

SLSA

CORNER POST

Fall 2006

Volume XXVII - Number 3



Quarterly Newsletter of the Saskatchewan Land Surveyors' Association



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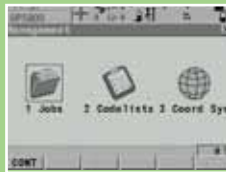
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The opinions of the contributing writers may not be consistent with those of the Council of the Saskatchewan Land Surveyors' Association. Articles may be reprinted with appropriate credit given to the authors, unless it is under copyright.

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Office Hours

Office hours are:
9:00 a.m. to 12:00 p.m.
1:00 p.m. to 4:00 p.m.
on all regular business days.

In this Issue

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When Is A Bank Not A Bank? - Gord Olsson.....	259
Canadian Spatial Reference System - Robert Duval.....	262
The Engagement - Malcolm Vanstone.....	264
Self Governance - Victor Hut.....	266
The New (Alberta) Boundary Resolution Process.....	271
The Image of A Surveyor - Lesley Ewoniak.....	275
Increasing Revenue at No Cost - F.C. Hutchinson.....	276
Growing Through Entrepreneurship - Eric A. Morse.....	278
Scrutinizing Survey Monuments - Fred Chang.....	280
You Own Your License, Not Your Employer - Dave Dediluke.....	283
Surveying For Profits - Wayne Newell.....	286

Regular Features

President's Message - Bob Webster.....	250
Council Highlights - Carl Shiels.....	252
Councillor's Corner - Tom Sansom.....	254
Biography - Jack Webb (H.S. Carpenter #011).....	256
Looking Back (1980) - Wayne Stockton.....	258

Cover Story

Jill Cheverie, SLSIT was quick to respond when the call went out for a cover photo for this edition of the Corner Post. As Jill noted with her submission, the photo certainly " ... fits the corner post motif."

Jill also made a major contribution to the association's efforts to recruit students to careers in the survey industry, having represented the SLSA - along with Ron Eichel and Wayne Stockton - at the career fairs in Swift Current on September 27 and Assiniboia on September 28.

Jill's original intention to pursue a career as a teacher was redirected into the Geomatics Engineering stream at UNB and, upon graduation, to Saskatchewan with Midwest Surveys. She is now the first ever woman to pursue a commission with the SLSA.

Although we are a long way from having an all-female survey crew as described in Lesley Ewoniak's article "***The Image of What A Surveyor Looks Like is Changing***" on page 275, it is a start - and for that we should be immensely proud.

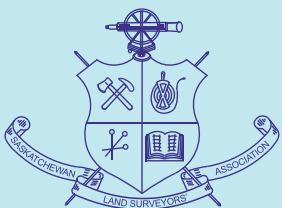
President's Message



Bob Webster,
SLS, P. Surv., P. Eng., CLS
President

Upcoming Events

Oct 12 - 14	ANSLS AGM Wolfville, NS
Oct 15 - 16	CCLS AG- Wolfville, NS
Jan 18 - 19	ANBLS AGM (T.B.A.)
Jan 30	U. of C. "Beef on a Bun" Reception
Jan 31	MARLS/ LSAW AGM's
Jan 31 - Feb 2	ABCLS AGM Fort St. John
Feb 21 - 23	AOLS AGM Ottawa
Apr 26 - 28	ALSA AGM Lake Louise
May 24 - 26	SLSA AGM Manitou Springs, Watrous



Ring---Ring---Ring

"Hello, Crosshair Surveys."

Voice on the other end of the phone:

"Hello, I am looking to speak to the surveyor in charge of the Overhill Project."

"I'm Homer Pocus SLS, perhaps I can help you."

"Something is wrong with your survey, the AutoCAD file does not fit into our GIS data base."

"Who did you say was calling?"

"I'm Joe the geo-technician from City Hall Mapping."

"What AutoCAD file are you talking about?"

"The one that was e-mailed over from Ajax Consulting Engineers."

"Well, all I remember sending them was a preliminary concept plan last year, but everything has changed and anything they had was on a local grid. If you are having problems with their drawings, why don't you talk to them?"

"Well they said to talk to you."

"We would be please to create a digital file that fits your data base for a reasonable fee."

"What fee? The information is there on your hard drive, just e-mail it to me."

"No, the information is not just on my hard-drive, we would have to create it for you."

"Well, my boss said that if we do not get a plan that fits from you there won't be any more plan approvals coming from us."

Is this a conversation that we have all had? All levels of government would like their geographic data to seamlessly integrate into their database with a minimum of effort.

My initial reaction was, "Why would I want to go to the added expense of geo-referencing my data and then providing it to the municipality for free?" I thought about it for a while and I realized that we do not do anything for free as Land Surveyors, our clients pay for it. We are all using GPS and AutoCAD so the technical requirements to position our surveys exist today.

We have the technology, but do we have the desire to integrate our surveys in the future? I would be willing to support the initiative of the regulatory authorities if they meet us half way and open their database for us to freely use. If we don't do it, some other entity will create the business model to extract the GIS data from our surveys, if it isn't already happening. Are we willing as a profession to make this leap into the future? 🍀



Thank you to ISC for their generous contribution to the Surveyors' School Resource Kit project. With commitments from the ABCLS and the ACLS, the project outlined at the 2006 AGM is much closer to becoming a reality.

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Council Highlights



Carl Shiels, M. Sc., P. Eng.
Executive Director

2006-07 Meeting #3 - Sept. 11, 2006

Committee chairmen B.G. Clark (Practice and Convention) and J.H. McLeod (Education) joined Council for the annual Committee Workshop. The CCLS web site was highlighted as a valuable source of information for Council and committee chairmen.

There had been no presidential travel since the last meeting but the president would be attending the AMLS AGM later in the week.

G.D. Craig's appointment as SLSA representative to the CCLS was extended for another three year term.

The regulatory bylaws, approved by the membership at the 2006 AGM, had received the approval of the Ministers responsible for the LSPS Act and are in effect. The Ministers also confirmed that the amendment to the LSPS Act – the repeal of section 19(2) clause (a) – as approved at the 2006 AGM, would be presented to the legislature at the spring, 2007 session.

In response to letters from the Controller of Surveys and President Webster expressing concern about the destruction of survey monuments by city work crews, a representative of the City of Regina Engineering Department had contacted the executive director for details of the complaint. A formal written response is expected from the engineering department and it is hoped that this will lead to an ongoing dialogue on the matter.

The president had sent a letter to the Sask. Law Society expressing concern about lawyers making illegal copies of Real Property Reports. The letter was expected to be discussed at the next Law Society Council meeting and a formal response would be forthcoming. Council was also advised that a lawyer with Korven Legal Services was preparing a paper on the illegal copying of Real Property Reports by lawyers, for submission to the Law Society. The executive director was asked to investigate the possibility of having an article published in the Sask. Law Society newsletter.

Most of the executive directors with the various land survey associations in Canada met by telephone conference on August

16. Much of the meeting had been taken up reviewing the CCLS web site and how it can be accessed and used by association executives, councils and committee members. One of the topics discussed was the problem of budgetary pressures due to increasing costs for presidential travel and the amount of time that presidents must spend attending all of the other association AGM's. Out of that discussion came the suggestion that these problems might be alleviated if each association were to host all other presidents every second year and that one AGM per year was attended by executive directors. This suggestion was to be presented to the next Presidents' Forum through the CCLS president. Council considered this option but rejected it. Although the amount of time spent by presidents travelling can be significant, and particularly problematic for one-person survey offices, the "once-in-a-lifetime" experience was considered to be well worth the time, expense and effort involved.

Council approved a Land Surveyor in Training Agreement signed between R.P. Maloney and P.M. Maloney.

On the recommendation of M.E. Putnam, Council appointed J.H. McLeod chairman of the Education Committee.

It was agreed that vice-president Rosnes and the executive director would represent the SLSA at the 2006 Political Form sponsored by the Saskatchewan Chamber of Commerce (SCC). One of the issues that SLSA representatives might raise is the challenges that most survey companies are having in finding and keeping skilled labour.

At the request of the Board of Examiners, Council prepared a short list of members who would be invited to sit on the Board, either on a temporary basis to replace members who require a temporary leave, or on a longer term basis to replace members who would like to step down. Some period of overlap was considered to be highly desirable.

The next meetings were tentatively scheduled for Monday, October 30 and Thursday, November 30. 🌿

New SLSA Display Being Put to Good Use

As approved at the 2006 AGM, the SLSA is now the proud owner of a 3.1m x 2.3m professional-quality portable display for use at career fairs and exhibitions. It consists of a pop-up folding frame with four fabric-covered panels onto which any number of Velcro-backed display posters can be mounted. The entire display breaks down into components that can be stowed in two rugged shipping cases equipped with wheels and carrying handles. There is even a case-to-counter conversion that allows the shipping cases to serve as an attractive, matching counter for displaying additional posters and brochure holders. A full description of the display can be found at www.jilca.com/products.php?ProductID=8

The display was barely in the office before it was shipped off to Swift Current for career fairs in that city and Assiniboia on September 27 & 28. It is booked for city-wide high school career fairs in Regina and Saskatoon on October 30 & 31 and in Weyburn on November 15.

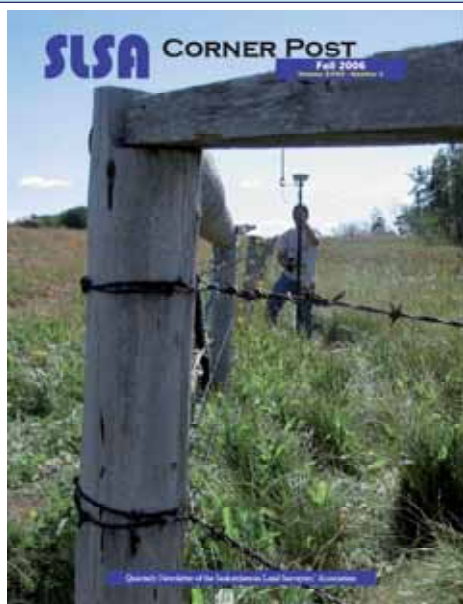
A PowerPoint presentation, originally developed by the ABCLS, is being adapted with their generous permission, to fit the needs of the SLSA. It can be used as an unattended, continuous running show in conjunction with the display or in a classroom setting with live commentary by one of our members.

All that remains is to make sure it is used to the greatest possible advantage. Please check with the high schools in your area to see if and when there are career fairs or other events that we should be attending. Our ultimate goal is to make sure there is a strong and viable Geomatics Technology Program at SIAST and that we attract an average of at least four new members to the profession each year for the next ten years.

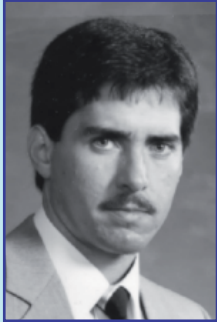
Wanted !!!

**We need your photos
for the front page of
the**

SLSA CORNER POST



Councillor's Corner



Tom Sansom SLS, P. Surv.,
P. Eng.
Councillor, Year 1

"Things That Haven't Changed"

Procrastinator! I don't even know how to spell the word.

It is Saturday, September 23rd, I'm sitting in a hotel room in Regina and I have to have a report for "Councillor's Corner" to Carl by Monday. This time I am starting early!

My last stint on council was about 10 years ago. I thought I might write a profound report about the relentless advance of technology since I started my surveying career, but other people have already done that.

Instead, I will share a few thoughts about things that haven't changed that much.

Helicopters - they haven't changed much.

A few years ago, my wife Martha and I spent some time touring the U.S. southwest and spent two days at the Grand Canyon. I have a fear of heights and could not get within 10 feet of the canyon edge. She was, therefore, quite surprised when I suggested we take a helicopter tour. The tour was quite spectacular with the helicopter flying just above tree top level, and then flying over the canyon's edge. Martha almost had a heart attack. It didn't bother me a bit.

Earlier in my career, I did a lot of work using helicopters. Sometimes it was exhilarating. Most of the time it wasn't. My first helicopter job was in the southern foothills of Alberta while I was still in university. One day while flying back to the hotel at which we were based, the young rodman (we called them that then) working with me asked the pilot if the helicopter could fly upside down. The pilot said, "I don't know - let's try it". He came very close to accomplishing this feat. This same pilot also liked flying straight at hills, clearing them at the last second, and chasing coyotes. I don't know where he is now.

The rodman was a replacement for a fellow I had worked with for about three weeks. One night, he broke into a car dealership, stole a truck and drove to

Calgary to see his girlfriend. It turned out he was on a day-parole when the company hired him.

A few days ago, one of our crew chiefs came back to the office in the morning without his survey assistant. It turned out his assistant got another job in the parking lot of Tim Horton's while the crew chief was inside getting a coffee. (Labour shortage, that hasn't changed much.)

One thing that has changed dramatically is the safety culture we all deal with on a daily basis.

Canoes - they haven't changed much.

As part of a job in Fort Simpson, N.W.T., some years ago, I and two assistants were running a traverse along the bank of the Liard River. We had rented a 20' freighter canoe with a 20 hp. motor to leap frog along the bank. I remember watching in horror as the two assistants motored past the station I was manning and struck a log. The log lodged in the motor and the canoe was spinning 360's madly for what seemed like an eternity. (The middle of nowhere, no cell phones, no radios, no means of communication except for a big red flag.) Luckily, the log dislodged and we carried on.

No incident report was ever filed.

Plumbobs - they haven't changed much.

The only problem is no one knows what they are anymore.

My wife - she hasn't changed much.

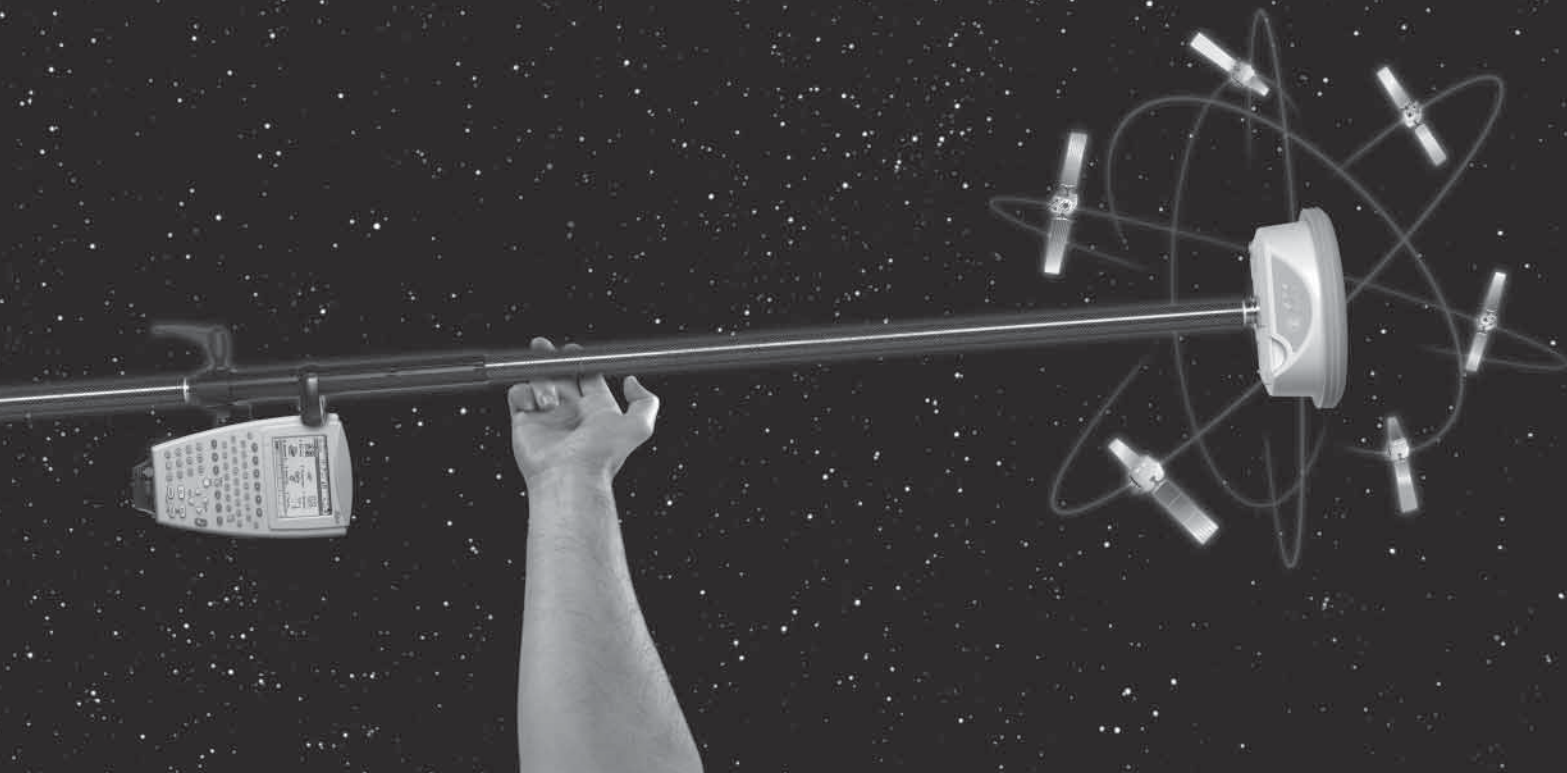
She's still married to the crazy guy.

The last time I was on council, Bob Webster was president, and the Saskatchewan Roughriders hadn't won a Grey Cup since 1989.

September 23, 2006. Bob Webster is president and the Saskatchewan Roughriders haven't won a Grey Cup since 1989.

Next time I'll write something profound. Or maybe not. 🍀

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Biography

By J. H. Webb, SLS (Life Member), ALS, MLS, CLS

Henry Stanley Carpenter
(1874 - 1950)

OLS, DLS, SLS (#011), MEIC, P.Eng., B.A.Sc.

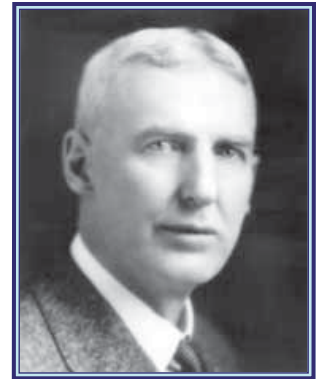


Photo Courtesy of Sask. Archives
Board - Photo # R-A3598

Henry Stanley Carpenter was Deputy Minister of Highways and Transportation, Province of Saskatchewan, from 1916 to 1939 when he retired in Regina.

A dedicated public servant who was well versed in Engineering and Surveying before coming west in 1905. Born in Collingwood, Ontario he was the fifth child in a family of nine and received his initial schooling in Ontario. While attending the University of Toronto he spent his summers in engineering and survey work prior to his graduation in Practical Science. He was a graduate of the University of Toronto in 1898, with a B.A. in Science. He soon obtained his commissions as an Ontario Land Surveyor in 1899 and his Dominion Land Surveyors in 1901. From 1900 to 1905, as a Professional engineer and surveyor, he worked for the Department of Railways and Canals in Ottawa, Ontario, on reconnaissance surveys. He was the assistant engineer on construction of the Trent Canal in Ontario along with spending time in exploration work on the Yukon Railway.

Mr. Carpenter joined the Saskatchewan Government service in 1905, as a District Surveyor and Engineer out of Regina. Due to his diligence, he was made Deputy Minister, Department of Public works from 1910 to 1912. He was then appointed Superintendent of Highways until 1914. While with highways, he held the position of Chairman, Board of Highways Commission until 1916, when he was again appointed a Deputy Minister under the Highways and Transportation Department. This position he held until he retired in 1939.

An interesting side note about Mr. H.S.Carpenter is that he never owned a car while he held the position of Deputy Minister. We can only assume that he used public transportation to attend functions throughout Regina and in the Province.

On May 27, 1909, a meeting of district surveyors of the Department of Public Works was held to discuss the formation of a Saskatchewan Land Surveyor's association. Mr. Carpenter was a member of that committee. The first official meeting to organize our association was in 1910 and was held in the office of the district Surveyor in Regina. Mr. Carpenter was elected chair of that meeting.

He was the Saskatchewan Government Director of Surveys from 1908 to 1910. At the time of the passing of the Land Surveyors Act of 1909, he became the first Secretary of the Board of Examiners, Saskatchewan Land Surveyors Association. He held this position until 1913.

In private life Mr.Carpenter married Jessie Ross Cameron in 1903 and they had five children. Their first born was Stan, who became a Civil Engineer, then Paul who became an investment officer. The third son Jack was a philatelist with the Federal Government in Ottawa, then daughter Alison (Mrs. Brown), and daughter Nancy (Mrs. Wooley) a visual artist and teacher. Mr. H.S.Carpenter was a member of the Wascana Lodge #2 A.F. & A.M, the Regina Curling Club, the Regina Golf Club and a member of the 1st Presbyterian Church in Regina.

He was a past president of the Saskatchewan Branch of the Engineering Institute and held executive offices with the Canadian Institute of Civil Engineers and the Saskatchewan Land Surveyors Association.

Mr. Carpenter has an island named in his honour shown on map 63L9 at Latitude 54 degrees, 41 minutes and Longitude 102 degrees, 06 minutes which is situated near Denare Beach, Saskatchewan. He was also honoured by having a small community named after him, "Carpenter". It was situated on the Aberdeen-Melfort line half way between Alvena and Wakaw just west of the present highway number 41. Since Mr. Carpenter was responsible for the Provincial administration of railways in the Province, the Canadian National Railways saw fit to honour him with the naming of the small village of "Carpenter".

Quoting from his obituary in 1950:

The man who was Saskatchewan's Deputy Minister of Highways from the time of the highway system consisted of little more than winding roads until it became a complex network, H.S.Carpenter died suddenly at the age of

seventy-six. He had been in Saskatchewan Government service since the formation of the Province in 1905.

The adjacent photograph shows Mr. Paul Carpenter, son of H.S. Carpenter, running levels in 1925 with a Dumpy level and standing beside a 1923 style-year model "T" Ford Touring car.

Paul Carpenter's son, David Carpenter, lives in Saskatoon and is a teacher and writer. He has written various books poetry and articles. Information on David can be found on his website www.dcarpenter.com covering his life and books. 🍀

Acknowledgements;

- *David Carpenter*
- *"Saskatchewan and It's People", book by John Hawkes, Leg. Librarian*
- *Biography, Ontario Land Surveyors Assoc.*
- *Saskatchewan Archives (T.Crump)*
- *Canadian Geographic – Atlas*
- *S.L.S. files*
- *People Places", book by Bill Barry*



H.S. Carpenter's son Paul with Dumpy level and 1923 Model "T" Ford

Great Truths

GREAT TRUTHS THAT LITTLE CHILDREN HAVE LEARNED:

- 1) No matter how hard you try, you can't baptize cats.
- 2) When your Mom is mad at your Dad, don't let her brush your hair.
- 3) If your sister hits you, don't hit her back. They always catch the second person.
- 4) Never ask your 3-year old brother to hold a tomato.
- 5) You can't trust dogs to watch your food.
- 6) Don't sneeze when someone is cutting your hair.
- 7) Never hold a Dust-Buster and a cat at the same time.
- 8) You can't hide a piece of broccoli in a glass of milk.
- 9) Don't wear polka-dot underwear under white shorts.
- 10) The best place to be when you're sad is Grandpa's lap.

GREAT TRUTHS THAT ADULTS HAVE LEARNED:

- 1) Raising teenagers is like nailing Jell-O to a tree.

- 2) Wrinkles don't hurt.
- 3) Families are like fudge . . . mostly sweet, with a few nuts.
- 4) Today's mighty oak is just yesterday's nut that held its ground.
- 5) Laughing is good exercise. It's like jogging on the inside.
- 6) Middle age is when you choose your cereal for the fibre, not the toy.

GREAT TRUTHS ABOUT GROWING OLD:

- 1) Growing old is mandatory; growing up is optional.
- 2) Forget the health food. I need all the preservatives I can get.
- 3) When you fall down, you wonder what else you can do while you're down there.
- 4) You're getting old when you get the same sensation from a rocking chair that you once got from a roller coaster.
- 5) It's frustrating when you know all the answers but nobody bothers to ask you the questions.
- 6) Time may be a great healer, but it's a lousy beautician.
- 7) Wisdom comes with age, but sometimes age comes alone.



Looking Back - 1980

By: W.W. (Wayne) Stockton, S.L.S., C.L.S.

In January 1980 we were hired by SaskTel to establish the position for a microwave dish on the roof of their building at Lorne Street and 12th Avenue in Regina. Up on the roof we took a series of sun shots for azimuth and set permanent reference points. A few days later I ran into Bill Schwartz and was telling him about our survey. During our conversation I mentioned that it would be interesting to take a star shot to verify our work. That peaked Bill's interest and he said, "Let's do it this afternoon." Showing my inexperience I replied, "You can't do a star shot in broad daylight."

"Sure you can," said Bill, "Let's do it."

That afternoon was cool and clear without a cloud in the sky. On the roof we set up the transit on our reference line. Bill checked the time, did a quick calculation on his Sharp pocket computer and turned the horizontal and vertical angle to Polaris. He fiddled with the focus for about 5 minutes and suddenly said, "There it is, take a look." I peered through the scope and couldn't believe it. Just to the right of the vertical cross hair was a tiny pinprick of light. We took a series of star observations and then compared the result with the mean of our sun shots. They differed by only 4 seconds of angle. Pretty good I thought.

In late April of the same year, the S.L.S.A. hosted the annual meeting of the Canadian Institute of Surveying in Regina. It was a great convention organized by convention chairman Tom Crump.

There were two things in particular I remember about the convention. The first was that I had to take an afternoon off to set the foot plates for the SaskTel satellite dish. The base had been constructed on our reference line. It was a steel frame and platform approximately 2.5 metres in height. We set the transit up on the platform and from our reference line marked the locations for the large bolts that were to anchor the dish.

As for the second memorable incident, one of the social activities for the convention was a special afternoon presentation of a Stage West play starring George Savalos. George had enjoyed a long and successful career on stage and screen but was less well known than his more famous brother Telly. They were also quite opposite in appearance. While Telly was completely bald, George sported a head of thick, curly hair.



Kojak - Telly Savalas and Stavros - George Savalas
from
www.sitcomsonline.com/photopost/showphoto.php/photo/27995

In the course of organizing the special Stage West presentation, the ladies on the convention committee got to know George fairly well. One afternoon, a ladies' bus tour to Fort Qu'Appelle and the Qu'Appelle Valley had been arranged. Since George had a free afternoon he asked if he could go along. George piled into Barb Bennett's car with a couple of other ladies and followed the bus tour out to the valley. It was reported that he had a great time that afternoon as the only male accompanied by 40 females on the scenic tour and lunch. 🍀

Familiar Sayings From Past Annual Meetings Of The SLSA

"Can't hear you, speak up" "Turn up your hearing aid"

"Stand up, can't see you"

"Use the mike"

"Point of order, out of order"

"Question"

"Time to vote, ask for the question"

"First time I ever agreed with you"

"Nobody ever read that book"

"Well I might as well speak once more"

When Is A Bank Not A Bank?

By Gord Olsson, ALS, CLS

Reprinted from "ALS News" June 2006

The following is a synopsis of the written reasons for judgment of *Andriet v. County of Strathcona No. 20, 2005 ABQB 848*.

The case should be of interest and concern to land surveyors. Not only were there several issues dealing with riparian rights, but the various decisions were not what one would expect. Most of the issues dealt with rights to accretion in Grandview Bay, a bay in Cooking Lake, Alberta.

The plaintiffs included Douglas B. Andriet and Jacqueline M. Andriet. The defendants included the County of Strathcona No. 20, Peter Brian Todd, Lynn Francis Forsythe, Gary Alexander McGowan, Kenneth Schley, Patricia Schley, Brian Allan Dawson, Judy Loraine Dawson, William Johansson, Frances Johansson, Donald Mills, Sheila Mills and Her Majesty the Queen in the Right of the Province of Alberta. It was held before the Honourable Mr. Justice D.W. Perras.

In order to determine the extent of the accretion in Grandview Bay all the parties engaged Alberta Land Surveyor Wayne Wesolowsky to conduct a survey of the location of the current bank. As well, Alberta Land Surveyor Ken Allred gave evidence on behalf of the defendants and Alberta Land Surveyor Duncan Gillmore (Sr.) gave evidence on behalf of the plaintiffs.

Accretion in NW1/4 of Section 13-51-22-W4M

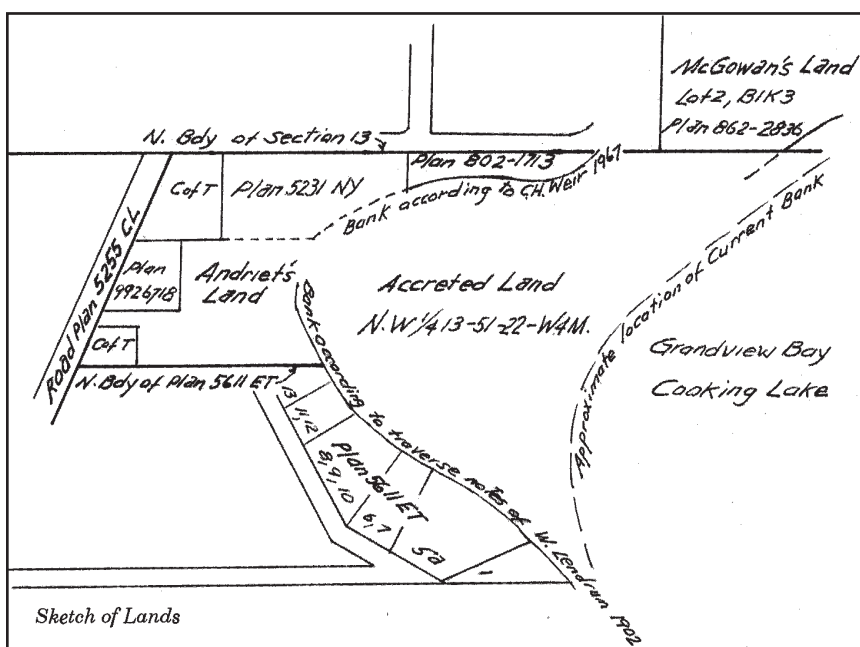
There were several claims for accretion in Grandview Bay in the NW1/4 of Section 13-51-22-W4M.

1. The Andriet Claim

The plaintiffs, the Andriets, claimed, as riparian owners of land certain lands that they alleged have accreted to their land as a result of the water of Cooking Lake receding over a number of years. Their land is the remaining portion of the NW1/4 of Section 13-51-22-W4M. The description contains the words "not covered by any of the waters of Cooking Lake..... which lies north of the north boundary of the land subdivided under plan 2611ET, and east of the easterly limit of the road as shown on road plan 5255CL..." There are also several exceptions. The boundary relevant to the accretion is the bank of Cooking Lake located by R.W. Lendrum in 1902, which is shown on a 1903 town-

ship plan referred to in Andriet's certificate of title. With regard to Andriet's claim, the Justice states:

[14] In my view the Andriets are entitled to the land as set out in their Certificate of Title which, when read carefully, fixes the easterly boundary as set out in plan 2611ET, which adopts the easterly boundary as found by R.W. Lendrum in 1902. The description on the title to the property has been consistent throughout its history since plan 2611ET, which



in my view must be given substantial weight when addressing a boundary issue since the title gives a clear picture of the properties within the boundaries. I therefore find that the Andriets are limited by the boundaries set out in their title and are therefore not entitled to any accreted land as they are not riparian owners.

2. County of Strathcona #20

One of the exceptions in Andriet's certificate of title was a parcel sold to the County of Strathcona for road widening purposes. The parcel is shown on the 1980 Plan 802-1713 and was purchased from the Lerbekmos in 1979 out of the land that they subsequently sold to the Andriets. The boundary relevant to the accretion was adopted from a 1967 plan, Plan 5231 NY, and is shown on Plan 802-1713 as "Bank according to C.H. Weir in 1967." Justice Perras states that this boundary is in keeping with what the Ler-

bekmos intended to sell to Strathcona in 1979. With regard to this issue, the Justice states:

[15] I find that Strathcona is limited to the boundaries set out in the two plans and is therefore not entitled to any accreted land related to the parcel delineated in plan 5231NY and plan 8021713, both of which, in my view, must be given substantial weight in determining the disputed boundaries as the plans are quite precise so that proper dimensions can easily be ascertained.

The County also owned lots 1 and 13 shown on Subdivision Plan 5611ET surveyed in 1936. The boundary relevant to the accretion is shown on this plan as "Bank of Lake according to traverse notes of R.W. Lendrum DLS in 1902." With regard to this issue, the Justice states:

[16] The easterly boundary was fixed by subdivision survey where the survey adopted the easterly boundary that coincided at the time with what had been the bank of Cooking Lake as found in 1936.

3. Other Lot Owners in Subdivision Plan 2611 ET

The other defendants (except for McGowan) also owned various lots shown on Subdivision Plan 5611ET. The boundary relevant to the accretion is also shown as "Bank of Lake according to traverse notes of R.W. Lendrum DLS in 1902." With regard to this issue, the Justice states:

[20] In my view then the lot owners have no riparian claim to accreted land as their easterly boundary is fixed and not subject to movement and they are therefore not riparian owners.

The Justice provides some context for his decisions by, in his introduction of the reasons for judgment, stating:

[4] The various claims of all the parties overlap extensively, such that none of the usual survey techniques can offer up a rational solution to the competing claims.

And in the very last sentence of the reasons for judgment stating:

[39] Invariably the context in the reported decisions involved several parties claiming the same land, however, either the common law rights of riparian land owners offered up an answer, or resorting to the integrity of the survey system coupled with the Torrens system of registering title offered up an answer, and occasionally disputes could be settled by having regard to various survey techniques. However, in the peculiar circumstances of this case none of the usual methods for determining disputed boundaries brought about a fair and equitable con-

clusion, hence my resort to giving significant weight to the various plans to establish boundaries.

McGowan Claim

1. Accretion in Section 24-51-22-W4M

The defendant McGowan claimed as a riparian owner accreted land to Lot 2, Block 3, Plan 862-2863 which is located in Section 24 adjacent to the NW1/4 Section 13-51-22-W4M. Accreted lands had previously been added to the title of that lot by Plan 867-2863. With regard to McGowan's claim, the Justice states:

[23] There is no contention to the McGowan claim for accretion to Lot 2, Block 3 and accordingly there will be a finding that Gary McGowan is entitled as riparian owner to title to all accreted lands to the east of his property; even though the potential accretion from 1986 to present does not appear to be great, nevertheless, it is conceded that such has slowly and imperceptibly increased over the last 19 years.

2. Decision Regarding Adverse Possession

The second claim by McGowan, for land that is south of his lot and that lies in the NW1/4 13-51-22-W4M, is based on the concept of adverse possession.

The Justice adopted the test for adverse possession as used by Justice Dea in *Edwards v. Edmonton Beach Resorts Ltd.* (1992), 130 A.R. 375. He found the element of exclusive possession required for adverse possession, on a balance of probabilities, was not proven and denied that aspect of the McGowan's claim.

Miscellaneous Matters

1. Lease between Her Majesty the Queen and County of Strathcona

There was a 21-year lease issued in 1980 between Her Majesty the Queen and the County of Strathcona that covered all those portions of legal subdivisions 13 and 14 of Section 13-51-22-W4M which comprised the exposed bed and shore of Cooking Lake, 18.67 acres more or less.

With regard to this lease the Justice states the following:

If indeed the Crown claims to be able to lease Section 13 which comprises the exposed bed and shore of Cooking Lake, then perhaps the land sought as accreted land by the land owners in and around Grandview Bay is indeed Crown land. In my view it is Crown land to deal with as the Crown sees fit.

2. A Claim for Trespass

A claim by the Plaintiff Andriets in trespass as against the defendants Peter Brian Todd and Lynn Francis Forsythe was dismissed.

Tenants in Common

The Justice discussed a proposal made by counsel for McGowan that would recognize everyone's claim to some extent. He stated that it is too early to invoke such a process and that the parties themselves could arrive at a solution similar to the tenants in common proposal, but it would have to be voluntary and ultimately registerable. He stated:

[35] Lastly all counsel agreed that whatever decision was reached by the Court with respect to the various claims that consultation would be undertaken with counsel for the Crown, who took no part in the trial, with a view to working out a plan for registration with all parties agreeing to use the Wesolowsky report and his 2005 survey as a springboard to a registerable plan.

Comments on the Case

1. The contention amongst the parties on how the accretion should be apportioned and the Justice's difficulty in determining a fair and equitable solution to dividing up the accretion appear to be significant factors in the decisions.
2. It is agreed that methods of dividing accreted land such as projecting side lines (normally only used for small amounts of accretion) or using lines laid out perpendicular to the shore line may produce overlap where there is a large amount of accretion. However, there are other methods that would result in a more equitable division of the accreted land. Apportionment of the accreted lands made by proportioning the frontage along the new bank in the same ratio as the frontage along the old bank is a well-accepted method that would appear to offer a fair and equitable solution in this case and is a solution based on the law regarding accretion and apportionment of accreted lands.¹
3. It is acknowledged that entitlement to accreted lands where a boundary of a parcel is described as a bank cannot always be assumed. There can be situations in which a bank having been adopted as boundary may not, in fact, be a riparian boundary. For example, this could occur in situations where there are a number of banks (by the popular definition of the word) and the bank shown on the plan as the boundary is one of these and not the legal "riparian" bank. In such a situation, it would also make sense that the landowner's right to the accretion may be further weakened if, in fact, over the years, the owner had not used or occupied the accreted lands. However, if these were factors in the Justice's decision they were not mentioned.
4. Would the decision have been different if, instead of adopting the position of the banks as previously surveyed, the surveyors for plans 5611ET and for 802-1713 had surveyed the natural boundary as it existed on the ground at the time of survey? The Justice's decision with regard to McGowan claim to accreted land in the adjoining Section 24 indicates that the answer is probably yes. The only apparent difference between McGowan's claim for accretion and the claims of the other parties in Section 13-51-22-W4M is that accreted lands had previously been added to McGowan's land and there was no contention.
5. Should the fact that the surveyors adopted the location of previously surveyed banks instead of surveying the natural boundary as it existed on the ground at the time of survey result in the banks not being riparian boundaries? While the answer no doubt would depend on a number of factors I believe most surveyors would say that it still should be a riparian boundary. On the other hand, not surveying the natural boundary as it existed on the ground at the time of survey certainly weakens the case.
6. The decision with regard to the 1980 lease between Her Majesty the Queen and the County of Strathcona is perplexing. It appears to not make a distinction between the bed and shore (the lands dealt within the lease) and the accreted lands. One would be hard pressed to see how being able lease the bed and shore would result in the accreted lands being determined to be Crown Lands.
7. McGowan's claim for adverse possession is interesting. As a result of *Johnson v. Alberta (Minister of Public Works Supply and Services)*, it is well established in Alberta that accretion is not allowed to be added to one's title where it expands beyond the boundaries of a section, quarter section, or legal subdivision of a plan referred to in a certificate of title. However, the fact that the Justice considered a claim for adverse possession in such a situation is noteworthy. It will be interesting to see if an adverse possession approach is successful in future case law.
8. The Justice's comments with regard to the tenants in common proposal is revealing. By giving his view that all the accreted land is Crown land, the Justice is leaving the door at least partly open to a solution where the accreted lands could be used for common purposes. Such a solution could very well be an acceptable solution to the defendants. However, it is less likely to be acceptable to the plaintiffs, the Andriets, as the area of the accreted land in front of the Andriet's land is substantial and much more useful than that of the defendants who would only gain long narrow strips of land. While the Justice's decision may satisfy some of the parties, it is a challenge to see how it could have been based on the law regarding accretion and apportionment of accreted lands. Nevertheless, there are lessons to be learned. For the land surveyor, it does indicate the pitfalls of adopting the surveyed location

CANADIAN SPATIAL REFERENCE SYSTEM

INTRODUCTION

By Robert Duval, Geodetic Survey Division, Natural Resources Canada

From "Geomatica" Volume 60, Number 2, 2006

Ever wanted to be in two places at once? We all know it isn't possible and we can hardly believe that we could be misled to think so. But in this modern world, where spatial geo-referencing using coordinates (latitude, longitude, and height) is becoming ubiquitous, the likelihood of being confused by different coordinates being associated to a same location is increasing. Obviously, merging or integration of geospatial or georeferenced information works best when a point or an object can be associated to a single coordinate.

Nowadays, GPS receivers are finding their way to almost everywhere and expanding geo-referencing capabilities far beyond the traditional geomatics community: transport and taxi companies use them to track vehicle locations; they are used in farming and forestry operations for autonomous platform guidance for crop harvesting and other robotic field operations; and cars use them for navigation, with some systems even able to alert emergency services to your exact location if you've been involved in an accident! GPS technology is making positioning easier than ever before and consequently impacting how we organize information, coordinate activities, and manage assets. To be useful though, positions must be compatible with one another, otherwise their utility is compromised and confusion follows. It is a bit like time! Imagine the chaos within a city, a province, or nation if we all operated with different time "systems" and had no means of reconciling them? A standard time system used by all ultimately ensures that the activities of a society are synchronized and organized in a way that allows it to function coherently.

Today, the Canadian Spatial Reference System (CSRS) provided by the Earth Sciences Sector (ESS) of Natural Resources Canada (NRCan) continues to respond to the Order in Council that created the Geodetic Survey of Canada in 1909 and tasked the then Minister of Interior "to determine with the highest attainable accuracy the positions of points throughout the country... which may form the basis of surveys for all purposes, topographical, engineering or cadastral, and thereby assist in the survey work carried on by other departments of the Dominion Government, by Provincial Governments, and by municipalities, private persons or corporations." This statement, though nearly 100 years old, continues to capture the essence of

the fundamental role played by the CSRS today. Not unlike the time standard analogy, the CSRS provides the fundamental reference values (or the starting coordinates) to ensure that positions anywhere in Canada can be determined uniquely and remain compatible with one another regardless of when they were determined or their originators. The resulting frames of reference, propagated through provincial and municipal networks as well as other governmental services, serve as standards which ensure the compatibility of Canadian geo-referenced information.

Over the last 20 years, in order to respond to the needs of diverse user groups and to adapt to technological changes, several new geodetic (or spatial) reference systems have emerged, each time introducing a new reference frame [a "geodetic reference system" is a theoretical concept and consist of a collection of prescribed principles, fundamental parameters, and specifications to quantitatively describe the positions of points in space; in contrast, a "reference frame" is much easier to relate to, as it is the materialization or 'realization' of such a prescription]. In addition, although the theoretical definition of these reference systems did not change, new realizations were introduced as measurement accuracy improved. This adds to the potential for some confusion within the user community as to what the basis for their coordinates should be.

Traditionally, a reference frame consisted of ground-based geodetic control monuments with adopted coordinates. In Canada, to ensure nationwide coordination and consistency, the establishment of primary horizontal and vertical networks of geodetic control points has traditionally been a federal responsibility. To facilitate downstream user access, provincial, municipal, and other governmental agencies have further densified the network "fabric," establishing a hierarchical structure. For most of the last century, surveyors "connected" to these control points using classical techniques to integrate their surveys within the adopted reference frame, the standard ensuring the compatibility of Canadian geo-referenced information.

Today, with the advent of Global Navigation Satellite Systems, and currently GPS in particular, the means for connecting to the reference frames have evolved significantly. A variety of tools and data products are now available to

maximize the efficiency and the benefits of these modern technologies. Additionally the widespread availability of low-cost GPS equipment in the consumer market is rapidly increasing the user base for geo-referenced information. Along with these changes comes the increased potential for incompatible coordinates due to the diversity of reference frames available. It is therefore important not only to facilitate the user's access to these reference frames but also to provide information about them, including their time-evolution and the related impacts on their geo-referenced information. This is an objective of this Special Issue of *Geomatica*.

In concert with these new developments, the possibility of integrating directly into a stable global reference frame is also becoming reality through applications such as Precise Point Positioning. Although this new ability is appealing, the requirement to maintain consistency with the adopted reference systems for Canada, the North American Datum of 1983 (NAD83) and the Canadian Geodetic Vertical Datum of 1928 (CGVD28), continues to be a priority. The legacy left by the monumented geodetic infrastructure still requires that relationships between old and new reference frame realizations be clearly established to maintain coordinate traceability over time. Additionally, the desire to maintain stable coordinates for control points that are monumented on the surface of our "restless planet" requires that reference frame options be available to minimize disruption to the general users while also meeting the needs of more demanding user communities.

Another fundamental role also played by the CSRS is its contribution to the determination of underlying dynamic parameters of the Earth such as its orientation and rotation rate in space as well as its gravity field. These parameters, determined from the collective effort of the international geodetic community, are not only critical to the efficient exploitation of modern space-based technology for positioning and navigation but are also enablers behind the technology itself. Furthermore, monitoring variations in both the Earth's geometry and its gravity field, essential to the maintenance of the reference frames, also contributes to a better understanding of regional and global geophysical processes linked to natural hazards and global change.

The use of reference frames provided through the Canadian Spatial Reference System has extended from traditional applications in mapping and cadastral surveys to monitoring sea level rise, rectifying remote sensing imagery, measuring crustal uplift and subsidence, and interpreting seismic disturbances. However, the fundamental role the CSRS plays has not changed much over the years, and today it continues to provide the means to ensure we can only

be "in one place at one time!" In this Special Issue, papers authored mainly by personnel from NRCan address different aspects regarding the evolution of geodetic reference systems in Canada as well as provide a look forward.

Space Geodetic Techniques and the CSRS - Evolution, Status and Possibilities looks at the evolution of technology over the past century, with particular emphasis on the advent of navigation satellites during the past decades, and the impact this technology has had on reference frame accuracy and access. Now that the positions (or, in a general sense, the orbits) of navigation satellites are continuously estimated with centimetre accuracy and subsequently made publicly available through the Internet, a geodetic control network has in essence been created in the sky. As a result, our dependence on an infrastructure of ground-based monuments is increasingly being lessened. This new capability is also giving rise to the development of new methodologies for end users to achieve greater efficiency and enhanced accuracy of their positioning information with respect to a common reference system.

In *The Evolution of NAD83 in Canada*, the reader will be provided insights into our national horizontal reference system including: the evolution of NAD83 from a horizontal to a three-dimensional reference frame, how it is now linked to the dynamic International Terrestrial Reference Frame (ITRF), and how it is maintained using active control points and episodic measurements of the Canadian Base Network. The improvement in NAD83 accuracy that came along with GPS is shown. Crustal movements driven by geophysical processes, observed at regional and national scales and capable of affecting reference frame stability, are now apparent and their impacts are also discussed.

A Gravimetric Geoid Model as a Vertical Datum in Canada gives readers a glimpse of how the vertical control network has developed nationally over time and how the advent of space geodesy has led the Earth Science Sector to initiate the "Height Modernization" project towards the adoption of a gravimetric geoid model as the new vertical datum in Canada. The improvements in geoid modelling, in part attributable to the availability of data from recently launched (CHAMP and GRACE) and upcoming (GOCE) satellite gravimetry missions, as well as the centimetre accuracy available for ellipsoidal height determination from precisely processed signals from navigation satellites, are the major enablers behind this new direction. The anticipated operational benefits that stem from not having to physically connect to a benchmark for precise height determination are appealing from the perspective of both the user and the provider of height information.

The Engagement

By Malcolm Vanstone, SLSIT



SARA WILL YOU MARRY ME?

This is just a brief story behind the photo you see here. This is how I proposed to my girlfriend, Sara Parsons, of 3 ½ years on September 23, 2006. The photo was taken near the farm that I grew up on south of Carnduff, SK. The message was cultivated into the SE. ¼ Sec.9-2-33-1. I started with the design in AutoCAD then scaled it to make the width of the letters be 33' (the width of the cultivator that I planned on using). An air photo of the section was obtained from ISC and geodetic coordinates of the section corners were calculated. The air photo was geo-referenced to the theoretical lat's and long's and the design was positioned over the air photo to fit between the row of trees that is at the top of the heart (east) and the bluff of trees to the right (south) of the heart. 185 points were created in AutoCAD and uploaded to

my GPS controller, all of which were then staked in the field. A design plan was plotted on paper which was used when cultivating around the sticks to determine which sticks went with which letter. A friend of the family, Denis Day of Fast Truck Ltd in Carnduff, had purchased a helicopter recently. A quick phone call to him ensured that we had a bird's eye view of the message. The photo was taken from the helicopter hovering at roughly 1000'. It was an exciting day, one that we will remember forever.

I would like to thank my parents, Merlin and Carol Vanstone, the Condon Survey Group and Fast Trucking Ltd. for helping to make this all come together. 🍀

The Engagement – The lighter side

By Malcolm Vanstone, SLSIT

All the activity that went into the creation and the actual proposal sparked quite a bit of interest from the locals. First the staking of the design which was done on a Thursday and Friday after work had many people talking about the prospect of the oil boom moving back into the area. This is a region that has had oil activity since about the 1950's. However, in recent years the patch in this particular area has slowed down, while only a few townships away it is prospering like never before. Quite a few local farmers were very interested in just what was being surveyed on Merlin Vanstone's land. To see only a cultivator being towed across the land caused even more curiosity and ignited even more rumours. A few short years ago this would have been a common site on the prairies but in today's farming era of zero-tillage and minimum disturbance the thought of doing "fall work" has gone the way of the small town elevator. It was enough to cause one good natured fellow to stop by and quiz my mom.

"I didn't think Merlin did fall work" said the inquiring chap.

"Oh no, he's not," replied my Mom with a muffled grin.

"Oh ... Well .. Merlin getting a oil well?" asked the man.

"Hmmm, No..." my mom slow-played her reaction, but by this time the excitement was too much for her to hold in.

"More like a daughter-in-law," boasted my proud mother.

"What?" exclaimed the neighbour who was by now thoroughly confused.

"You better just go up to the house and talk to Merlin yourself."

I wasn't present for the conversation at the house, but I am sure that it went something like this.

Merlin: "Gooday Neighbor. Time for a coffee?"

Neighbor: "Certainly. Thought you were getting an oil well. Carol says a daughter-in-law though... too bad."

Merlin: "Well, I never asked. Maybe she comes with an oil well."

Neighbor: "Ya - good luck, mine never did. Anyhow, so what the heck's going on?"

Merlin: "Oh I don't know, something to do with surveying, well you know that GPS stuff, that's what it is. He's been out there walking around for two days now. Then he's going to cultivate a message and fly over it in Denis's helicopter. Can you believe that?"

Neighbor: "Oh, I see. So what if she says 'No?'"

Merlin: "Well, then I guess Malcolm's got to cultivate the rest of that field out there!"

The design is still cultivated in the field and will remain visible until the snow flies. If anyone is an avid flyer and wishes to see the design for themselves, it is located 4 miles south and 2 miles west of the town of Carnduff. A warning goes out that if you have a girlfriend named Sara and you are not ready to be engaged, then either make it painfully apparent before the flight or leave her at home. I am not responsible for any unwanted marriages. 🌿

Malcolm was born and raised in Carnduff, SK. Upon graduation from High School in 1999 he enrolled in the Geomatics program at SLAST in Moose Jaw, SK. Malcolm began working for the Condon Survey Group in Weyburn, SK on his first work-term during the summer of 2000. He returned for his second work-term during the fall and winter of 2001. After graduating in 2002 Malcolm accepted a position with the Condon Survey Group in Regina, SK. He worked there until the fall of 2004 when he moved to Burnaby, BC to attend BCIT and work towards a Geomatics B.Tech degree. Upon completion of the Geomatics program in BC he returned to work in Regina with the Condon Survey Group. Malcolm received his certificate of completion from the Western Board in May of 2006 and is currently articling under Dave Gurnsey, CLS, SLS, of the Condon Survey Group in Regina.

261 - "When Is A Bank Not A Bank?" 🏠➡

of banks from previous surveys. For landowners with land that has accreted to their property, it's probably a good idea to periodically update the title description to include the accreted land.

The full text of the decision is on line at:

www.albertacourts.ab.ca/jdb/2003-/qb/civil/2005/2005abqb0848.pdf 🌿

Footnotes

1 See: James F. Doig, Settlement of Boundary Uncertainties, Survey Law in Canada (Carswell, 1989) Sections 8.54 to 8.57; and the Manual of Instructions for the Survey of Public Lands of the United States 1973 (U.S. Department of the Interior, Bureau of Land Management, Technical Bulletin 6) Section 7-66. A frequently cited case is Johnston v. Jones, 66 U.S. 209 (1861)

Self Governance

By Victor Hut, ALS

Reprinted from "ALS News" - June 2006

Like many of you, I found Justice Cote's speech at our AGM in April, very thought-provoking and rather unsettling. His overview of what has transpired in parts of the United States with respect to professions losing elements of their self-governing status is a sober reminder that we must not assume we are immune to such possibilities within our own profession. Maintaining the public's confidence and trust is paramount if land surveying is to remain a respected profession.

This threat, as most of us well know, is not a new one. A Critical Professions Act was theorized by the Manitoba Law Society back in the early nineties and is brought up now and again by those who feel professions have grown beyond their original purpose. The perception exists that professions are now driven by self-serving interests rather than satisfying a public need, with many being more of an occupational profession, or trade rather than a critical profession akin to doctors, lawyers, and architects. As far as I can tell, what they propose is standards that are determined virtually entirely by the marketplace in which they exist.

In a recent Calgary Herald article featuring Dr. Elizabeth Cannon, the Alberta Land Surveyor supply situation was quoted as being "critical." Contrary to this sensationalized headline, our Association continues to outpace other provinces with increasing numbers of new articling students and commissions. In fact, Alberta enjoys roughly three times the number of articling students than British Columbia, Saskatchewan, and Manitoba, combined. However, even though we are doing relatively better than our counterparts, we do have a supply issue. It just isn't as bad as that news article alluded.

Our high entrance standards can be viewed by some as being somewhat elitist and built around protecting an exclusive field of practice. Potentially qualified geomatics graduates from universities and polytechnic institutions from around the world are often afforded only a portion of the exemptions allotted as compared to Canadian geomatics program. Unfortunately for these potential candidates, the content of the foreign geomatics programs are not as well known as the Canadian programs. As well, it is very difficult to determine the equivalency of each program as they differ dramatically from country to country. Just because the course has the same name and syllabus does not necessarily mean it covers the same material as we would expect. The only option we are currently left with is to prove their equivalency by examination.

I can tell you from my personal experience on the former Western Canadian Board of Examiners for Land Surveyors (WCBE), and now the Canadian Board of Examiners for Professional Surveyors (CBEPS), that each foreign candidate is

evaluated fairly and without prejudice against the standard we have set for like graduates from Canadian programs. Fulfilling the supply need that currently exists out there is simply going to take time. To do it any other way will lower the bar and be an obvious disservice to all in Alberta who enjoy a defined and well maintained legal survey fabric. Good boundaries make good neighbors, and no one wants to see that compromised.

But what about the perceptions of elitism and entitlement that the public can have when professional rates skyrocket to the point where only the "haves" can afford the service? I am sure I am not alone in feeling that if you want a good lawyer, you need to pay top dollar, thereby reserving the best service for only those that can afford it. I think the public would say that is not serving their best interests, but rather the professional's interests.

Personally, I feel that the better we do our job, in general, the more that everyone affected benefits from our specialized services. It's not just the paying client who deserves accurate spatial determination and depiction of what is on the land, or in an area. It's all who have a vested interest in how land and its surrounding area is enjoyed and used. The non-clients, if you will.

In order to maintain the public's confidence, we must continue to strive to be deserving of their faith in us. Practice review, continuing professional development, public relations, registration, standards, discipline, all our committees exist to preserve these confidences and do our due diligence to keep our profession current, viable, and relevant. To do any less would be of mutual detriment.

I honestly believe that our right to self-governance is of paramount benefit to the public at large. However, it needs constant attention and action on our part to be ultimately sure that we are doing enough. To ignore this need and spend our days looking only at the next job or project we have to do will result in the deterioration of our profession. This requires us to maintain a high level of involvement in our Association and capitalize on opportunities to share our knowledge and expertise with the public. It ultimately requires action on all our parts.

If we are to treat Justice Cote as Odysseus did the seer Cassandra in Homer's *Odyssey*, then his prophetic warnings will be proven true by virtue of our own inaction. His comments are a timely wake-up call for us and should not be taken lightly. I encourage all of you who are not already involved on committees or volunteering in some other capacity to find a way of doing so. The future may depend on it. 🌿

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The New (Alberta) Boundary Resolution Process

Reprinted from "ALS News" - March 2005

ALSA Editor's Note: On January 27, 2005, the Council of the Alberta Land Surveyors' Association approved the Boundary Resolution Process as a pilot project with a budget of \$10,000 for the 2005-2006 fiscal year.

What is the overall intent of the recommendation?

For several years the Alberta Land Surveyors' Association has been attempting to develop a system for resolving boundary problems in the Province.

The Section 9 of the Surveys Act Ad Hoc Committee (the "Committee") is recommending a process at this time that will show leadership in protecting the public use and enjoyment of land by assisting Alberta Land Surveyors to find solutions to boundary problems.

Section 9 of the Surveys Act has been used very rarely to resolve boundary problems. A number of reasons have been offered for this limited application of a powerful tool. It may be that the limited scope of Section 9 is a hindrance, or it may be that Alberta Land Surveyors have not been aggressive enough in pursuing this remedy. Alternately it may be due to the limited number of parties that are eligible to bring problems forward. A number of theories exist, and have been discussed at length by the Committee. The Committee is aware that some of these boundary problem are being compounded over time by the completion of subsequent related surveys.

Therefore, the Committee decided to bring forward a process that will allow the ALSA to learn more about the nature of the problems, the solutions for these and ultimately if it is necessary to amend the Surveys Act or other statutes. At the same time, this process should assist in solving many of the existing problems currently lying dormant. The Committee is not prepared to recommend legislative changes until a better understanding is formed.

The process that is proposed has two components: firstly mediation, and secondly a boundary panel. The mediation facility would be established by the ALSA to assist two or more active Alberta Land Surveyors to resolve differences of professional opinion. It is intended that this facility be used only when the affected Alberta Land Surveyors cannot agree on solutions through direct discussions.

The Committee anticipates that some Alberta Land Surveyors will refuse to participate in mediation. On the other hand mediation may not result in a solution, or be applicable to the problem in the first place. If mediation does not occur, fails or is not applicable, the matter will be forwarded to a boundary panel.

The Boundary Panel will consist of experienced Alberta Land Surveyors and may include a public member, all appointed by Council of the Alberta Land Surveyors' Association. This panel will have no legislated powers at this time but will be responsible to investigate circumstances and recommend solutions. The Boundary Panel may decide that Section 9 of the Surveys Act should be applied in certain cases (based on an updated intent and application document that has been developed by the Committee), in others it may suggest alternates such as court order or resurvey. If Section 9 is proposed for a particular case, the panel must bring a recommendation to Council of the ALSA for further action in accordance with the Surveys Act.

What is the problem to be addressed?

The problem is that boundary uncertainties or alleged errors in surveys exist in Alberta and that there is no clearly defined process to resolve them. As a result, there are many unresolved boundary uncertainties or alleged errors in surveys lying dormant.

At the 2004 annual general meeting, the Director of Surveys stated that his office is contacted 6 - 12 times by surveyors looking for help or additional information in any given year.

How does the recommendation solve the problem?

This recommendation establishes a process to help Alberta Land Surveyors resolve boundary uncertainties or alleged errors in surveys.

The Section 9 Ad Hoc Committee is aware that other jurisdictions have procedures to deal with boundary uncertainty issues. Ken Allred's 2001 paper to Council, reviewed by the Committee, identified similar processes in other jurisdictions. At the 2004 annual general meeting, Dr. Mike Barry spoke of the South African experience and Francois Dion spoke about bornage in Quebec.

What is the genesis for the recommendation?

At the 2000 AGM, under new business, the membership recommended that Council consider establishing a committee charged with preparing a white paper for presentation to the Government of Alberta with respect to establishing a statutory boundary tribunal to provide an avenue to resolve boundary uncertainties and disputes as an alternative to resorting to the court process.

Following the 2000 AGM, then vice-president Ken Allred was asked to do some research on this issue and prepare a

paper. In early 2001, Mr. Allred submitted his paper to the ALSA Council. He concluded that the current Section 9 of the Surveys Act is likely the only process for the resolution of boundary type problems outside the court system. He went on to say that it is clear that the breadth of this remedy was severely limited in the discussions that led up to the passing of the new Surveys Act. "It is also clear that 'survey errors' are only a minor cause of boundary uncertainties and the provisions of Section 9 of the Surveys Act do not extend far enough to resolve the majority of boundary problems. "

In the 2001-2002 Association year, Council established a Statutory Boundary Tribunal committee. The Committee was asked to analyze Mr. Allred's report, conduct additional research (research court cases, discipline files, speak with Land Titles and the Director of Surveys), and identify options for change including revisions to the Land Titles Act and the Surveys Act.

In December 2001, Mike Michaud, the Director of Surveys, and Tim Grusie, from Land Titles, had a meeting with Council. The Director of Surveys had written a letter to Council on October 19, 2001 that the "need to develop a process for dealing with boundary problems is paramount." Council passed a motion requesting that the Executive Committee develop a process for dealing with boundary problems.

The Statutory Boundary Tribunal Committee struggled; it had a difficult time focusing on what exactly the issues were and how significant the issues were. In the end, the Statutory Boundary Tribunal Committee passed a motion that the Committee recommend to Council that Section 9 in principle, is suitable for dealing with boundary uncertainties as a result of survey errors. The Executive Committee also struggled with the issue. With all of its regular discussions in advance of a Council meeting, it was impossible to focus on identifying the scope of the issue and then developing a process.

In September 2002, Council disbanded the Statutory Boundary Tribunal and removed the action item from the Executive Committee's terms of reference. Council established the Section 9 of the Surveys Act Ad Hoc Committee (Council motion 2002.09.010) with the following specific terms of reference:

1. To review Section 9 to determine the legislated scope of its powers and articulate what types of boundary uncertainties Section 9 is designed to resolve.
2. Define the term "error in a survey."
3. To review the "Intent and Application of Section 9 of the Surveys Act" document, as published in the January 1991 issue of ALS News to determine if it covers the entire scope of resolution of boundary uncertainties authorized by Section 9.

4. If it is determined that the "Intent and Application" document does not cover the entire scope of resolution of boundary uncertainties contemplated by Section 9, then draft a new "Intent and Application" document.
5. To investigate and review the current working application of Section 9 to determine if it is consistent with the "Intent and Application" document.
6. If Section 9 is not sufficiently broad enough to deal with the resolution of boundary uncertainties, to draft amendments to Section 9.
7. Make recommendations back to Council.

At the 2004 AGM, the concept of the Boundary Resolution Process was put to the membership in a straw vote. There was overwhelming support for the concept.

How is the recommendation in the public interest?

At its October 1 st and 2nd, 2003 strategic planning session, Council identified "resolving boundary uncertainties" as its top priority and consistent with the mandate to protect the public interest.

This recommendation by the Ad Hoc Committee establishes a process to help Alberta Land Surveyors resolve boundary uncertainties. These uncertainties have an adverse effect on land owners now and in the future, and can present significant impediments to the use and enjoyment of land. Moreover, failure to resolve boundary uncertainties may lead to a compounding of the seriousness and expense of resolution in the future. A practical process for resolution of uncertainties will be of direct benefit to land owners and the public.

The proposed process in this recommendation should mean that boundary uncertainties will be resolved quicker.

It means that the more serious boundary uncertainty or alleged error in survey cases will have been reviewed by a group of the Alberta Land Surveyors' peers who may be able to recommend a method of resolving the matter.

What is the Resolution Process?

The Boundary Resolution Process has been developed to assist Alberta Land Surveyors to address boundary uncertainties and alleged errors in surveys that have been identified through their daily activities. There are two components to the Boundary Resolution Process. First, if the involved Alberta Land Surveyors cannot informally resolve the situation themselves, the Alberta Land Surveyors' Association may assist with mediation. Second, if mediation has failed or does not apply, there is a referral from the Executive Director to the Boundary Panel who would convene to determine if the boundary uncertainty is best resolved by Section 9 of the Surveys Act or some other means.

For the purposes of this document the following shall apply:

- *An alleged error in survey exists when a corner or boundary of property of record on a plan registered in a Land Titles Office or the Metis Settlements Land Registry has been formally brought into question by an Alberta Land Surveyor.*
- *Boundary uncertainty occurs when the opinions of two or more Alberta Land Surveyors are in conflict as to the position of a corner or boundary of property whether the Alberta Land Surveyors are active or not.*

When is the Boundary Resolution Process Initiated?

The Boundary Resolution Process may be initiated when:

- there is a boundary uncertainty in a survey to which the Surveys Act applies and which is represented by a plan of record in the Land Titles Office or the Metis Settlements Land Registry, or
- there is a boundary uncertainty as a result of reestablishing the position of a lost governing monument of a previous survey of record in the Land Titles Office or the Metis Settlements Land Registry, or
- there is a boundary uncertainty as a result of placing a monument (or computing a coordinate) to govern a boundary shown on a plan of record in the Land Titles Office or the Metis Settlements Land Registry, or
- there is a boundary uncertainty as a result of an alleged error in a measurement made to show the position of a monument, placed to govern a boundary shown on a plan of record in the Land Titles Office or Metis Settlements Land Registry, relative to an existing boundary, and
- there is a boundary uncertainty of a magnitude, which is in excess of the accepted limits of accuracy prevailing at the date of survey.
- the Boundary Resolution Process does not apply to natural boundaries.

PART 1

What is the first step in the Boundary Resolution Process?

The first step in the Boundary Resolution Process is for the involved Alberta Land Surveyors to communicate with one another to try to resolve the situation before the initiation of any formal process. If there is a continuing difference of opinion, the Alberta Land Surveyors' Association may assist with mediation. The intent is to mediate a resolution to a boundary uncertainty or an alleged error in survey.

What is Mediation?

Mediation is a process of dispute resolution where a mediator or trained negotiator assists parties in a dispute, who have each agreed to mediate, in negotiating a settlement.

The process takes place on a confidential, without prejudice basis and is entirely voluntary. A mediator is usually chosen who has experience with, and an understanding of the area of dispute. Settlements can often be reached within a few hours when mediation is used, saving much time and money (excerpt from the Alberta Arbitration and Mediation Society - www.aams.ab.ca). The mediator does not render an opinion as to who is right, where the boundary is, or whether there has been professional misconduct.

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When would mediation apply?

- When there is a boundary uncertainty.
- When the Alberta Land Surveyors involved are still active or retired or honorary life members or former members and agree to the mediation.

Who can request mediation?

- Mediation is between two or more Alberta Land Surveyors that have identified a boundary uncertainty. However, anyone knowing of that boundary uncertainty being any affected land owner, any Alberta Land Surveyor, any Council of a municipality, the Director of Surveys, a registrar to a Land Titles Office or the Metis Settlements Land Registry may request mediation as well.

Where is the request for mediation sent?

- The request for mediation is sent to the Alberta Land Surveyors' Association office.
- The Executive Director of the ALSA shall take the lead on the file. Because of concerns regarding conflict with the discipline process, the Registrar shall not be responsible for the file. The Executive Director shall not file a complaint on a file brought forward for mediation.

Who can mediate?

- The mediator could be an Alberta Land Surveyor and/or a member of the Alberta Arbitration and Mediation Society.
- The mediator must be impartial and independent with no prior involvement in the dispute. If a bias or perception of bias develops at some point during the mediation, either the mediator or one of the parties may terminate the mediation.
- Mediation can be conducted with either one or a number of mediators. A panel of two or more mediators is generally utilized where the dispute is more complex, involving a number of areas of expertise, or where the dispute

involves more than two parties. Where more than one mediator is utilized, it is important to ensure that the mediators can work together effectively. (excerpt from the website of the Alberta Arbitration and Mediation Society - www.Aams.ab.ca)

What are the Association costs?

- Mediator fees and expenses.
- Administrative costs.

Who selects the mediator?

- The Executive Director or any other party involved can put forward the name, or names, of possible mediators.
- Parties must unanimously agree to the mediator.

What if mediation does work?

For the mediation process to work, it must end in a formal written agreement ratified by the practitioners and an undertaking to resolve all issues for affected parties. There shall be documented confirmation, in general terms, of the outcome of the mediation submitted to the Executive Director and the parties. The Executive Director will be responsible to follow up with the parties on the outcome. If the agreed upon outcome has not occurred within a reasonable amount of time, the case will be directed to Part II of the Boundary Resolution Process.

What if mediation does not work or does not apply?

The Executive Director must refer the matter to the Boundary Panel.

PART II

What is the intent of the Boundary Panel?

To determine if a boundary uncertainty is best resolved through section 9 of the Surveys Act or some other means.

When would the Boundary Panel convene?

The Boundary Panel would convene when mediation has failed, does not apply, or there is a referral from the Executive Director. If one or more parties do not participate the Boundary Panel may still convene. If there is an outstanding complaint against any of the parties relative to the matter in question, the Panel shall not deliberate on the issue.

Who is on the Boundary Panel?

Council shall appoint, by motion, members of the Boundary Panel from which it shall appoint a chairman and/or one or more vice-chairmen.

The Panel shall have at least six members, one of whom may be a public member and the others shall be Alberta Land Surveyors. Three members shall constitute a quorum of the

Panel. The term of appointment for Panel members is five years.

Appointments to be made to ensure a balance of expertise in areas such as urban land development, resource industries, general practice, RPR/construction, control surveying/ GPS. Appointments to be made to ensure a reasonable geographic balance.

What are the terms of reference of the Boundary Panel?

1. Parties involved in the boundary uncertainty or alleged error in survey shall provide all of their research, field notes, and any other documentation to the Panel in advance of the meeting. The Panel may do any investigation that it deems necessary.
2. The Panel shall encourage a resolution that best ensures that a boundary uncertainty or alleged error in survey is resolved and may recommend solution by Section 9 or some other means. The Panel may ask for additional survey work to be performed by the surveyors involved.
3. The Boundary Panel may recommend how the Alberta Land Surveyor(s) may resolve the boundary uncertainty or alleged survey error but not express an opinion on where the boundary is.
4. If the Boundary Panel recommends a Section 9, it shall make such recommendation to Council so as to present the case advocating a Section 9 to the Director of Surveys on behalf of Council without providing Council with names, facts, or specific information.
5. Any sitting of the Boundary Panel may be recorded. The extent of the record keeping of the Boundary Panel would be determined by the Chairman.
6. Subsequent to convening of the Boundary Panel, the Chairman shall prepare a written report of the findings of fact along with any recommendations made by the panel and keep the report on record for subsequent follow-up.
7. Land owners, the Council of a Municipality, the Council of the Alberta Land Surveyors' Association or a Registrar of a Land Titles Office or the Metis Settlements Land Registry shall retain their right to request a Section 9 Board of Investigation directly to the Director of Surveys.
8. The Panel shall not award damages or costs.

What are the Association costs?

- The Association would be responsible for the expenses of the Panel members, including the public member.
- The Association would be responsible for providing a means of keeping accurate records.
- Administrative costs. 🍀

The Image Of What a Surveyor Looks Like Is Changing

by Lesley Ewoniak, ALS

Reprinted from "ALS News" June 2006

It seems as though all we ever hear about these days is the shortage of labour. Where can we find all the people to fill the gaps of all of the field crews that we need to satisfy our client's demands? Let me suggest a possibility ... women.

Yes of course, I know the difficulties that may arise from hiring a female in the oil and gas industry. Many of the consultants are hesitant in having a "girl" come out to do the survey for them. However, I found that I had more success in dealing with them than not.

Let me give you some statistics concerning the current standing of the make-up of the market place. Women make up an estimated 47% of the labour market (Statistics Canada 2005), which is consistent with the University of Calgary Geomatics Engineering program having approximately 50% of students being female. The increasing number of women in geomatics in both BC and Alberta show promise that the under-representation of women in geomatics is fading. However, women commissioned or registered as articling students with the Alberta Land Surveyors Association account for only 11.5% of the total membership and only 2% of the Association of British Columbia Land Surveyors' membership.

To raise awareness of a career in land surveying, Lesley Anne Sick, (articling ALS), Shauna Goertzen (BCLS), and I held a presentation at the University of Calgary Geomatics Career Day on February 2, 2006. The objectives of the presentation were to increase the level of understanding of how to obtain a commission, as well as the role of a land surveyor. Topics of the discussion specific to women were the physical demands, safety, and work/ life balance that come with having a career in land surveying.

I find that the main concern of women entering our work force are the physical demands of the job.

Hiding the fact that land surveying is physically demanding will not make the industry more attractive to females, instead it will give them a false sense of what it is like. However, there are many ways to work around the tasks to decrease the amount of intensity that a job appears to have. Here are some examples:

- **Use the buddy system**

Having a female chainperson for most of my party chiefing time, we had to use the strength of two people rather than one.

- **Be smart**

Look for alternatives to the "brute force" method.

- **Use equipment that makes tasks easier**

Instead of lifting a quad out of the mud, use a winch.

- **Maintain your equipment.**

Chopping down a tree with a sharp axe is much easier than with an axe that is dull.

Women in the land surveying profession do not have to be amongst the strongest women in the world, they just need to be smart about how the tasks can be accomplished. Having the knowledge and physical capabilities are important, but attitude is a huge success factor.

Sugar coating things is not really my strong suit so I'm not going to tell the women out there that this profession is fully accepting of women. However, I will say that it is getting much better. The number of women encountered in the field is continually increasing, reducing the shock to consultants when a female crew arrives to survey a pipeline. I found that in the majority of cases, the female presence is welcomed. If it isn't, it doesn't take a long time for them to discover that the job can get done regardless of who is completing it.

Safety has changed the way we conduct ourselves in the field. When I speak to females wanting to enter the profession, they are not only concerned with safe work procedures, they are more concerned about the possible harassment that they may encounter in the field. Your personality and the way you conduct yourself will have the most impact on what you will have to deal with. I found that the majority of the time the situations that you encounter are under your control.

Work/life balance is a very important consideration when selecting a career. Land surveying is similar to other professions and one cannot always expect to enjoy regular hours. The hours that a land surveyor works can range from 40 to 80 hours a week. This will depend on the chosen region and sector serviced.

In the current job force, more employers are being flexible with work schedules, hours, and vacations where family commitments are concerned. Many land surveyors find that their own clients dictate their workload. They have the freedom and flexibility to manage their projects and the number of hours they work.

Unfortunately, there is a lack of manpower and a large volume of work and finding the "work-life balance" can be a challenge. Having said that, employers are willing to accommodate professionals and other employees, to ensure that the career they have chosen is a satisfying one. As a



Increase Revenue at No Cost

by F. C. Hutchinson, BA, NSLS, CIS

Reprinted from "The Nova Scotian Surveyor" - Summer 2006, NO. 177

Customer Service

People love to shop, but most of all they appreciate customer service and value for the money spent. No matter what a business is selling, the client expects to have to pay for the product. The product might be a new lamp, auto repairs or a professional service. The price of lamps can vary from a few dollars for a small table lamp to several thousands of dollars for a Tiffany lamp at an estate auction. Auto repairs can also fluctuate based on repairs requested, age of vehicle and suggested preventative maintenance. Surveying services also vary depending on the nature of the job and time required to provide the service. Now remember, people love to shop and their phone call is the opportunity for the surveyor to get the customer to buy something. The shopper may have visited the survey store before and is well aware of the items for sale or the shopper may be new to the store and just browsing. It is the salesperson's job to be a pleasant "greeter" and ask how they can help the caller. The caller may not know what they want to buy, but they do know that they have to buy something from someone before the end of the week. At least this is what they were told and thus the reason for the call.

Caller: "Hi, I would like to have my property surveyed."

Surveyor: "So ...why do you want a survey?"

Caller: "Well, I am building a fence and I need to know where to build it."

Surveyor: "Is there an existing fence?"

Caller: "Yes, but it is in poor condition and my neighbor says that it is not on the boundary."

Surveyor: "Do you and your neighbor get along?" (Hoping the answer will be yes.)

This is typical of calls, but how the surveyor or office manager deals with the caller is critical in determining if the client will buy anything. The caller may want time to think about the day's shopping experience and come back the next day to kick a few tires. Remember that the caller wants service every bit as much as you would if you were shopping for a new car. The product is one thing but how you are treated during and after the sale is what a professional is really selling.

Word-of-mouth can be a very effective promotional tool but it can be both positive and negative in its results. Without devoted service to your clientele, you will constantly be searching for new clients. Following are a few questions to ask of your business:

- * Do you return messages?
- * Do you greet clients in a pleasant manner?
- * Do you keep appointments?
- * Do you let clients know if you will be late for a meeting?
- * Do you call ahead to confirm a meeting or appointment?
- * Do you advise clients of potential problems or delays?
- * Do you advise a client what you will be charging for your services?
- * Do you use contracts?
- * Do you confirm work orders by email or fax?
- * Do you follow-up on a service or product a few weeks after delivery?
- * Do you ask if the customer is satisfied?
- * Do you handle a customer complaint in a professional manner?

Most people have a high degree of respect for the land surveyor. Some will never consult with a surveyor in their lifetime while others will use the services of a land surveyor on a regular basis. Those shoppers who do call on the services of the land surveyor do so because they have to. They either hope to turn a profit through development, are having boundary problems or a regulation of some kind has forced them to get a survey. I am not aware of too many people who have to flip a coin to decide if they will buy a survey or a wide screen TV. Surveying services are generally considered a need, not a want.

Fees

Once the surveyor has taken on a surveying project, there should be a project file created so that any work done can be properly documented for billing. A retainer is certainly something to ask for if the project is of any length. No sense acting as both banker and land surveyor. If the client is reluctant to provide a retainer then you do not start the project and advise accordingly.

However, if you do accept the job, then you need to make sure that the services and payment method are clearly documented and provided to the client. This can be by contract or a summary of the agreement provided by fax or email. This is good for both parties in that it spells out what will be done, when it will be done, how much it will cost and when payment is due.

Most professional businesses have set hourly fees or provide fixed fees for various established services. The other aspect

of an invoice deals with disbursements or miscellaneous expenses. To get an idea of what might be considered a miscellaneous expense, you should look at an auto repair bill. Such things as bolts, clamps and washers add up over the run of a year if you give them away. I recently had an occasion to review an invoice for legal services and found the experience enlightening.

When was the last time a surveyor charged an hourly rate for reviewing case law on adverse possession or statute law concerning priority of title? Such activities can be charged to a project. I was surprised that an incoming fax was billed at \$0.25 per page while an outgoing fax was charged at \$0.50 per page. Consulting with client by phone and review of email was also charged at an hourly rate, while online research was billed as units of time. The invoice that I reviewed also charged for over 2000 photocopies at \$0.25 per page. Such things as wood stakes, survey markers, paint, chainsaw gas and oil add up and should be billed separately from your hourly rate. Now that you have determined how to apply some cost recovery techniques to your billing practice you need to look for conventions to attend in exotic places with the extra revenue. Who says that you can't mix business with pleasure? 🍀

Fred Hutchinson is the Executive Director of the Association of Nova Scotia Land Surveyors. He has been a professional land surveyor for 35 years with experience in both the private and public service sector.

professional, your value to your employer will be substantial, and thus finding a routine which meets your needs is a priority.

I strongly encourage women to enter into land surveying. I find that every day presents itself with a new challenge, and with the rate of change in technology the amount that one can learn is unlimited.

Do you ever remember reading this riddle and being stumped?

A young boy and his father were out playing football when they were caught at the bottom of a giant pile-up. Both were injured and rushed to the hospital. They were wheeled into separate operating rooms and two doctors prepped up to work on them, one doctor for each patient. The doctor operating on the father got started right away, but the doctor assigned to the young boy stared at him in surprise. "I can't operate on him!" the doctor exclaimed to the staff. "That child is my son!"

How can that be? Until more women got into medicine, the answer was not as easily thought of as it is today.

The image of what a surveyor looks like is changing. 🍀

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Growing Through Entrepreneurship The Innovation Imperative

By Eric A. Morse, PhD.

From "Ontario Professional Surveyor" Summer, 2006 - Volume 49, No. 3

'Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels that there really is another way, if only he could stop bumping for a moment and think of it.'

A.A. Milne

Entrepreneurship has been defined as the pursuit of opportunity without regard to resources currently controlled, but A.A. Milne's quote captures its essence. If Edward Bear were a true entrepreneur, he would find a better way to come downstairs, probably by stepping back, looking at the whole of the situation and deciding his problem is being dragged down by convention. Entrepreneurship is about recognizing, creating, and exploiting new opportunities that uproot convention and lead to growth, or higher profitability.

Like other forms of discovery, entrepreneurship has often been seen as a mystery. Traditionally we have tended to focus on the basics of business, like finance and marketing, assuming that entrepreneurship was something you were born with or could only acquire through the school of hard knocks, but now we are taking another look, and there are compelling reasons why. In the past two decades, entrepreneurial firms have created the bulk of the job growth in the economy, and have produced most of the innovation. Recent studies also show that large firms with an entrepreneurial approach have outperformed the market average.

Most people now believe that entrepreneurship is more than starting businesses. It's a particular way of thinking about business - being creative and innovative, managing with few resources, and managing risk. These are skills that are important in a large corporation or a small one. Anyone can learn to think more entrepreneurially, but many must first push through some myths about entrepreneurship that hold them back.

Myth one is that you have to be born an entrepreneur. We know from research that's just not the case. In fact, there's as much trait differentiation between entrepreneurs as there is between entrepreneurs and non-entrepreneurs. People often point to characteristics common to successful entrepreneurs, but what we find is that these charac-

teristics are common to all successful people, no matter what their vocation. They are motivated to succeed, they know it is possible, and they are willing to work very hard at it.

Myth two is that entrepreneurship is all about luck, or being in the right place at the right time. What is really interesting is that when you look very carefully you can see that there were thousands of people in the same place at the same time, so why did one individual recognize the opportunity, and decide to act on it? We find that the recognition of opportunity and the ability to exploit it are knowledge sets that can be learned through experience.

Myth three is that it's all about risk, but entrepreneurs aren't so much risk takers as they are risk distributors. For example, research in the field shows that if you take an entrepreneur out of a known context, they're no more likely to take risk than the next person. Another study has shown that entrepreneurs are less likely to play the lottery or to gamble than the general population. The point is that entrepreneurs like knowable and controllable risk.

In fact we should note that the real problem with risk is that most managers do not evaluate it very effectively. Managers focus on sink the boat risk to the exclusion of miss the boat risk. Entrepreneurs have a good handle on both: they assess the potential downside of a particular opportunity and figure out ingenious ways to limit it as much as possible; entrepreneurs also assess the potential upside of an opportunity and figure out creative ways to maximize it as much as possible. Only at this point do they make an evaluation as to the best decision to make and action to take.

Myth four is that entrepreneurship cannot be learned. In fact it can be learned, but like everything else it takes hard work, practice and time. This is why you talk to so many entrepreneurs who can recount the number of failures or near failures they had prior to becoming successful. The key for aspiring entrepreneurs is to find a good mentor(s), someone who has been there and done that, who can help you to limit the number of mistakes made and help you to gain the experiences and contacts you need to succeed.

Experience and learning make entrepreneurs better at pattern (opportunity) recognition than the rest of us, but this level of expertise takes time to accumulate. Most estimates place the time required at nearly ten years of work within a particular field or at a particular endeavor. The recognition of patterns (opportunities) in the environment is often the ability to look at the same set of circumstances as everyone else from a slightly different perspective. This is not another exhortation to think outside the box, this is an inherently difficult thing to do (contrary to popular belief), but rather an exhortation to bring new voices into your current conversations, to start conversations with people with different passions, who may see the world just a little differently than you do, and to try new experiments in the margins of your business. All of these things can bring you a new perspective on your business, your market and your industry.

“Face it: out there in some garage, an entrepreneur is forging a bullet with your company’s name on it. You have only one option: you have to shoot first.”

Gary Hamel

How do you shoot first in a competition when it is not even clear what the rules of the game are? The short answer is you out innovate the competition. Innovation is the specific function of entrepreneurship; it is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth. The problem is that most firms leave innovation to chance - this is a gamble most entrepreneurs would not take. Innovation is hard work that requires total commitment. First and foremost it requires vision: who you are as a business and who you want to become. This is not a trivial question left to some plaque in the hallway, this is a compelling statement that defines the hopes and dreams of the people with whom you work. It must be alive and it must guide you and your employee’s decision making toward some more attractive future state. You can see how defining your firm as a “Great regional surveying company” would create a very different firm than if you defined your firm as “the provider of choice for geographic information.” To create something that is meaningful takes time and effort, but once we know where we want to go we can begin the process of searching for the innovations that will carry us to that state.

Many creative ideas come from challenging long held assumptions about our day to day work. We make assumptions about the service we perform, the market we serve and the industry in which we work. The problem is that these assumptions are not always true.

“It ain’t what you don’t know that gets you into trouble. Its what you know for sure that just ain’t so.”

Mark Twain

Take the time to step back from the day-to-day fires that you are dealing with and work on how you do business and how you go to market. Challenge what you believe about the product or service that you deliver to your customers and ask your self how you could dramatically improve the value equation. Think big 500-1000%, because this will force you to think about new ways of doing things. Ask yourself whether it is possible to separate the information you provide your clients from the standard process of gathering that information. When you do this can you think of other uses for the information provided or the process used to gather that information? Lastly, ask yourself how you can dramatically change the way your customer interacts with your firm. Can you elevate the interaction to the point where your customer doesn’t just think that you’ve done a great job but rather finds the interaction fun and looks forward to the next encounter?

Challenge what you believe about the market you serve, and ask yourself if you are focusing on the total imaginable market. Challenge yourself as to the accessibility of your product or service. Who else could use your product or services if it was just packaged or delivered a little differently? Challenge what you believe about the industry in which you work, and ask yourself if you have skills that would allow you to play in different markets or industries. Are there different parts of the supply chain that you could be serving or can you drive convergence across industry boundaries?’

Growth, innovation and entrepreneurship - none of it is easy. We need to commit to a process of innovation and entrepreneurship that will protect the future of our organizations and make them the places that we and our employees want to practice our profession. We do this by providing a compelling vision, encouraging new and different voices, passions, and perspectives in our conversations about how we do business and how we go to market. Most of all we do this by taking action that doesn’t leave it all to chance. 🌱

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Scrutinizing Survey Monuments

By Fred Chang, ALS, Director of Practice Review

Reprinted from "ALS News" June 2006

The purpose of this article is purely educational. No names or identifying legal descriptions are included. Opinions expressed herein are those of the author.

I have, on occasion, received telephone calls from practitioners inquiring what recourse an Alberta Land Surveyor could have when encountering a situation where a landowner has moved or removed a statutory iron post. At other times, I have been asked to comment on the status of bent iron posts, and disturbed monuments.

Fundamental Principles

Once statutory iron posts, or any other statutory survey monuments as specified under section 1(p) of *the Surveys Act*, are placed by an Alberta Land Surveyor and are shown on registered plans of survey at a Land Titles Office, for the purposes of defining property corners and property boundaries, nobody has the legislative right to move or remove them without the application of the current legislation with respect to boundary adjustments, plan corrections, or resolution of survey errors.

Without the proper application of the legislation that deals with the above-mentioned situations, one would not have knowledge of whether or not other landowners have relied upon the monuments to construct physical structures, such as fence lines on their homesteads. Other Alberta Land Surveyors might have related their surveys to the original monuments or other stakeholders might have relied upon the statutory monuments to create other physical improvements or documents relating to the location of the monuments.

These statutory monuments govern the position of the boundaries created, even when found and compared to have mathematical anomalies against their registered plans. This is supported by provisions of the current surveying legislation in Alberta. Wherein sections 36 and 37 (Part Two) of *the Surveys Act* states:

- 36 *All boundary lines of a survey in accordance with section 29 or 32 are determined by monuments placed for that purpose as shown on the official plan, whether or not the dimensions between them or the areas expressed on the official plan are found by remeasurement to be different.*
- 37 *Every parcel surveyed in accordance with section 29 or 32 shall consist of all the land included between the several monuments placed to determine the boundary lines, and no more and no less, notwithstanding any quantity or measure expressed*

on the official plan, certificate of title, grant or other instrument.

In addition, Section 45(4) of the *Surveys Act* also provides that statutory monuments govern the position of property corners once placed and plans of survey reflecting their positions thereon are registered at a Land Titles Office or filed at the Metis Settlements Land Registry.

Section 45(4) (Part Three) of the *Survey Act* states:

45(4) All the boundary lines surveyed and established in accordance with subsection (1) shall be defined by the monuments placed for that purpose as shown on the plan of survey registered at the Land Titles Office or filed at the Metis Settlements Land Registry, whether or not the dimensions or areas expressed on the plan are found by re-measurement to be different.

With reference to the above provisions, once the statutory monuments are placed in the ground and upon registration of the plan showing the monuments placed, they govern the position of the property corners and property boundaries that are created for that purpose. It is important that they be protected and not be removed.

Current Provisions Within the Surveys Act Dealing With Moving/Removal of Monuments

At present, the following provisions within the current *Surveys Act* [RSA 2000 Chapter S-26] deal with inspection surveys, resolution of alleged survey errors, and boundary adjustments, in terms of re-surveys, could all relate to the moving (or removal) of statutory survey monuments.

Section 6(5) (Part Two) of *the Survey Act* deals with inspection of surveys wherein it states:

6(5) The Director (Director of Surveys) may take steps that the Director considers advisable to correct any errors and omissions in a plan of survey before it is registered at a Land Titles Office or filed at the Metis Settlements Land Registry.

The above *Surveys Act* provision suggests that a land surveyor may, during the course of their operation, move or remove survey monuments that were placed prior to the plan of survey being registered at Land Titles. However, caution must be taken to record which monuments have been removed, and ensure that these monuments were not used by other stakeholders such as land surveyors, landowners or other

third parties for the purpose of their surveys and construction of physical improvements respectively.

Section 9 (Part Two) of *the Surveys Act* provides the Minister responsible for *the Surveys Act* to appoint a board to investigate alleged survey errors. Section 9(11) confers the board with the powers and duties to make necessary changes to the surveys and plans which would, by implication, include moving monuments and boundaries associated thereto upon completing their investigation. Section 9(11) herein states:

9(11) The Board, on completing the investigation, may:

- (a) order that surveys and survey plans be varied, altered or amended in the manner that it directs;*
- (b) order that any descriptions, registers, certificates of title or plans of survey deposited, filed, or registered in a Land Titles Office or in the Metis Settlements Land Registry be varied, amended or altered as may be necessary to reflect the true position of monuments or boundaries, or the accuracy of dimensions or areas;*

Sections 34 and 35 of *the Surveys Act* deal with re-survey of Part Two surveys. In addition, sections 39(6), 40, 41, 42, 43 and 48 of *the Survey Act* deal with re-survey of Part Three surveys.

It is interesting to note the provisions of Section 41, wherein it states:

41 The order of the Minister confirming the re-survey is final and conclusive and shall not be questioned in any court, whether or not the monuments marking the original survey are subsequently found or their positions proved by other evidence.

Section 50(3) (Part Three) of *the Surveys Act* prohibits any individual to remove statutory survey monuments and survey control markers, wherein it states:

50(3) A person who, without the written permission of the Director, pulls down, alters, defaces or removes any monument or survey control marker placed by a surveyor in carrying out the surveyor's duties under this Act is guilty of an offence and liable to a fine up to \$10,000.

As such, it is important that Alberta Land Surveyors, who have concerns about any persons moving or removing survey monuments, explain this to these persons and make them understand that statutory iron posts or any other survey monuments, including Alberta Survey Control Markers, are not to be tampered with.

Other Legislation With Respect to Moving/Removal of Monuments

Sections 91 and 92 of the current *Land Titles Act* [RSA 2000 Chapter L-4] provide the following legislative process towards amending errors or making changes to plans of survey

registered at Land Titles caused by clerical errors, omissions, or other defects.

Section 91 of *the Land Titles Act* states:

91(1) A court may, on application and on hearing the persons to whom notice of the application was given,

- (a) order a plan to be cancelled, in whole or in part, amended, altered or corrected, and*
 - (b) make any order with respect to the vesting or re-vesting of any land included in the plan, on any terms or conditions as to costs and otherwise as the court considers proper.*
- (2) An application for an order under subsection (1) may be made by*
- (a) a person who caused a plan to be registered,*
 - (b) a person deriving title to or some other interest in any land shown on a plan,*
 - (c) an Alberta Land Surveyor who signed a plan, or*
 - (d) the Registrar.*
- (3) Notice of the application referred to in subsection (2) shall be served on those persons and in any manner that the court directs.*

Section 92 of *the Land Titles Act* states:

92 When there is an omission, clerical error or other defect in a registered plan, the Registrar may correct the plan if

- (a) the Registrar is satisfied that the correction will not adversely affect any person, or*
- (b) where the correction may adversely affect a person, that person has consented to the correction, and the Alberta Land Surveyor who signed the plan or, if the Alberta Land Surveyor is not available, the Director of Surveys has consented to the correction.*

When carrying out sections 91 and 92 of *the Land Titles Act*, it is strongly recommended that the Land Titles Office personnel be consulted and procedures governing these provisions within the Land Titles Procedures Manual be adhered to. In particular, the court may direct the removal of statutory monuments or provide boundary adjustments upon application of the above mentioned Section 91 of *the Land Titles Act*. It is imperative that all stakeholder consents be obtained and the prescribed legislative procedures are carried out accordingly. ■■■►

A Message to Property Owners Who Moved/Removed Survey Monuments

The physical movement of a survey monument or boundary marker does not necessarily mean that a boundary is moved without the application of the above-mentioned legislative process towards boundary adjustments. An Alberta Land Surveyor is trained to detect these movements and be able to re-establish the property corners and boundary positions at their correct locations with confidence.

Alberta Land Surveyors are the only persons permitted by law to survey land, and determine or establish property boundaries. This is supported by Section 3 of the *Land Surveyors Act [RSA 2000 Chapter L-3]* wherein Section 3(1) states:

3(1) No person except an Alberta land surveyor, surveyor's corporation or surveyor's partnership shall engage in the practice of land surveying.

As stated in *the Land Surveyors Act*, no persons other than Alberta Land Surveyors are allowed to render opinions on property corners and boundary issues in accordance with surveying and related legislation in Alberta. Even Alberta Land Surveyors are not allowed to adjust boundaries and move or remove survey monuments without application to the legislative processes as specified by *the Surveys Act* and *Land Titles Act* as mentioned in the preceding sections.

While removal of survey monuments is an offence subject to monetary punishment, as stated in Section 50 of *the Surveys Act*, it is also costly to have the monuments replaced at the correct positions.

In addition to the above Section 50 of *the Surveys Act*, sections 428, 430(1)(b), 430(1)(c), 430(1)(d), 430(3), and 430(4) of the current *Criminal Code of Canada [RS 1985, Chapter C-46]* also suggest that one who wilfully alters or removes a boundary marker lawfully placed by a land surveyor to mark a boundary of a parcel of land is considered to be an act of mischief. This act, if found guilty of an indictable offence, is liable to imprisonment for a specific term or punishable on summary conviction [additional reference: Sections 398, 399 of *the Criminal Code of Canada [RSC 1970, Chapter C-34]*].

Landowners having knowledge and/or witnessed a third party other than an Alberta Land Surveyor moving or removing survey monuments should report this activity to the law enforcement authority with proper supporting information.

Is the Moved/Removed Monument Considered “Disturbed” or “Destroyed?”

The current Manual of Standard Practice provides the following definitions for disturbed, obliterated, and lost monuments.

Disturbed monument - A disturbed monument is one that has been moved by someone other than an Alberta Land Surveyor in the course of his duty and that can be proved beyond reasonable doubt to have been moved from its original position.

Obliterated monument - An obliterated monument is one that can be restored with confidence from traces remaining on the ground of the original monument or from other physical evidence of the position of the original monument.

Lost Monument - A lost monument is one whose position can be re-established only by its bearing and distance from some other monument or monuments to which it had previously been connected by survey.

Land surveyors are required to exercise their professional judgement in determining the true original position of a found monument. When an Alberta Land Surveyor concludes that a survey monument has been moved, while in the process of conducting a survey, it is suggested that the original monument should be placed back in its original position, giving due weight and consideration to the best available evidence and circumstances of the situation provided.

In the event that an Alberta Land Surveyor concludes that a survey monument has been removed, while in the process of conducting a survey and the original monument cannot be found, it is suggested that the land surveyor should place a new monument in its original position giving due weight and consideration to all best available evidence and circumstances of the situation provided.

In either of the above situations, additional information should be noted on the plan of survey providing future plan readers with sufficient documentary information such that the position of the monument and its original position could be discerned with confidence.

Sections 44(3) and 46(3) of *the Surveys Act* and the provisions within Part C Section 3.8 of the Manual of Standard Practice should also be adhered to in terms of the time frame required to register a plan of survey for these purposes.

Food for thought

I have been informed that some practitioners suggest that bent iron posts were “disturbed” and a new iron post was placed at a supposedly better-fit mathematical position according to the numerical bearings and distances as shown on the registered plan. This practice is not supported by sections 36, 37 and 45(4) of the *Surveys Act*. In one instance, a practitioner had to make a plan correction, within the confines of the legislative process, due to our SPR finding of a restorable (bent) post adjacent to the re-established post placed by the practitioner.

It seems we are becoming hung up on mathematics (precision) rather than exercising our professional discretion as to the original position of found evidence prescribed by law.

You Own Your License, Not Your Employer

By Dave Dediluke, BCLS

Reprinted from "The Link" Volume 29 - Number 3, September 2006

Recently I was present during a conversation between an experienced Aircraft Maintenance Engineer and a new graduate that was entering his career. During the discussion about work experience and opportunities, the veteran, of about thirty years in the profession, said: "Always remember that you own your license, not your employer. Never sign anything that says you did something under regulations that you did not despite your employer or coworker saying that everyone else does".

This sage advice applies to everyone working under statutory regulations, especially those with legislated professional status. Regulations specify the way important tasks should be done and who is qualified to do them. Believing, or advising, that it is "common practice" to circumvent or ignore what is clearly written in a regulation is naive at best. Our legal system interprets the meanings of words and phrases as what would be understood by an ordinary person with an ordinary command of the language. An understanding of a regulation based on some abstract definition of the words composing it, or a rationalization of meanings to circumvent the intent understood by an ordinary person, would be inappropriate. This has been continually reaffirmed in judicial decisions.

Advice from employers, colleagues or clients to ignore a clearly stated regulation, in favour of some nebulous interpretation of it, or incorporating a "common practice" argument should be rejected. Aside from protecting one's license to practice, reasons for rejecting the "common practice" argument include safety, security of life and property and integrity of public trust, as well as to maintain and expand a profession. Most circumventions of regulation, usually rationalized by some esoteric arguments, are consciously, or unconsciously, made for selfish reasons such as increasing profit and keeping work away from competing firms.

Circumvention of a regulation generally requires less work for those licensed and entrusted to follow it. This will affect the supply and demand equation pertaining to the applicable profession. If certain work is done by someone not licensed, or someone licensed is not doing the work that should be done, demand for the applicable license holders is reduced. This, in turn, will reduce the overall collective remuneration, notwithstanding a potential for those circumventing certain regulations to increase their individual profits at the expense of others. The attractiveness of entering a profession, as well as the attractiveness of purchasing an existing practice from someone abiding by the regulations, will therefore be decreased. In addition to the monetary considerations, when a perception exists that it is "common practice" for members of a profession to circumvent regulations, the resulting loss of respect will reduce the attractiveness of entering a profession or using it when alternatives are available.

The more attractive a profession is the greater the range of skills and interests that will be held by the people willing

to endure the work necessary to become qualified members. The result will be a broadening of collective expertise. This can soften the negative effects of technological change and economic downturns by opening up new and expanded opportunities. The less attractive a profession is, the more likely those with desirable skills and interests will find homes in other organizations that could evolve into parallel and competing professional groups.

Unfortunately, regulatory bodies cannot simply rely on everyone under their jurisdictions to follow ethical behavior so they are usually given the responsibility of addressing transgressions and promoting ethical behavior through boards and tribunals. Those that stray from the rules and make false statements can be brought into line or barred from further practice. An excuse that such a transgression was made because it is "common practice" clearly cannot be accepted.

If a statement that it is "common practice" for members to circumvent regulations is accurate, it is a manifestation of decay within the regulatory body itself. If this is the case, cynicism will replace pride of membership, the supply and demand equation will be adversely affected, those that circumvent the rules will have economic advantage over those that do not, confidence of the public including those who are considering entering the profession will decline and the profession will atrophy rather than expand. A regulatory body itself is not immune to political or legal assault if it knowingly allows false statements to become "common practice".

This erosion of a profession, caused by acceptance, or complacency, with regard to circumventing regulations may be slow and imperceptible but, if allowed to continue, will eventually change the focus of the organization from the strength of core values to appearance and fluff under the direction of outside consultants and public relation gurus. These corporate and political fashion consultants, perhaps unaware of the underlying decay, will focus on appearances and trendy cliches. A facade will be presented but the decay will continue until the professional entity is overtaken by parallel and competing entities or simply fades into oblivion. The facade may be so effective that members will believe everything is fine without recognizing the erosion due to the regulatory body's acquiescence to inappropriate behavior by calling it "common practice".

An employer that encourages, or tacitly expects, an employee to sign a document that is not true, in the common sense of the words, should be challenged. There is probably no better advice for a professional than to always remember that he or she owns the license to practice and to reject the "everyone else does it" argument. This advice not only protects the practitioner; it protects the profession. The Aircraft Maintenance Engineer gave the new member some very wise advice that all professionals should follow. 🌿

While geodetic reference frames underpin the measurements of the motions and slow deformations of the Earth's crust, these geophysical processes also systematically affect the reference frames provided as standards for geodetic surveys. In *Crustal Motion and Deformation Monitoring of the Canadian Landmass*, some of NRCan's efforts to monitor contemporary crustal dynamics across Canada are reported. Progressing from continental to smaller regional scales, the rationale, techniques, and results are outlined in this paper. While the required observational data and interpretations are fundamentally dependent on the Canadian Spatial Reference System, they in turn also contribute to the incremental improvement of its definition and maintenance.

In this era of global technologies, modern reference frames require alignment with a global "standard." Collectively realized by geodetic agencies around the world under the auspice of the International Association of Geodesy (IAG), the International Terrestrial Reference Frame provides this foundation. Recognizing the need for better coordination of international efforts to satisfy long-term requirements, the IAG has initiated the Global Geodetic Observing System (GGOS) project and has specifically tasked a working group to develop a strategy to further integrate and maintain the fundamental geodetic network of instruments and supporting infrastructure in a sustainable manner. In *Global Geodetic Observing System - Considerations for the Geodetic Network Infrastructure*, a global integration process is proposed that includes the development of a network of fundamental stations with co-located geodetic techniques and precisely determined inter-system relationships. The design of this network would exploit the strengths of each technique and minimize the weaknesses where possible. The paper summarizes the present state of the infrastructure and provides a road map to future global geodetic networks, services, and products.

In closing, I would like to thank all contributing authors, including those whose papers were not selected for publication in this Special Issue. For the papers not presented here, I look forward to their possible publication in future issues of *Geomatica*. Special thanks to Pierre Heroux who has taken on the coordination of this effort within the Geodetic Survey Division and without whom this issue would have not materialized. Finally, I would like to extend my thanks to Kelly Dean, Editor, *Geomatica* and Carol Railer, Production and Advertising Manager, for facilitating the publication of this special issue and, despite a very tight schedule, for being so accommodating at the final editing stages of this production. 🌟

Let us be mindful of the two fundamental conditions when it comes to scrutinizing survey monuments and assessing of evidence:

- (1) the monument is the original monument placed by the original land surveyor for the specific purpose; and
- (2) the monument is where the original land surveyor placed it.

If both conditions are met, the monument governs the boundary at its original position. The monument can still govern the corner, even if it may appear that a blunder has been made in placing a monument for an original survey. No amount of discrepancy between measurements and the physical location of the monument changes the fact that the monument governs, provided that the two mentioned conditions are met.

A bent statutory iron post does not necessarily mean it is disturbed, destroyed, or lost when traces or remnants of the original monument are still there, perhaps hidden away. Look thoroughly, research deeply and ask questions, for the evidence you are overlooking today will still be there tomorrow. Today is the time to think about how you want to be remembered tomorrow! 🌟

December 23, 1898

Christmas dinner on the plains

A.F. Martin, D.L.S., who is subdividing in tp. 21, Gilbert Plains, expects to be through in that vicinity by Christmas time, and then commence work in the Riding Mountain in tp. 23. r. 18, southwest of the Ochre.

At the completion of his work at the Ochre he will then proceed to the Swan decision with its party. Mr. Martin says the land of Gilbert Plains is unsurpassed in quality and that new settlers were on {his} heels to locate as fast as the land was surveyed.

A special and pleasant feature on Mr. Martin's trip to town was to procure supplies for his camp for Christmas with which he intended to give the boys a right royal feast.

"There is no place," said the veteran surveyor, "where a man enjoys his Christmas dinner like on the open plain with the broad canopy of heaven for his roof."

Gleaned from the files of J.H. Webb, SLS, Life Member



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SURVEYING FOR PROFITS

By Wayne Newell, C.M.A.

Reprinted From "Ontario Professional Surveyor" Volume 49, No. 3, Summer 2006

The Continuing Education Committee of the AOLS hosted April seminars in London, Toronto, Ottawa and Sudbury for the express purpose of assisting its members to increase profits and improve cash flow. This article will highlight the key strategies discussed at each four-hour course.

Two components of profits, risk and return on investment would be mandated if I was your financial manager.

Risk: the return you get for securing your assets and investments to ensure the success of your business. You are entitled to earn some recognition for these risks and that comes in the form of profits. Consider that employees take few or no risks and therefore do not share in this profit component.

Return: the return you get for investing your assets in your business; these come in the form of start-up capital, shareholder loans and re-invested profits. When you invest assets in other businesses you expect a good rate of return - ensure you make a good return on your invested assets in your firm.

When bidding new work, owners are prone to let their entrepreneurial emotions dictate their bid prices. While I understand this rationale, I suggest that all identifiable costs be included in each estimate and then a "BUY" amount be determined to set the final price. With this identification the actual results of the job can be compared to the original estimated costs, a necessary tool to discover the reasons behind good and poor results on a job. Your price must include ALL costs of the job. Simply defined, they are costs that would not be incurred if you were not awarded the job.

One of the problems in any business is labour productivity. We certainly cannot arbitrarily reduce the size of our workforce by laying off employees but we can implement procedures and controls that increase productivity in 15-minute segments. Look for 15-minute time savers each day. The results will be significant. You have no doubt heard of Murphy's Law but have you heard of Parkinson's Law, "Work expands to fill the time available."

I particularly enjoy discussing negotiation techniques with the key strategy being to "flinch" when prices are offered to you even though they may meet your planned prices. Flinching very subtly sends the message that you wish to enter into negotiations. Remember, that by negotiating with a given offer, you can only improve your position.

The subject of contract extras must be raised with a PreEngagement Understanding. Prior to signing a new contract, a pre-job meeting should be held with the owner and professional surveyor. You should assure them that your firm will fully abide by the contractual agreement, but that it is an absolute necessity that all parties to the contract completely agree upon how changes and additions to the work will be handled. Gross profit is defined as revenue earned from a project less the direct costs incurred to complete that project. It is prior to any overhead expenses such as management salaries, professional fees, marketing, utilities, etc.

Determining your gross profit factor

Revenue	3,000	4,000	5,000
Cost of sales	2,000	3,000	4,000
Gross margin	1,000	1,000	1,000
%	33%	25%	20%
Factor	3	4	5

Consider that your company determines it needs to hire a clerical assistant for your office at an annual cost of \$24,000. At a gross profit factor of 3, you must increase your annual revenues by \$72,000 to maintain your current level of profits. You now have the opportunity to reinforce your decision with an additional factor - the need to increase revenue by \$72,000. Will the addition of this assistant lead to the sales required to cover the additional cost?

Gross margin	Factor	New Expense	Revenue Increase Monthly	Revenue Increase Annually
33%	3	2,000	6,000	72,000
25%	4	2,000	8,000	96,000
20%	5	2,000	10,000	120,000
10%	10	2,000	20,000	240,000

I suggest you take the time to review your administration expenses from your last financial statement. Apply your GP factor to these expenses for a realization of what revenues are needed to cover these expenses. Such an exercise allows you to re-examine the need for all your expenses. When faced with the monthly or annual revenues necessary to pay these expenses, you may have good cause to review and perhaps reduce some of them.

Expense	Annual	Factor	Revenue Required	Factor	Revenue Required
Salaries	50,000	3	150,000	4	200,000
Phone	2,000	3	6,000	4	8,000
Office	2,000	3	6,000	4	8,000
Auto lease	6,000	3	18,000	4	24,000
Insurance	4,000	3	12,000	4	16,000
Interest	2,000	3	6,000	4	8,000
Prof. fees	2,000	3	6,000	4	8,000
Rent	9,000	3	27,000	4	36,000
Depreciation	2,000	3	6,000	4	8,000
	79,000		237,000		316,000

With three numbers you can develop your profit plan and revenue requirements for a year. Let's make a basic assumption - you could get a stress free, 40 hour a week job with a land surveying firm in your area with annual salary and perks around \$70,000. However, for various reasons - independence, community standing, and desire to earn more - you are determined to own your own firm.

Forecasting profits and revenue

Annual overhead expenses	100,000	100,000
Profit goal	50,000	50,000
	150,000	150,000
Gross profit factor	3	4
Revenue required	450,000	600,000

When your annual overhead is \$100,000 and your profit plan is to make \$50,000 AFTER your salary, your annual revenue is quickly identified.

Discussions with many of the participants convinced me that your prices are too low - and most recognized that fact. Reluctance to charge a price that includes all costs plus a contribution to overhead costs plus a planned profit is mandatory to stay in business. If you charge only enough to make a reasonable salary your path is clear - get a job and eliminate your risk, your headaches and your sleepless nights.

I demonstrated that a 10% across the board increase in prices with a 40% decrease in revenue would leave you a bit better off. So why not raise prices, reduce your workload and maintain your same profits? Consider the bottom line increases if you don't lose 40% of your business - it will be significant. On every \$100,000 you improve profitability by \$10,000!

Are you willing to cut your prices to increase your volume and thus earn more profit? Charts showed an extraordinary case where you double your volume, reduce your price by 50% and actually lose money. Price cutting does not work.

Everyone learned the basic procedures required to develop a 4-week cash flow forecast, the potential problems that could be revealed and the decisions to be made to avert those problems.

The courses concluded with my thoughts on how I would manage your business.

... I would ensure the following key strategies were implemented and used in order to maintain and improve your profits: an aggressive revenue drive, timely billings, assertive account collections, determined negotiating skills, timely cost reports, cash flow forecasts, practical internal controls, and postcompletion job reviews.

... I would look at your billable hours and billing rates to ensure that they were adequate to achieve your profit expectations.

... I would ensure that all billings were prepared and delivered in a timely manner - after I had reviewed each one to determine if all costs were included. When I reviewed the contracts for extras I would ask, "Is it free to me?" If not, it must be billed.

... I would ensure billings are monitored for timely payments and would aggressively pursue all accounts past their due dates. Emphasis would be placed on Unbilled Revenue.

... I would ensure that we negotiated all major material and equipment purchases for best price and delivery dates. Negotiating skills take time and practice but I am certain that job profits will improve by employing the Flinch, Refer to a Higher Authority, Split the Difference, Low Ball, Show no Emotion and Know Strengths and Weaknesses techniques.

... I would insist on employees recording their daily time by cost code and then prepare timely, effective cost reports that would guide me to corrective action prior to the job completion.

... I would forecast weekly cash flows for the next eight weeks and the following three months, since cash flows are critical to every business. These forecasts will serve as useful guides to cash shortfalls and surpluses.

... I would implement internal controls to safeguard your assets with the most notable being: signing all cheques after viewing supporting documentation, reviewing all billings, open and view all bank statements and review gross profits and cash flows on bids prior to their submission.

... I would conduct post-mortems on completed jobs to discover what went wrong, what caused the problems and how the company will avoid those issues during the next job. If a job went well, we would use this time to identify what went right and ways to recreate that experience on the next project.

... I would accept that my primary responsibility as your manager is to earn a profit. By following these strategies, I will meet that responsibility.

Wayne Newell, C.M.A. has held senior financial roles with small to medium sized companies during his 30-year management career. He can be reached by email at: waynenewell@eastlink.ca. He will be setting up a special page for professional surveyors on the following website: www.contractingworkshop.com.

You Might be Married to a Surveyor ... If

©Written by Curt Sumner

EVERYONE KNOWS ABOUT JEFF FOXWORTHYS, "YOU MIGHT BE A REDNECK ... IF"

To honor those who are married to surveyors (especially to us guys), it can be said that, "You Might be Married to a Surveyor ... If: "

- You've cooked a hot meal that goes cold before it is eaten!
- Your family's primary vehicle is a suburban!
- Family outings often include looking for survey monuments!
- You have held the "zero end/dumb end" of a measuring tape in public!
- You've paid a credit card bill for surveying equipment when you really needed a new washer and dryer!
- You know what business your husband is in, but have no idea what he does!
- Your husband can use complicated equipment and computers, but gets lost while just driving around!
- You've been driven through a snowstorm, or on a really hot day, to get to a meeting you care nothing about!
- You have spent all day learning arts & crafts that you will never use again!
- Your husband's friends are more eccentric than he is!
- You have waited all afternoon in a hotel lobby, after check-out, until your husband's meeting is over!
- You have sat through endless awards ceremonies and boring after-dinner speeches!
- If the luggage with the pink flagging tape on it coming along the baggage claim carousel belongs to you!
- You have received field boots as a Christmas gift!

YOU MIGHT BE MARRIED TO A SURVEYOR!!!!

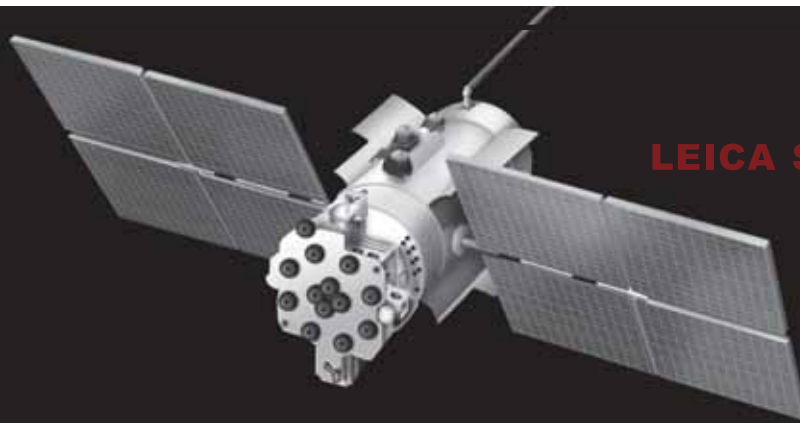
There may a couple of things among those above with which surveyors' wives can relate.

On the other hand, I'll bet they can also relate to being married to a surveyor if:

- You think your husband is the most caring person you know!
- Your husband cares more about getting it right and not being perceived to have cheated anyone, than about how much money he makes!
- Your husband respects his peers, even when he thinks they are wrong!
- Your husband cares about what happens to his profession, even after he is gone from it!
- Your husband feels a responsibility for the lives of his employees and their families!

Yes! if you are married to someone with integrity, you might be married to a surveyor!

Curtis W. Sumner is Executive Director of the American Congress of Surveying and Mapping (ACSM) - www.acsm.net



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