prince de Bénévent (born Feb. 2, 1754, Paris, France—died May 17, 1838, Paris), French statesman and diplomat noted for his capacity for political survival, who held high office during the French Revolution, under Napoleon, at the restoration of the Bour-bon monarchy, and under King Louis-Philippe.

After the fall, in July 1794, of Maximilien Robespierre, the chief instigator of the Reign of Terror, Talleyrand petitioned the National Convention to remove his name from the list of émigrés, as he had left France on an official passport. His request was granted and he reached Paris in September 1796, immediately taking the seat in the Institut National (a creation of the National Convention reestablishing, in a new form, the 18th-century academies, among them the Académie Française), to which he had been elected in his absence. The paper that he read there in July 1797, in which he concluded that France would be unable to reconquer its American colonies and should therefore attempt to establish colonies in Africa, showed that he again hoped to enter politics. A few days later, his paper, which raised him in public esteem, and his connections with a member of the ruling Directory gained him the post of foreign minister.

http://www.britannica.com

In much of the world, national borders have shifted over time to reflect ethnic, linguistic, and sometimes religious divisions. Africa is different, its nations largely defined not by its peoples heritage but by the follies of European colonialism. But as the continent becomes more democratic and Africans assert desires for national self-determination, the African insistence on maintaining colonial-era borders is facing more popular challenges, further exposing the contradiction engineered into African society half a century ago.

When the nations of Nigeria and Cameroon went to settle a border dispute in 2002, in which both countries claimed an oil-rich peninsula about the size of El Paso, they didn’t cite ancient cultural claims to the land, nor the preferences of its inhabitants, nor even their own national interests. Rather, in taking their
case to the International Court of Justice, they cited a pile of century-old European paperwork.

The case, as Reuters once explained, “again highlighted Africa’s commitment to colonial borders drawn without consideration for those actually living there.” African borders, in this thinking, are whatever Europeans happened to have marked down during the 19th and 20th centuries, which is a surprising way to do things given how little these outsider-drawn borders have to do with actual Africans.

The International Court of Justice, also known as the World Court, is the main judicial organ of the UN. Its 15 judges are elected by the General Assembly and the Security Council, voting independently and concurrently. The Court decides disputes between countries, based on the voluntary participation of the States concerned. If a State agrees to participate in a proceeding, it is obligated to comply with the Court’s decision. The Court also gives advisory opinions to the United Nations and its specialized agencies.

The seat of the Court is at the Peace Palace in The Hague (Netherlands). Of the six principal organs of the United Nations, it is the only one not located in New York (United States of America).

The Court is composed of 15 judges, who are elected for terms of office of nine years by the United Nations General Assembly and the Security Council. It is assisted by a Registry, its administrative organ. Its official languages are English and French.

From May 22, 1947 to August 25, 2015, 161 cases were entered in the General List, including the following boundary/border cases since 2010:

- Maritime Delimitation in the Indian Ocean (Somalia v. Kenya)
- Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicaragua)
- Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)
- Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 nautical miles from the Nicaraguan Coast (Nicaragua v. Colombia)
- Certain Activities carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)
- Frontier Dispute (Burkina Faso/Niger)

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When I’m conducting Continuing Competency Reviews (CCRs), surveyors often mention lessons they learned from Lyall Pratt, ALS (retired) during a Systematic Practice Review or Getting it Right seminar. It is obvious to me that Mr. Pratt had a significant influence on the practice of land surveying in Alberta and I’m going to attempt to tap into that influence with this article.

About 15 years ago, Mr. Pratt put forward a series of educational case studies focusing on problems found during Systematic Practice Reviews. I’d recommend revisiting all of these case studies, they are very informative. However, Case Study No. 5 (Found No Mark, What does it really mean?) and Case Study No. 7 (Fd. No Mk. Re-established) resonated with me. In the past few months, I have come across several examples where found no mark is shown on a plan even though it is very obvious from the field notes that a search was not actually conducted. I’ll share two such examples here.

Figure 1 is a sanitized portion of a field note sketch recorded for an RPR. Note that this sketch clearly shows one FNM notation and two found posts. However, in Figure 2 (a portion of the corresponding RPR plan) an additional Fd no Mk has been added between the two found posts. Similarly, Figure 3 is a sanitized portion of a field note sketch recorded for a subdivision survey. This sketch clearly shows that at point number 3 the field crew did not search for a post because of a pile of snow and the crew did not indicate if a search was conducted at the corners of these lots and the lane. Despite this, the subdivision plan in Figure 4 incorrectly shows found no mark at several locations.

Although the lessons learned during SPR are still relevant today, I believe these CCR examples highlight the need to improve plan preparation and checking processes. In both of these examples the ‘error’ was introduced during the plan preparation stage and could have been avoided by comparing the plan to the field notes. These examples demonstrate inappropriate uses of found no mark. As such, I’d like to highlight Pratt’s observations about found no mark:

"Before declaring a monument lost, the surveyor must make an exhaustive search for the original monument…” Pratt (2000, September) Case Study No. 5: Found no Mark. ALS News, 35

"Before concluding that a monument is lost, a land surveyor is duty bound to complete an exhaustive search for that monument and, before abandoning this search, must be convinced that no other land surveyor will subsequently find better evidence that might invalidate this work.” Pratt (2001, March) Case Study No. 7: Fd. No Mk. Re-established. ALS News, 27

Lyall Pratt is very clear that it is a land surveyors’ responsibility to ensure that a monument is actually lost before indicating that it is lost. I don’t interpret this to mean that the land surveyor must confirm every lost monument in the field (but this might not be a bad idea) but, at the very least, a land surveyor should review every found no mark notation on every plan. This shouldn’t be that onerous because based on information I am collecting during CCRs, all plans are being checked by a land surveyor before leaving the office anyway. Based on the examples above, it seems that more attention could be given to the found no mark notations during these plan examinations.
This year, the tournament had to be rescheduled to September 3 as the original date in August was rained out. The tournament has only been rained out twice in the last twenty years.

The Convention and Social Group decided to change the venue to the River Bend Golf Course in Red Deer which seemed to be welcomed by the golfers.

In support to the J.H. Holloway Foundation mulligans, flagging and draw tickets for two nights’ accommodation at the Fairmont Jasper Park Lodge were sold. We were able to raise $1,270. The lucky winner of two nights accommodation at the Fairmont Jasper Park Lodge was Greg Illchuk. Thank you to everyone who contributed to the Foundation.

The winning team was team #11A Tom Bassette, John Federico, Paddy Marshall and Brent Wilson.

HOLE PRIZE WINNERS

Hole Prize #01: Closest to the Target Men --------------------------- Dirk VandenBrink
Hole Prize #02: Closest to Pin (second shot) Anyone------------- Richard Andrews
Hole Prize #03: Closest to Pin Anyone --------------------------- Scott Westlund
Hole Prize #04: Closest to Pin Anyone (second shot) ---------- Scott Westlund
Hole Prize #05: Longest Drive Ladies ----------------------------- Lorraine Hortness
Hole Prize #06: Closest to the Pin Anyone ------------------------ Tom Bassette
Hole Prize #07: Longest Putt: Ladies ----------------------------- Lorraine Hortness
Hole Prize #08: Longest Drive Men ------------------------------- Dean Spocchi
Hole Prize #09: Closest to the Target: Ladies ------------------- Lorraine Hortness
Hole Prize #10: Longest Putt: Anyone --------------------------- Stephen Sharron
Hole Prize #11: Closest to Target from Tee Anyone ------------- Lorraine Hortness
Hole Prize #12: Closest to the Pin: Anyone ---------------------- Dan Green
Hole Prize #13: Closest to the Pin Anyone ---------------------- Rockey Annett
Hole Prize #14: Longest Putt: Anyone --------------------------- Russ Barnes
Hole Prize #15: Longest Drive Men ------------------------------- Sirt Lin
Hole Prize #16: Longest Drive Anyone ----------------------------- Dean Spocchi
Hole Prize #17: Longest Drive Anyone ----------------------------- Dean Spocchi
Hole Prize #18: Longest Drive Anyone ----------------------------- Dean Spocchi

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The purpose of this article is purely educational. Opinions expressed herein are those of the author, and not necessarily of the PRB.

GNSS RTK Surveys Over Short Distances

Using GNSS Real-Time Kinematic (RTK) over shorter distances should only be done with some caution. Manufacturer-stated accuracy is most often stated in horizontal and vertical precision in root mean square (RMS) values, and can likely only be done under perfect conditions. Precision and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. The manufacturer’s specifications recommend the use of stable mounts in an open sky view, EMI and multipath clean environment, optimal GNSS constellation configurations, along with the use of survey practices that are generally accepted for performing the required accuracy of surveys for the application, including occupation time appropriate for baseline length. Over shorter distances, pogo pole verticality, bubble calibration, base station tribrach, and antenna center calibration are increased.

Manufacturer-stated accuracies typically state for RTK of Horizontal 8mm +1ppm RMS and Vertical 15mm + 1 PPM RMS. The definition of RMS is usually taken as 1 sigma or 65% confidence interval. We should strive to work at the 95% confidence region or 2x RMS, which would double the stated manufacturer accuracies. In tests that we have completed over a 50 metre baseline that set using a precise robotic total station, we have found this to be factual. The accuracies we can achieve are at the 2RMS level on a repeated basis for short distances in horizontal and vertical. Calibrated pogos and tribrachs were used as well as stabilized pogo during the observation. We employed a bipod or lath to assist with the steadying of the pogo.

The confidence region is calculated in such a way that if a set of measurements were repeated many times and a confidence region calculated in the same way for each set of measurements, a certain percentage of the time, on average, (e.g. 95%) the confidence region would include the point representing the "true" values of the set of positions being measured.

The most common sources of error in RTK observations are the GNSS system itself, pogo non-calibration of the level bubble, base station tribrach error, and input error. One can take care of the pogo and tribrach errors by having crews check these regularly using simple proven methods. Input errors need to be checked against what has been entered and what has been recorded in the field notes. Changes of height of antenna in the field must be recorded and confirmed by post processing. Post-processing of all RTK field observations is always highly recommended and is not a time consuming task.

On shorter distances, use a quality tape measure to confirm the distances observed, or use a total station to re-observe the measurements. If one looks at two centimetres on each point as a possible worst case scenario over a distance of five metres, using the covariance law, you would arrive at a likely error of 2.8 centimetres or 1 in 177, for 10 metres 1 in 355.

Get to know your equipment limitations and capabilities, calibrate you survey instrumentation, ensure your observation methods are proven, and post process your observations to confirm the field measurements. GNSS has improved the methods and allowed increase production but as we all know check, check and recheck.

David McArthur, ALS

The J.H. Holloway Scholarship Foundation

administers the following awards:

**University of Calgary—John Deyholos Memorial Scholarship**
$3,000 annual scholarship to a continuing undergraduate student in the Department of Geomatics Engineering

**University of Calgary Scholarship**
$3,000 annual scholarship to a fourth year student in Geomatics Engineering

**University of Calgary—Lethbridge College, NAIT and SAIT Transfer**
$1,250 annual scholarship to a NAIT, SAIT and Lethbridge College graduate in Geomatics Engineering Technology enrolled in the University of Calgary program in Geomatics Engineering

**Lethbridge College**
$1,500 annual scholarship to a Lethbridge College student entering their second year of the Geomatics Engineering Technology program.

**NAIT and SAIT Academic Achievement**
$1,500 annual scholarship to a NAIT student entering their second year.

**ALSA Members Scholarship** - $1,000 award upon graduation to an active member of the ALSA enrolling in a program leading to the award of a related degree

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*J.H. Holloway Scholarship Foundation—1000, 10020 - 101A Avenue, Edmonton, AB T5J 3G2*
Change is Coming

O ur Association is always evolving in order to best serve the public, meet industry needs and keep pace with advances in technology and shifting cultural standards. Recently, we have seen a number of changes and proposed changes to the articling process. With so many of these changes slated for implementation within the upcoming year, the Registration Committee felt that it was essential to provide stakeholders with an update and discuss expectations. It is our hope that in communicating what principals and articling pupils can expect from the Registration Committee going forward, and what we expect in return, we will help pave the way to a smooth transition.

Project Reports
The number of project reports a pupil is required to submit reduced from three to two in June of this year. The expectations of the Registration Committee, regarding project reports, are clearly listed in the articling pupil syllabus. The syllabus provides pre-approved topics, general guidelines and content essentials. Steve Keddy also wrote an excellent article in the March 2015 edition of ALS News regarding project report requirements. The one thing that the article did not address is what pupils and principals can expect from the Registration Committee going forward. The simple answer is increased consistency in marking and feedback. This will be accomplished by the implementation of customized marking guides for the pre-approved topics. Before you get too excited please note that these marking guides are for Registration Committee use only. It is our responsibility to examine all future ALSs and ensure they meet the requirements for registration. Providing a copy of the marking guide, complete with partial answers, would not be a very effective means of testing this knowledge.

Affidavit of service
A new form will be introduced for the annual affidavit of service. The form will be a fillable spreadsheet with set categories for experience type under three main headers (field, office and discretionary time). The set categories will assist students in accurately reporting their experience, the principal in evaluating whether their pupil is getting a large enough breadth of experience and the Registration Committee in evaluating the amount of credit that should be granted to the pupil for field, office and discretionary time. With so many anticipated advantages, it is our hope to finalize and approve the final version of the new affidavit of service at the next Registration Committee meeting in November. This will allow for the new form to be posted to the ALSA website for implementation prior to the January 2016 affidavit of service submissions.

Qualifying Examinations
Having just recently adjudicated my first qualifying exam I am eagerly anticipating the changes proposed to the qualifying examinations. A large number of these changes will occur behind the scenes such as providing examiners with sample questions, a more detailed outline of the content requirements and suggested flow of an exam. The intent of these changes is to provide as much consistency as possible to the process. Every candidate should be examined on the full breadth of the profession from unsurveyed territory to urban surveys and everything in between. This leads to the final proposed change: reduce the number of minutes spent on project reports from 45-60 to approximately 15. Project reports are already evaluated as part of the articling process and reducing their weight will assist examiners in insuring as many topics are covered as possible in the three hours allowed for a qualifying exam.

This said every qualifying exam will be different; that is its nature. Candidate answers will determine the path the exam is to follow, much like in a choose your own adventure book. As such pupils should prepare at length for this exam, participating in at least one mock oral, prior to attempting. Adjudicators expect all candidates to arrive prepared and to present themselves in a professional manner.

Written Examinations
With the first sitting of the new written examinations scheduled for April 2016, there have been many questions regarding their content and structure. The titles for the two exams will be Principles and Practice of Land Surveying One and Two. The exams will be formatted in much the same manner as our current practical exam however, the content will be divided by scope of practice. Certain topics such as ethics, hierarchy of evidence and the Surveys Act will, by necessity, be included in both exams. However, the urban exam will focus on topics such as condominiums, infill subdivisions, RPRs and the Municipal Government Act while the rural exam will focus on topics such as wellsites, dispositions and the Pipelines Act. Sample questions, submitted by the registrar for review, read much like the discussion principals have with their articling pupil before they begin work in a new area of practice. Such discussions typically begin with a recommendation to read certain acts, regulations and sections of the Manual of Standard Practice to ensure the pupil understands the requirements before conducting such work. They then move towards sources of research such as SpinII and AbaData. The largest part of the dialogue focuses on how the survey will be conducted, what evidence you expect to find and how it will be evaluated. Finally, the articling pupil and their principal discuss safety, ethics and the business of conducting such work. By formatting the exams in this manner it is hoped that the exams flow in a manner that is familiar to the candidates and that enables the Registration Committee to fully test their knowledge of the profession.

Currently, the registrar is working on developing the two new exams and revising the syllabus found in the articling manual on the ALSA website. Both items are on the schedule for the November Registration Committee meeting. In addition, the Registration Committee will be discussing the release of sample questions to assist pupils in preparing for the new written examination.

That concludes the list of the substantial proposed changes to the articling process for the upcoming year. These are the largest
changes that have been made to the articling process since I began my career. At every instance the greatest care has be taken to ensure the process remains fair, objective and efficient. There will be some growing pains and adjustments along the way and I encourage all Association members to get involved with the Registration Committee and to assist in steering the direction of change. After all "the only way to make sense out of change is to plunge into it, move with it, and join the dance." Alan W. Watts

Please stay tuned to the Friday emails for updates.

Robyn Graham, ALS

It is our hope that in communicating what principals and articling pupils can expect from the registration committee going forward, and what we expect in return, we will help pave the way to a smooth transition.

PROJECT REPORTS
For articled students, a minimum of one project report should be submitted within two years of the student signing articles and one project report the year thereafter.

AFFIDAVITS OF SERVICE
Due no later than January 15 of each year.
ASSMT Syllabus

At the Alberta Society of Surveying and Mapping Technologies (ASSMT) Annual AGM held in Canmore on May 29th and 30th, 2015 the membership unanimously ratified a motion that ASSMT implement two full and complete syllabi that resulted from work done by the RST Implementation Committee and the earlier “ASSMT-ALSA MOU Implementation Committee.”

The course descriptions are summarized below including where suggested course equivalencies may be found. Each of the syllabi including detailed course names, institutions and hours of study may be found on the ASSMT website.

ASSMT SYLLABUS LEVEL 1
This portion of the syllabus will focus on education and experience equivalent to college level courses. The outcomes are based on the National Technology Benchmarks (NTB_2012) criteria adopted by the Canadian Technology Accreditation Board (CTAB) and used to review education programs in engineering technologies.

The Geomatics Engineering Technology programs of study at SAIT Polytechnic, NAIT and Lethbridge College have ongoing accreditation with CTAB (Canadian Technology Accreditation Board). Each of these programs includes a capstone project (technical research project and report) as a requirement for successful completion of the program.

Level 1 is related to the level of responsibility taken on by Technicians, Senior Technicians and Technologists. The knowledge and skills demonstrated by the applicant should include outcomes such as:

1.1 Survey Calculations
The candidate should explain concepts and solve problems in physics, algebra, trigonometry (including spherical trigonometry), calculus and statistics. The candidate should be able to perform calculations including: converting bearings and angles, converting polar measurements and rectangular coordinates, traverse calculations including latitudes and departures, misclosures, estimates of survey quality, compass rule adjustment, areas, calculations involving figures with straight line and curved boundaries from legal survey plans, horizontal circular curves (e.g., calculations for field layout of curve-line intersections, curve to curve intersections, and areas of figures with curved boundaries), and distance-distance, distance-bearing and bearing-bearing intersections.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, Lethbridge College and Northern Lakes College.

1.2 Survey Field Work
Knowing proper field techniques and procedures are imperative to the candidate’s success as a technologist. While it is important to understand GNSS and how to use the equipment properly, it is also paramount that candidates understand how to use conventional equipment as well.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, Lethbridge College and Northern Lakes College.

1.3 Basic Safety Awareness
The subject of safety is becoming more and more important and employers (and their clients) expect all personnel to have the basic safety tickets. Candidates should have basic safety skills in order to prepare them for employment.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, Lethbridge College, Alberta Health & Safety Training Institute and various other providers in Alberta.

1.4 CADD, Plan Prep and Plan Reading
The candidate should be able to draw legal survey plans in digital format that meet the requirements of the Alberta Land Surveyors’ Associations Manual of Standard Practice, the Land Titles Act and the Surveys Act. They should be proficient in lettering, line work, and dimensioning conventions. They should be able to produce and interpret construction drawings in the context of geomatics applications, such as plan and profile, contour plans and building layout plans. The candidate should be able to research, select and acquire the plans and other documents that affect a project.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and Lethbridge College.

1.5 GIS and Remote Sensing
The candidate should be able to use GIS tools for data collection, storage, sharing, retrieval, analysis, and to produce reports and cartographic products for delivery to regulatory agencies and clients. The candidate should demonstrate competency in using databases, managing data formats and performing data transformations. The candidate should be able to apply concepts of geodesy including map projections and datum’s to solving surveying and mapping problems.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, Lethbridge College, Olds College, ESRI Canada, University of Calgary (Geography, and Geomatics Engineering), Mount Royal University (Geography) and University of Lethbridge (Geography).

1.6 Legal Surveys
Candidates will be expected to demonstrate a thorough knowledge of the legal and ethical requirements for surveying in Alberta. Candidates must apply the concepts of boundaries
and governing evidence as defined in the *Surveys Act* and *Land Surveyors Act* of the Province of Alberta. The candidate should employ procedural and quality control recommendations as outlined by the Alberta Land Surveyors’ Association in the Manual of Standard Practice. Candidates must recognize projects and circumstances in which it is necessary to work under the supervision of a land surveyor. Candidates must demonstrate ethical and professional practice in minimizing professional liability risks and protecting the public.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and Lethbridge College.

### 1.7 Communications

The candidate should have solid communication skills for working in a professional environment. This includes effective oral and written communication techniques with co-workers, supervisors and clients. The candidate should be skilled at conducting research, assessing the quality of sources and data, analyzing and interpreting data to support decision-making, and preparing reports and project related documents.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and Lethbridge College.

### 1.8 Project Management

The candidate should have a basic understanding of project management. Basic skills should include task prioritization, time management, timesheet recording, project planning and documentation.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and Lethbridge College.

**ASSMT SYLLABUS LEVEL 2**

This portion of the syllabus will focus on post-college technical level courses and management training and experience. It is more closely related to the level of responsibility taken on by senior technologists. It includes topics and outcomes such as:

### 2.1 Project Management

The candidate should demonstrate a thorough understanding of the role of a project manager in the surveying/geomatics industry. The candidate should explain and apply skills necessary for “initiating, planning, executing, monitoring and controlling, and closing a project.” Project management training develops skills in communication, costing and financial controls, human resources, scope and time, quality, and risk management. A project management program of training should include five to seven courses selected to support the critical processes.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, University of Calgary and Mount Royal University.

### 2.2 Communication

The candidate should demonstrate competency in verbal and written communication with both internal and external stakeholders. Knowledge of the legal environment and the implications of contract language and project risks will assist in developing effective communication strategies to ensure project quality and client confidence.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and University of Calgary.

### 2.3 Time Management

The candidate should implement personal organization skills and tools to balance competing demands. Setting priorities and implementation of a personal system for time management contribute to successful completion of projects and client satisfaction. Analysis of time allocation, general approaches to prioritization and time management, management of communication, and implementation of tools and strategies to effectively use available resources should be emphasized.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and University of Calgary.

### 2.4 Safety

The candidate should demonstrate knowledge and support for the statutory and regulatory requirements placed on managers and utilize a workplace safety program consistent with the type of business in which they are managing projects.

Suggested course equivalencies are available from SAIT Polytechnic, University of Calgary and the Alberta Construction Safety Association (Leadership for Safety Excellence).

### 2.5 Financial Processes

The candidate should be able to explain the sources of income, creation of fee schedules, effective job costing, invoicing, handling of receivables, importance of cash flow, and capital expenditure decision making. The candidate should understand how financial reports are designed and use these reports on the job. The candidate must be able to decipher and analyze key information from various financial reports.

In order to perform in today’s complex business environment, managers must be able to anticipate and assess the financial consequences of business decisions. The candidate should be able to explain analysis and integration of financial statements, capital budgeting and proposal evaluation, financial planning and cash flows, and relevant cost decision-making. Candidates should also be aware the sources and forms of financing, the management of capital structure and management of working capital.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, University of Calgary and Mount Royal University.

### 2.6 Human Resources

One of the many daily tasks of a senior technologist or supervisor is managing relationships with other staff members. The candidate should have training in employment legislation, recruitment, communication, training, performance management, and compensation.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, University of Calgary and Mount Royal University.

### 2.7 Survey Practices

The candidate should be able to explain the legal and ethical issues surrounding surveying and particularly land surveying. The candidate should be able to distinguish when a project should be referred to a “land surveyor.”

The candidate should demonstrate knowledge and skill in the application of ethical practices in all aspects of project management.
...the membership unanimously ratified a motion that ASSMT implement two full and complete syllabi...

The Surveying Profession: Candidates will be expected to demonstrate knowledge of the surveying profession in Alberta which may include:

1. Scope of the surveying profession;
2. Professional responsibilities of land surveyors;
3. Interrelationships between members of the surveying profession and other land related disciplines such as law, planning, architecture, and engineering;
4. Ethical basis of professional practice and an understanding of the professional liability of survey technology, survey systems, survey organizations and the survey profession in general; and
5. Current affairs of the Alberta Land Surveyors’ Association as well as current survey technologies.

Suggested course equivalencies are available from SAIT Polytechnic and University of Calgary.

2.8 Asset Management
The candidate should apply good business practices to managing capital assets and equipment in the surveying industry. The candidate should understand the importance of privacy and data security as it applies to clients, employees and contractors.

Suggested course equivalencies are available from the University of Calgary.

2.9 Conflict Management
The candidate should be able to explain the causes and effects of conflict in the workplace and apply communication strategies to minimize the development of conflicts. The candidate should have the skills necessary to resolve most conflicts by negotiation and access mediation or arbitration resources when required.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT, University of Calgary, Mount Royal University and Progress Seminars Inc.

2.10 Business Development
The candidate should be able to explain basic business law, contribute to business planning and strategic planning initiatives, select and implement appropriate marketing strategies, and adapt planning and processes to change in the corporation or the industry.

Suggested course equivalencies are available from SAIT Polytechnic, NAIT and University of Calgary.

Darryl Larson, CST, P.Mgr.
President, ASSMT

Surveyors in Balboa Park
San Diego, California

Photos provided by Akram Din
Student Teams Create Software Solutions to Real-World Energy Problems
Schulich teams place third in Advanced Energy Analytics Competition
Real-world energy problems like inefficient bus routes and pipeline incidents were front and centre at the Advanced Energy Analytics Competition this spring.

Over a four-month period, student teams tracked down relevant data and produced software-based solutions to real-world energy analytics problems. Judges from IBM Canada and the University of Calgary Advisory Committee on Analytics and Visualization (ACAV) critiqued the submissions on their levels of applicability, innovation and creativity.

“The most surprising aspect of the competition was the breadth and quality of submissions,” says Frank Maurer, chair of ACAV. “Calgary is an energy town. Hence, I expected to see submissions related to oil and gas topics — and we got those. But we also got submissions looking into sustainability topics, reducing energy consumption for public transport as well as financial aspects of the sector. The engagement and excitement that the students brought to the competition was amazing.”

First place went to two teams: Thinking Outside the BOCZ for their Calgary Transit route optimization project, and The Minions for PipeVis, an application to track pipeline incident data. Schulich School of Engineering students were part of two of the third place teams: Eagles and GeoSpatial.

Pipeline Accident Data Visualization Helps Inform Industry Decision-Makers
The Minions team was able to fill a specific industrial need with their pipeline visualization application. “We found out that there are several challenges and open questions in the pipeline industry, and there was also no visual analytics tool built for this industry,” says Zahra Sahaf.

In response, the team developed a web-based application that provides a visual overview of data related to liquid pipeline accidents across the U.S. “It applies different analytical techniques over the raw data in order to uncover hidden patterns, unknown correlations, tendencies, and other meaningful information that might be helpful for industry decision-makers,” she says.

The Minions worked with an industry contact to ensure their application was relevant. “It helped us to establish our application in a right track. Therefore, with high confidence, we can say our application is applicable, demanding and effective in the pipeline industry,” says Sahaf. Because of that relationship, the team learned the importance of user involvement in the development process. “We learned the main ingredients of a good visual analytics tool, and tried our best to implement all of them including multiple co-ordinated views, different analytics and visualizations, and being interactive and user friendly,” Sahaf says. “We had to make every section and every result meaningful, understandable and useful.”

The competition demonstrated a spectrum of expertise, and allowed the university to bring in experts from IBM to create connections between researchers and industry for future collaborative research projects.

“IBM is committed to building analytics capabilities as an effective value-creation method in a modern economy, and we wanted to promote interest in this field among university students,” says Dariusz Piotrowski, energy sector executive in the IBM Analytics Business Unit. “We were impressed with a quality of submissions and delighted to see passion for analytics expressed by the competitors. We look forward to sponsoring the analytics competition next year and to including partners from the energy industry.”

The competition also aligned with the university’s Strategic Research Plan. “Energy Analytics is at the intersection of the university’s Energy Innovations for Today and Tomorrow research theme and the Analytics & Visualization research platform,” says Maurer. “It was a natural place for tapping into our campus’ expertise and engage creative students in developing new ideas for the area.”

Bus Route Optimization Gains Attention of Calgary Transit
Thinking Outside the BOCZ team member Carley Bullock found the competition to be an exciting challenge. “Our supervisor, Yuriy Zichenko, specializes in mathematical optimization. His idea of optimizing bus routes intrigued all of us, as we all thought it was very different than your typical ‘energy problem.’” The team gathered data from Google Earth on two bus routes, and used their findings to determine how the routes could be optimized to minimize the amount of time a passenger would be onboard a bus before they arrived at the nearest depot.

“By choosing two actual bus route areas in Calgary and optimizing the existing routes, you can see the model go to work and make improvements on something that is used by so many people,” says Bullock.

The group has already sent their project to Calgary Transit for feedback. “They were very impressed with what we did for being ‘junior analysts’. Just to know that our work was seen and impressed them felt very satisfying,” Bullock says. “We’re still in touch and there is a potential that we will present to them and continue our work. For now though, we are flattered that they took the time to take a look and to have that positive feedback.”

Advanced Energy Analytics Competition Winners
First place teams (tied)
• Thinking Outside the BOCZ: Carley Bullock, Sarah Couzens, Michael Oliwa
• The Minions: Zahra Sahaf, Haleh Alemasoom, Mahshid Marbouti, Roberta Cabral Mota

Third place (four teams)
• HKJ]: Heng Zhu, Kunlin Hao, Jixian Li, Ji Ruan
• Eagles: Emad Amin Mohammed, Soheil Salehian,
• GeoSpatial: Bingjie Wei, Xiaodong Sun
• Work in Progress: Tony Phi, Nisha Valckx, Seharish Lakhani, Saeed Masoumi

Pamela Hyde, May 21, 2015
Michael Sideris is Elected President

Dr. Michael G. Sideris, professor of geodesy in the Department of Geomatics Engineering, is the new president of the International Union of Geodesy and Geophysics (IUGG, www.iugg.org) for the period 2015-2019. Prof. Sideris was elected by unanimous vote to this prestigious position by the country-member Council of the IUGG at the XXVI IUGG General Assembly, which took place in Prague, Czech Republic, from June 22 to July 2, 2015. Prior to this, he was the elected vice-president of the IUGG for the period 2011-2015 and President of the International Association of Geodesy for the period 2007-2011.

IUGG is a non-governmental, international scientific organization, established in 1919, which is dedicated to advancing, promoting, and communicating knowledge of the ‘Earth System,’ its space environment, and the dynamical processes causing change. It comprises eight semi-autonomous Associations, namely the International Associations of:
- Cryospheric Sciences (IACS)
- Geodesy (IAG)
- Geomagnetism and Aeronomy (IAGA)
- Hydrological Sciences (IAHS)
- Meteorology and Atmospheric Sciences (IAMAS)
- Physical Sciences of the Oceans (IAPSO)
- Seismology and Physics of the Earth’s Interior (IAGS)
- Volcanology and Chemistry of the Earth’s Interior (IACCE)

IUGG is one of the 31 scientific Unions in the International Council for Science (ICSU, www.icsu.org). It encompasses a wide range of geosciences, dealing with subjects such as the shape of the Earth, its gravitational and magnetic fields, the dynamics of the Earth as a whole and of its component parts, the Earth’s internal structure, composition and tectonics, the generation of magmas, seismicity, volcanism and rock formation, the hydrological cycle including snow and ice, all aspects of the oceans, the atmosphere, ionosphere, magnetosphere and solar-terrestrial relations, and analogous problems associated with the Moon and the planets. IUGG encourages the application of this knowledge to societal needs, such as mineral resources exploration, mitigation of natural hazards, and environmental monitoring and protection.

Geodesy and Geomatics Engineering
University of New Brunswick, Fredericton, NB, Canada

Professor Marcelo Santos Elected President

The International Association of Geodesy (IAG) is a scientific organization in the field of geodesy. It promotes scientific cooperation and research in geodesy on a global scale and contributes to it through various research bodies. The IAG is member of the International Association of Geodesy and Geophysics (IUGG). It is composed of four commissions.

GGE’s Professor Marcelo Santos has been elected as the president of Commission 4 on Positioning and Applications in a vote conducted among IAG national delegates and members. He started serving IAG in this position during the recent IUGG General Assembly, which took place in Prague, Czech Republic, from June 23 to July 1, 2015. He also became member of the IAG Executive at that time.

Images Kings Landing Historical Settlement in 3D

During the summer and fall of 2014, a team of researchers from the Department of Geodesy and Geomatics Engineering at UNB carried out the first three-dimensional survey of Kings Landing Historical Settlement, a living history museum just a few kilometres from Fredericton. Using state-of-the-art laser mapping equipment recently purchased by the department and a couple of GPS receivers, the team has produced highly detailed three-dimensional images of part of the settlement, together with fly-throughs of selected areas.

The team, consisting of Prof. Peter Dare and students Yong-Won Ahn and Renée Tardif, used a Trimble TX5 terrestrial laser scanner to capture the information required to create the 3D images. The scanner sends out millions of laser pulses while it rotates 360 degrees horizontally and up to plus or minus 90 degrees vertically enabling positioning and imaging of all the objects surrounding the scanner. In this way, information on building walls including doors, windows, and other features along with historical objects within the buildings was captured.

Fifty-five setups of the scanner were required to cover the selected area of Kings Landing, after which, the individual scans were stitched together to create one complete image. Around four billion data points were collected altogether. Subsequently, by applying coordinates of reference locations determined by students Gozde Akay and Ryan White using GPS, the positions of the features scanned were made to coincide with the legal coordinate system used in New Brunswick.

This type of work creates a detailed digital inventory, which will enable Kings Landing to:
- Have a complete record of their holdings for the first time.
- Have accurate records in case of an insurance claim (theft, flooding, and so on).
- Document and archive collection items in their original state and - for those items on display - while in their original location.
- Increase the financial stability of the museum by being able to advertise holdings that could be used by TV and film companies.
- Show to the public more clearly what they can expect from a visit to the living history museum by improving the museum’s online content.
- Provide an online educational resource for local schools regarding the history of New Brunswick.
- Enable historians around the world to learn more about historical life in New Brunswick.
- Produce models of buildings and individual items with a 3D printer.
- Show online items owned but not on display.
- Show what can be loaned to others.

Other living history museums and historical buildings in New Brunswick...
and elsewhere would benefit from similar imaging of their properties. Imaging from laser scanning has numerous applications in addition to the scanning of historical properties, such as land-surface deformation monitoring and recording of crime scenes.

Two example fly-through movies are provided in mp4 format. One shows the exterior and interior of St. Mark’s Church, one of the two churches at Kings Landing. The other movie shows the various buildings surveyed with a preview showing the location of Kings Landing in Google Earth. It should be emphasized that these fly-throughs were computer-generated from ground-level data.

The scenes shown were illuminated by monochromatic laser light. The colour comes from colour digital photos, which the scanner takes after capturing a scene with the laser. The photos are made to overlay the point cloud from the laser measurements so that when done correctly every point in the point cloud has a three-dimensional coordinate set along with red, green, and blue colour values.

**Professor Authors Book on the Geospatial Web**

Emmanuel Stefanakis, a professor in the Department of Geodesy and Geomatics Engineering at the University of New Brunswick, has published an introductory textbook on the geospatial web entitled *Web Mapping and Geospatial Web Services: An Introduction*. Its content is the product of a series of continuous improvements to lecture notes distributed to students in several European and Canadian universities in the context of courses, tutorials, and seminars, since 2007.

The book provides an introduction to both the theoretical and practical issues related to the dissemination of map and geographic content on the web as well as the development of map mash-ups and geospatial web services.

The content is organized into nine chapters. After an introduction to web mapping and the alternative methods and tools in developing geospatial web applications and services (Chapter 1), the basic concepts of HTML and XML languages are discussed (Chapters 2 and 3). Then, three XML-based languages widely used in geography and mapping are presented (Chapter 4). The development of advanced geospatial web applications and services in client-server architectures requires the installation and running of specialized software on either the client or server side. In this respect, JavaScript and PHP scripts are examined (Chapters 5 and 6) to extend the functionality of the client, server, or both. The web services for mapping and corresponding specifications are presented next (Chapter 7). Today’s paradigm in geographic data handling involves numerous providers of data, applications, and services on the one hand, and multiple users on the other. Spatial data infrastructure (SDI) refers to a collection of technologies, policies, and operational frameworks to facilitate access and promote usability of all these resources. The technological aspects of an SDI, the architecture, systems, as well as the development steps are also part of the discussion (Chapters 8 and 9).

This book aims to provide an aid and reference to both students (at the undergraduate and graduate level) and professionals alike. Prior knowledge of basic concepts in geographic information systems and science is necessary to better understand the content.

The book will serve as a textbook for an introductory GGE course on web mapping and geospatial web services, which is also being delivered as an open entry online course through the College of Extended Learning at UNB. The course is also available through the Canadian Virtual University.

The book may be obtained from a number of outlets including Amazon.ca, Amazon.com, and CreateSpace. CreateSpace is a publishing division of Amazon.com.

This is Professor Stefanakis’ second book. Last year, he published Geographic Databases and Information Systems.
Real Property Law
Interest in Land
Easements—Creation—By prescription—Requirements—Use as of Right and not by Permission

Appeal by Condos and Castles Realty from the dismissal of its application for a declaration that its predecessors in title acquired an easement by prescription to use the right-of-way that burdened lands owned by the respondent, Janeve Corp. The appellant owned a property that included a rear parking area connecting to a private laneway. The laneway was a registered ownership interest burdening the adjoining properties owned by the respondent. The registered right-of-way traversed the rear of the respondent's properties. A dispute arose after the respondent's construction caused inconvenience for the appellant and led to litigation. The appellant's property was not a dominant tenant with rights of use. However, the appellant's predecessors in title regularly used the adjoining private right-of-way across the respondent's property for vehicular and other traffic prior to registration of the lands in the Land Titles System. The appellant consequently sought a declaration of easement. The judge dismissed the application finding that the appellant's evidence of the history of use of the properties was insufficient. The judge found that although there was more than twenty years of use of the private right-of-way by the appellant's predecessors in title, that use was by licence and not as of right and there was nothing that indicated that the original owner's permission to cross the respondent's property was granted as if the users had an ownership right. Inclusion of the right-of-way in the listing agreement did not establish acquisition of a prescriptive right-of-way.

Held: Appeal allowed. There was no evidence to support the judge's factual finding that the respondent's predecessor in title permitted his neighbours to cross over his property by way of licence and not as of right. The appellant had proven facts to support the inference of acquiescence in 20 years of use and there was no evidence presented by the respondents to rebut the presumption. The appellant's predecessors in title had used the laneway in a continuous, uninterrupted, open and peaceful manner without objection by the respondent for over 20 years, which gave rise to an inference of acquiescence by the respondent.

Alberta Reinforces Licensing Authority’s Role
The recent decision in Togstad v. AltaLink (Surface Rights Board) [2015] A.J. No. 635 further articulates and affirms what previous court decisions have said about the role of the Alberta Surface Rights Board in assessing right-of-entry (ROE) applications—namely, that the SRB's discretion to deny an ROE order is highly circumscribed, and that the SRB cannot use right-of-entry proceedings to revisit terms of orders issued by the Alberta Utilities Commission (AUC).

Togstad deals with the scope of the board's authority in relation to ROE applications, which involves deciding whether to grant an order where the operator of an energy development project has been unable to obtain the consent of a landowner or occupant to access their lands for the purposes of the project. In order to grant such applications, the SRB requires evidence that the subject lands are required for a project that was approved by a licensing authority such as the Alberta Energy Regulator or the AUC.

In Togstad, the AUC commenced a hearing in June 2012 with respect to AltaLink Management Ltd.'s application for the Western Alberta transmission line project. Some landowner participants in the hearing argued that the project was part of an international or interprovincial undertaking, and therefore beyond the provincial regulator’s authority to approve. The AUC rejected the argument, determined that the project was wholly within Alberta, and granted an approval in December 2012.

AltaLink then applied to the SRB for ROE orders in relation to lands owned by two landowners: Togstad and the Kures. The landowners/appellants objected unsuccessfully to AltaLink's ROE applications on the basis, inter alia, that the project was an interprovincial line and part of an interprovincial undertaking. Regarding Togstad's objection, the board noted that it is not authorized to consider constitutional questions by the Administrative Procedures and Jurisdiction Act and the Designation of Constitutional Decision Makers Regulation. The board deemed the Kures' objection a collateral attack on the AUC's decision because it raised issues that “either were or should have been raised at the licensing stage” (2014 ASRB 263).

The appellants then sought judicial review of the SRB's decisions. Justice John T. McCarthy heard the Togstad application and Justice Kirk Sisson heard that of the Kures ([2014] A.J. No. 896 and [2014] A.J. No. 1018, respectively). Justice McCarthy held that the SRB correctly concluded that Togstad's objection raised a constitutional question which it could not answer. Justices McCarthy and Sisson both ruled that the appellants' objections constituted impermissible collateral attacks on the decision of the AUC, and in doing so referred to Mueller v. Montana Alberta Tie Line [2011] A.J. No. 1315. In Mueller, Justice Dallas Miller held that the SRB has “no alternative” but to issue an ROE order following the issuance of a permit or license by the Energy Resources Conservation Board (now the AER) or the AUC within which the operator has authorization to seek entry on to the subject land.

Togstad and the Kures appealed the dismissal of their judicial review applications to the Alberta Court of Appeal. Togstad's argument that his objection was not constitutional in nature was swiftly rejected by a panel consisting of Justices Peter Costigan, Frans Slater and Thomas W. Wakeling, who noted that the objection was framed in constitutional
The SRB is intended to be a regulatory forum that is accessible to unrepresented landowners and occupants. As such, the SRB regularly receives objections to ROE applications that effectively ask it to reconsider aspects of a licensing authority’s decision, such as objections that raise concerns about the impacts of a project’s routing on farming operations. Togstad serves as an important reminder that these types of objections can and should be dismissed as impermissible collateral attacks on the decisions of licensing authorities.

While it remains to be seen whether this will play out in practice, one implication of Togstad may be a shift in the nature of the objections that the SRB receives to ROE applications. That is, as understanding grows about the limited scope of the SRB’s discretion to deny an ROE application, objections may exhibit a greater focus on the consistency between ROE applications and the approvals issued by licensing authorities such as the AER and AUC.

This may in turn lead operators to ensure that project details and all attendant land requirements are clearly determined and defined as part of their licensing applications. Another implication may be increased involvement by landowners and occupants in the initial licensing phase of projects.

This article originally appeared in the August 21, 2015 issue of The Lawyers Weekly published by Lexis/Nexis Canada Inc.
The Roman Land Surveyors
An Introduction to the Agrimensores
O.A.W. Dilke, Davis & Charles, Newton Abbot, Devon, UK
ALSA Library H731

... but the agrimensor is entrusted with the adjudication of a boundary dispute that has arisen, so that there may be an end to wanton quarrelsomeness. He is a judge, at any rate of his own art; his law-court is deserted fields; you might think him crazy, seeing him walk through tortuous paths. If he is looking for evidence among rough woodland and thickets, he doesn't walk like you and me, he chooses his own way. He explains his statements, puts his learning to the proof, decides disputes by his own footsteps, and like a gigantic river takes areas of countryside from some and gives them to others. Cassiodorus (AD 493-583)

This book was donated to the ALSA library many years ago by Barry Bishop, ALS (now retired). It is a classic that I have read and referenced many times over the past thirty years because it is one of the few sources of information on the origin of our township system in Roman times. The Roman land surveyor or agrimensor was a true professional as Cassiodorus characterizes in his satirical discourse.

The book traces the history of surveying from the ancient fields of Babylonia where votive stones were placed by landowners to mark their boundaries through to the development of the American and Canadian township systems. It is well illustrated with photographic plates and diagrams illustrating examples of ancient survey instruments such as the groma and examples of centuration that still exist in the Po Valley in Italy as well as examples from England and Tunisia.

Chapters in the book are dedicated to the subjects of the training of Roman land surveyors, boundaries and even accurate town planning in Roman Britain. It speaks of the role of the land surveyor as an arbitrator in settling disputes and despite the fact that this book was published in 1971 the author foresees the future of satellite photography where he states: 'With improvements in telescopic photography, the ideal method may prove to be satellites continuously photographing the whole world for every required purpose.'

Based on this book, I was actually able to find an example of early Roman centuration near Ludo, Italy, where I visited a number of years ago. This book was also the first place that I learned of the Egyptian Rope Stretchers, which is briefly described in tracing the early history of surveying boundaries.

The early history of land surveying is summarized very well in the 260 pages of this book.

G. K. Allred, ALS (Hon. Life)

Fidler’s Journal
Journey over Land from Buckingham House To the Rocky Mountains
Bruce Haig, Editor
ALSA Library H0793

This book is, I believe, a word for word copy of Fidler’s Journal for 1792-93 on an expedition from Buckingham House (Elk Point) to the Rocky Mountains near the headwaters of the Old Man River in southern Alberta. Sextant readings and other numerical observations are not included. Peter Fidler was a meticulous observer, not just of his geographical position but also of the social life of the several native tribes, which he travelled with and encountered along the way. He also observed the weather flora and fauna making many observations of numerous and large herds of buffalo.

One interesting observation was of an ‘Old Man’s Playing Ground,’ a circle of stones which the natives used as an outdoor field game with hoops and arrows. Fidler included a picture of the layout in his journal, which Haig has reproduced. A map of Fidler’s route as well as a few other illustrations are also included.

Fidler, who was the surveyor and a trader for the Hudson’s Bay Company is noted for a number of firsts. He records the first siting of coal and cactus in Alberta, both near modern day Drumheller and is the first white man to climb a mountain in the Canadian Rockies. On December 31, 1792 he slipped away from his native companions and climbed Thunder Mountain at the head of Racehorse Creek, a tributary of the Old Man River. He found the height of the mountain to be 3,250 feet above its base.

This fourth edition contains a number of e-mails from several of Fidler’s current relatives (some from Bolsover, UK) as well as an e-mail from Gordon Jackson the author of another book on Fidler entitled True Brit – The Adventures of Peter Fidler of Bolsover 1769 - 1822.

Overall, this book is a good readable transcription of Fidler’s journey in Alberta but it does not tell a story – it is merely a record. While I salute Haig for his transcription, I don’t expect a lot of people will find it of too much interest.

G. K. Allred, ALS (Hon. Life)

A complete listing of library books is available on the ALSA website under Member Resources-Reference Material.
I probably first heard PearlAnn Reichwein’s name a number of years ago when she contacted me looking for some information about A.O. Wheeler, one of our very first Alberta Land Surveyors. I provided her with whatever information I could and didn’t think much more about it other than it was a pleasant diversion from the usual real property report calls.

Her name then cropped up again when she led the charge to try to prevent Parks Canada from tearing down A.O. Wheeler’s home in Banff known as Claremount. Although the effort proved unsuccessful in the end, it was apparent that PearlAnn Reichwein is a woman of great determination and vision.

So, I was very pleasantly surprised when I found out that she had written a book entitled *Climber’s Paradise: Making Canada’s Mountain Parks (1906-1974)*. This was the research project she had been working on and why she wanted information about A.O. Wheeler – one of the founders of the Alpine Club of Canada.

*Climber’s Paradise* tells not only the story of the Alpine Club of Canada itself but the people and personalities who belonged to the ACC and others who have climbed Canada’s mountains.

It is particularly interesting for land surveyors to read the short biography of Arthur Oliver Wheeler. He was an Ontario Land Surveyor, Dominion Land Surveyor, Manitoba Land Surveyor, British Columbia Land Surveyor and, when the Alberta Land Surveyors’ Association was established, he became an Alberta Land Surveyor too.

During 1883 and 1884, he was engaged in the West on township and townsite surveys for the Dominion Government and the Canadian Pacific Railway. Then in 1885 came the Riel Rebellion, and throughout this he served as a lieutenant with the DLS Intelligence Corps. With the rebellion over, he again returned to survey practice with the Department of the Interior, his first chief being Dr. Deville, who trained him in photo-topographical surveying. This specialized type of surveying was to claim much of his later years.

*Climber’s Paradise* would also be a fascinating read for anyone who is interested in hiking or climbing in Canada’s national mountain parks.

For clarification, Phyllis Munday was a prominent mountaineer. She ascended about a hundred peaks in her lifetime, a third of which were claimed as first ascents and many of which were first female ascents. However, she is no relation to me.

*Climber’s Paradise: Making Canada’s Mountain Parks* was awarded a Clio Prize from the Canadian Historical Society in Ottawa in early June. The award citation reads:

> PearlAnn Reichwein’s *Climber’s Paradise: Making Canada’s Mountain Parks, 1906–1974* is a fantastic blend of leisure, environmental, and cultural history. Focusing on the Alpine Club of Canada, Professor Reichwein explores the ways the history of the club parallels and affected the development of the Rocky Mountain parks over the twentieth century. Covering topics ranging from the marketing of climbing equipment to organising opposition to hydro development in the park, she has written a book of broad appeal to twentieth century historians. In her conclusion she makes very powerful arguments about environmental history, climate change, and our relationship to nature and the mountains. The book is an exciting read and beautifully produced, integrating many images and side bars on a variety of topics, making it appealing to a broader audience than the academic market.

PearlAnn Reichwein is an associate professor in the Faculty of Physical Education and Recreation at the University of Alberta.

Brian Munday

**ALBERTA SURVEYING HISTORY WEB ADDRESS**

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Surveyors began by looking at the stars. Between the huge clear northern sky and the vast open lands to the west lies the history of surveying in Alberta.
Christopher Everett
(1936-2015)

Chris Everett was born in London, England in 1936. He attended the Army Apprentice School and spent three years at the Royal School as a military surveyor.

In 1965, he came to Canada and shortly thereafter obtained his commission as a Dominion Land Surveyor. He served his articles under Al Bereskin, DLS, SLS, P.Eng. He received his commission as an Alberta Land Surveyor on July 22, 1970 and also earned commissions as a Saskatchewan Land Surveyor and British Columbia Land Surveyor.

The self-described workaholic served on the Saskatchewan Land Surveyors Association’s Board of Examiners for ten years and was president of their Association in 1979. In 1992, he was president of the Alberta Land Surveyors Association’s Board of Examiners for ten years. He also earned commissions as a Saskatchewan Land Surveyor and British Columbia Land Surveyor.

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During his tenure as Director of Practice Review in Alberta, the Saskatchewan Royal School as a military surveyor.

MOMENT OF SILENCE

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During his tenure as Director of Practice Review in Alberta, Chris was an integral part of developing the Continuing Competency Review program and he left a lasting impression on staff and Association members.

Published in the Nanaimo Daily News:
Beloved husband, father, and grandfather passed away peacefully in Nanaimo on Thursday, August 6, 2015 after a brief illness. He is predeceased by his daughter Hazel in 2010. Chris is survived by his wife Christine Blouin, his daughter Dawn, and his son Mark (Elaine). He is also survived by his granddaughter Laura, his grandson Taylor, and his sister Ann Morgan.

Chris was a retired professional land surveyor working in Saskatchewan, Alberta, and BC also retired from the British Army Royal Engineers Corps and retired Pilot from the Regina Flying Club.

He was active in his community as a member of the Rotary Club of Nanaimo Daybreak and he was the Mid-Island Ambassador for Shelter Box Canada.

Jack Cheetham
(1929-2015)

Jack left 85 years of his footprints, talents, joviality, love, and passions to the world; and he enriched the lives of family and friends.

Jack’s interest in surveying began in 1952 when he was a rodman with the Saskatchewan Department of Highways. The longest stretch of road he measured with a tape was Highway No. 4 from North Battleford to Dorintosh, a total of 131 miles. Surveyor Jack trekked through miles of terrain to make this land into perfect lots, acres, and organized subdivisions. Those of you who have assisted Jack in these surveying endeavours have had a lesson in patience. He was always in the pursuit of perfection to the fraction of an inch. There is a wide assortment of “Jack projects” in people’s homes, yards, and churches. A friend, who also enjoys woodworking, describes Jack as a “chiseller,” who could be quite “abrasive,” but was after all a “plane” man. We all “saw” how great he was.

He received his ALS commission on June 29, 1978 and continued in active practice until 1986. He was a past-president of the Saskatchewan

Sports - watching or participating, he loved them all!!! Even lawn games were practiced and played enthusiastically with the goal of winning. While living at Lac Des Iles, he enjoyed golfing, fishing, and exploring the outdoors around the lake.

Over the years, Jack improved his skills at felling trees. Some trees that were too close to the house had to come down. He gave lessons to anyone who would listen on chain sharpening, fuel mixing and operating your best and only saw worth owning—a Husqvarna.

Jack had a passion for grass: the greener - the better! He mercilessly attacked every dandelion that dared grow in his lawn. Hence he wore out the knees of several pairs of pants. Second only to grass, Jack loved roses, especially the Emily Carr, which he planted strictly to enhance the beauty of his lawn.

Jack experienced a new life when he became a Christian in 1991 and grew spiritually as time went on. He loved to help Jan Newman organize the seniors’ outings and activities for the JOY group. One of Jack’s outstanding contributions was in the design and manufacturing of the Olympic medals for the Skip-Bo competition.

Jack appreciated a good beer, but he was a man with champagne qualities. He was able to instill in others some of his bubbly nature and good humor.

We will miss you very much Jack.

Esther Woffendale

Letter dated February 1989
To my relatives, friends, and colleagues
You have known me all these years as Bev, which is short for Beverley. An English male name meaning Beaver Stream. I was named after British Member of Parliament Beverley Baxter. The name Beverley was also used as a last name, and a well known actress, Courtney Beverley famous as Miss Beverley, started the trend to name girls Beverley. As a result more girls were named Beverley than boys, and the girls have actually taken the name over.

It has always been difficult when I tell strangers my name, I find I have to repeat it, spell it out, and explain that this is a male name. Mail comes addressed as Miss or Mrs. Bev, is Bev your wife? and etc.

For many years I have wanted to use my second name “Jack” (not John). This is a Scottish name, originally Jack, and became established as Jack. So the next time you greet me, please call me Jack.

Now I expect a transition period for some to adjust from Bev to Jack. For those who cannot, I will accept Bev, but I prefer Jack.

I’m still the same person, with the same personality and I like the positive and masculine sound of Jack.


Signed Beverley Jack Cheetham

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President Hill told the membership that there is continuing and unremitting pressure on our educational institutions to upgrade the quality of instruction in survey science. The mood across Canada indicated a strong desire to ensure an upgrading of entrance standards to the degree level. Mr. Hill said that the graduate must be highly conversant in one or more of the following: EDM devices, instant positioning, inertial survey systems, Doppler satellite, geometric geodesy, photogrammetry and photo control, subdivision and site planning, environmental impact, computer hardware and software, digitizing, electronic plotting, and coordinate systems.

Mr. Hill challenged the membership to take a more independent progressive stance in advising clients of the most efficient, modern and economical methods of completing a job assignment. He felt that Association members had broken through some barriers in this regard such as wellsite surveys in remote areas, the Urban Integrated Control and Provincial Coordinate System and the Cadastral Mapping Program.

At the 1976 Annual General Meeting, the membership approved a new recommended tariff of fees for legal surveys. For the professional services of an Alberta Land Surveyor, the fee was to be no less than $40 per hour. At the same time, the federal government’s anti-inflation guidelines had to be taken into account when approving the new recommended tariff of fees.

The membership also considered adding a new section to the Land Surveyors Act to allow for survey corporations and partnerships. The Association had received a legal opinion indicating that an argument could be made that survey corporations could not legally incorporate.

A recommendation was brought forth, and approved, by the membership that a full-time secretary/manager be hired to look after the day-to-day affairs of the Association and to carry out the duties of the Secretary-Treasurer and Registrar. At this time, Ontario, British Columbia and the Canadian Institute of Surveying each had full-time staff persons. It was expected that the secretary/manager would carry out the duties formerly carried out by the University of Calgary, conduct research, provide continuity of representation at CCLS and other interprovincial meetings and oversee legislative changes.

President Hill also indicated to the membership that the J.H. Holloway Scholarship Foundation had been registered as a charitable foundation the previous November and that some funds had been received and members were encouraged to make contributions if they had not already done so.

J.W. (Jack) Hill

Born May 10, 1918 in Kirkby Lonsdale, England, Jack died at the Saanich Peninsula Hospital in North Saanich, B.C. on February 16, 1999. He was pre-deceased by wives Sonja (1977), Peggy (1995), and Emily (1998); survived by children Christina, Duncan, Celina (Charles) and Alexander (Edith); sisters Celina and Jane; and nieces and nephews.

Following completion of matriculation and a higher school certificate in England, Jack passed the open civil service examinations and then served as a mapping assistant in His Majesty’s Land Registry on a project to convert the established conveyancing and deed registry system to the Torrens System.

He served in the British Army from 1939 to 1946 in Europe and North Africa. His military service included surveys and computations to transform geographical values to rectangular coordinates for various grid systems in Algeria, Tunisia, Egypt, Libya, Sicily, Italy, Yugoslavia, and Germany, using mechanical calculators.

Following the war, he returned to the Land Registry for two years, then worked as a surveyor in Iran for the Anglo Iranian Oil Company.

He immigrated to Canada in 1950 with his wife and two small children and found employment as the computations director in the office of the Director of Surveys in Edmonton. He articulated to C.W. Lester, DLS, ALS, and received his commission as an Alberta Land Surveyor on June 13, 1953, and as a Dominion (Canada) Lands Surveyor in March 1954.

After two years in private practice, Jack joined Triad Oil as chief surveyor in 1955. As such, he successfully lobbied the Alberta Mines and Minerals Department for funds to provide survey control in the Foothills area and worked with the Director of Surveys and other surveyors to establish the Foothills Survey Control Network.

He also initiated action by the Canadian Petroleum Association, the Alberta Land Surveyors’ Association and the Director of Surveys to establish the wellsite regulations.

In 1960, he was appointed Canadian technical advisor to government officials in British Honduras. Over the next four years, he advised on survey methods, legislation, education and training, and aerial photography as well as serving as emissary for the Governor of British Honduras to the Governor of Jamaica.

On completion of his consultancy in Belize, Jack worked for a year in Ann Arbor, Michigan, on computer applications of subdivision calculations and electronic plotting.

He returned to Edmonton in 1965 and joined Canadian Engineering Surveys until forming his own practice (Control Land Surveys) in 1968. He turned his practice over to his partner in 1983 and retired in 1984 after a long and distinguished career.


Among Jack’s many initiatives was the coordination of activities to establish the J.H. Holloway Scholarship Foundation. During his term as president in 1975, his leadership of Council conceived the vision of a self-sustaining capital based scholarship fund to support the fledging survey science program at the University of Alberta. Jack was a founding Director of the J.H. Holloway Scholarship Foundation and its first and only president until he suffered ill health late in 1997.
and related industries responded to fundraising motivated by Jack through the intervening years that saw prosperity and recession, the introduction of the surveying engineering program at the University of Calgary, and NAIT and SAIT transfer students participating in the scholarship program.

He was awarded the Professional Recognition Award in 1988 and was made an Honorary Life Member that year. He was a Fellow and Life Member of the American Congress on Surveying and Mapping, a Fellow of the Royal Geographic Society - London, a member of the Royal Astronomical Society of Canada, and a member of the Canadian Institute of Geomatics.

Wally Youngs, ALS (Hon. Life), with the assistance of Elwyn Koehler, ALS, Vic Wolchansky, ALS, and John Deyholos, ALS

From the ALS News Vault
I commend Jack Hill’s very aptly recited tribute to our late member, Mr. Jack Holloway, for whom I too shared a great respect.

The resultant effect of the last phrase in the second-to-last paragraph, of the published tribute, however, may require some review. Not being too meticulous, I do not have any statistics on hand but I would venture a guess that the attendance at our golf tournaments is dropping, or at least losing enthusiasm among members.

The scoring method presently used at our tournaments acts against human nature. Not only does it demoralize the good golfer, but it also degrades the beginner by placing him in the winners circle. The golfer who plays in the 70s goes home wondering why the player who doubled par won the main event.

Wm. J. Iwaschuk, ALS
March 17, 1976

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October 28, 2015 - Edmonton
November 4, 2015 - Calgary