SLSA Corner Post

Spring 2008
Volume XXIX - Number 1

Quarterly Newsletter of the Saskatchewan Land Surveyors' Association

BUTLER SURVEY SUPPLIES LTD.

Your Partner in the Field

We provide **Support**
any time, anywhere

GPS900
- when it has to be **right**

Leica Geosystems

We sell top of the line ***products****, but it's the* ***service*** *that sets us apart.*
Butler Survey Supplies Ltd.
...Your Partner in the Field.

SRX SOKKIA™

i5000 METROTECH®

Calgary	Edmonton	Regina	Richmond	Prince George
1-800-661-1129	1-800-661-8816	(306) 525-6422	1-800-667-5944	1-866-399-8940

www.butlersurvey.com

SLSA Corner Post
Spring 2008
Volume XXIX, Number 1

SLSA Corner Post is published by the Saskatchewan Land Surveyors' Association for circulation to its members.

Deadlines for articles are the last Friday in December, March, June and September.

Address all correspondence to:

Doug Bouck, SLS (Ret.) - Editor
408 Broad Street #230
Regina, Saskatchewan S4R 1X3
Phone: 306-352-8999
Fax: 306-352-8366
e-mail: slsa@sasktel.net
web site: www.slsa.sk.ca

In this Issue

In This Issue

Regular Features

Cover Story

Although not quite a "needle in a haystack", the "survey pin in a stone pile" can be almost as elusive. Since fence lines, and therefore property lines, were the nearest and most obvious repository for stones picked off the land - usually by hand in the early days - they have since become a regular challenge for surveyors searching for survey monuments.

This photo was submitted by Gerald Johnson, SLSIT and was taken during the summer of 2007 in the Swift Current area.

President's Message

R. Dale Rosnes
SLS, P. Surv.
President

Upcoming Events

Apr 24 - 26	ALSA AGM Lake Louise, AB
May 5 - 8	ACLS AGM, Victoria, BC
May 8 - 10	ANLS AGM, St. John's, NL
May 29 - 31	SLSA AGM, Cypress Hills, SK

We have less than a couple of months left before the end of May when the 98th AGM will take place in the Cypress Hills. Halia and I have taken a couple of hikes through the hills near Fort Walsh, and we have seen crocus flowers blooming on the south facing slopes, and the Mountain Bluebirds are back busily building nests for their next brood.

It has been a real honour to serve as the President of the SLSA over the past year. Halia and I have really enjoyed travelling across Canada and meeting with the members of our sister Professional Associations. The hospitality of the other Land Surveyors we have met has been noticeable and we greatly appreciate the friendships we have made along the way. Halia and I have had the pleasure of representing the Association at three venues since the beginning of the year.

We attended the 55th ANBLS AGM in Saint John, NB at the Delta Brunswick Hotel from January 24 – 26. Jim Martin and Kathy proved to be excellent hosts. The new President is Glenn Goss, NBLS, P. Eng.. The Scholarship auction at the icebreaker received a lot of support from the membership and raised an impressive $8400 this year.

John Boyd and Eunice provided warm hospitality as they hosted the 116th AOLS AGM in Niagara Falls at the Sheraton Fallsview Hotel from February 20 – 22. Our room on the 15th floor provided an excellent view of the Niagara Falls. Jeff Talbot gave a very thorough historical presentation on the Six Nations Tract along the Grande River. Eleven new commissions were handed out at the Awards and Convocation luncheon, and a couple of service awards. More than 20 exhibitors were in attendance with ample time allowed to walk through and check out the latest technology. The new President is Kenton Campbell, OLS.

The next week we were off to the 103rd ABCLS AGM hosted by Joe and Bobbi Johnson in Kelowna at the Grand Okanagan Lakefront Resort and Conference Centre from February 26 – 29. This was a very impressive hotel with excellent rooms and facilities for the meeting and a dreamy hospitality room. There was a CPD Seminar with Dr. Brian Ballantyne as the speaker and his topic was Re-establishing Boundaries, Ambiguities and Riparian Rights. There were nine new BCLS commissions handed out at the Awards Luncheon. The Pirates of the Okanagan Dinner and Games was a very enjoyable event with many people dressed up, with prizes for the best costume. Several fines were handed out at the end of the business meeting, with the money going towards the Foundation fund. I received a fine of $20 for having a "flaming sword", but Joe Johnson graciously stepped up and paid the fine on my behalf.

The "Future of the Profession" and CBEPS continues to dominate the discussion at the President's Forum across the country. The message appears to be unanimous that the Associations want to be a part of developing a new national association, and it should be a high initiative of the CCLS to try and get it up and running within the next three years. CBEPS continues to get support with Ontario now on board. The membership of both Nova Scotia and New Brunswick have supported resolutions in favour of becoming members, and Quebec has been in discussions.

There will be six people writing their professional examinations this year. This is the most we have had writing their examinations since I received my commission in 1996. The last time we saw this many people writing would have been in 1985, when several people received their commission. There are 19 people registered as Student Land Surveyors or Land Surveyors in Training, the most I have seen in the annual register. It looks like we have a healthy number, but I don't think we can afford to be complacent in our recruitment efforts. These numbers are healthy for the short term, but what about the long term? With up to 75% of the 64 practising land surveyors listed in the annual register being expected retire in the next five to ten years, we are not yet assured of sufficient numbers to replace them. Some Land Surveyors are suggesting the economic boom Saskatchewan is currently experiencing will take care of this problem. On the other hand, if we want to make sure there will be enough people coming up through the educational system, it will be necessary to continue doing the awareness

27

ProMark 500

THE WINNING COMBINATION

GEMINI POSITIONING SYSTEMS LTD.

Competitive Advantage:

- **BLADE™ GNSS technology**
- **Enhanced RTK accuracy**
- **Wide range of communications**
- **Cable-free lightweight design**
- **Rugged base & rover solution**
- **Multi-application field terminal**

For more information:

Gemini Positioning Systems Ltd.
611 71st Avenue SE
Calgary, AB T2H 0S7
1-800-361-0978

Talon Survey Solutions
1255 38th Avenue NE
Calgary, AB T2E 6M2
1-866-608-2566

ProMark™ 500

Multi-constellation RTK Surveying by Magellan

The new ProMark™ 500 offers GPS+GLONASS+20 years of field-proven Magellan technologies. Designed by our GNSS experts, this powerful survey solution delivers state-of-the art RTK features in a light, cable-free rover that gives you maximum mobility and flexibility in the field. Its unique GNSS engine insures fast initialization, long-range accuracy, robust signal tracking, and secures future constellation evolutions.

Offering extensive equipment interoperability via the new FAST Survey™ field software, ProMark 500 is also the only survey equipment featuring a handheld GPS as field terminal ready for navigation and GIS data collection.

ProMark 500 encompasses all the RTK features that land surveyors expect for productive and reliable positioning and concentrates the best Magellan technologies for the survey market.

To learn more about the ProMark 500 winning combination, visit www.pro.magellanGPS.com today

MAGELLAN® PROFESSIONAL

Council Highlights

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

2007/2008 - Meeting #5 - Feb. 11, 2008

- CCLS Executive Director Sarah Cornette made a presentation to Council on *"The Future of the Survey Profession in Canada, a preliminary proposal from the CCLS Task Force on the Future of the Profession."*
- The president reported on his attendance at the ANBLS AGM in Saint John, N.B. January 24 – 26. Highlights from the Presidents' Forum included:
  - The AOLS have agreed to join CBEPS and the Atlantic Board of Examiners (ABOE) is giving serious consideration to joining.
  - Some presidents expressed concern that the proposed new organization being considered for the CCLS would be taking something away from the provincial associations.

Riparian Rights

- R.B. Shrivastava has held initial discussions with the members of his committee and he will be arranging a face-to-face meeting soon.
- A member of council had spoken to the new minister of justice about the issue and felt that the new government may be more receptive to the idea of changing government policy. It may be appropriate to get a briefing document to the Minister, along with a suitable background document, as soon as possible.

Revised Rules for Professional Exams

- Revised Rules for Professional Examinations, proposed by the Board of Examiners, were approved. The primary changes included:
  - Candidates must successfully pass all of their examinations, with an average of 70% or greater, within three years of completing their practical experience; or start the process over again.
  - Not all exams need to be written at the same time.
  - Once an exam has been passed, it need not be re-written except to achieve a 70% or greater average.
  - Starting in 2009, the exams will be broken up into two settings, with half the exams scheduled in March and the remainder in April.
  - The Oral Exam will only be administered after all exams have been written at least once and project reports have been submitted.
- There was a brief discussion of the relative merits of requiring applicants to complete their practical experience before being allowed to write any examination as opposed to the Alberta approach where applicants can challenge the written exams at any time during their practical experience. This matter was to be referred to the Board of Examiners for consideration.

Surveyors Educational Crate Project

- R. A. Webster provided a brief report on the status of the Surveyor's Educational Crate project. The consultant is working with a panel of SLS's in Saskatoon who will be providing input to the project but it was hoped that more members would provide input as well. In particular, they were hoping that surveyors would be able to provide personal examples that could tie in to the projects the students would be undertaking.

New Land Surveyor in Training

- A Land Surveyor in Training Agreement signed between S. Rajakumar and R. D. Rosnes, SLS, was approved.
- Two applications for membership, under the Mutual Recognition Agreement (MRA) had been approved since the last council meeting. These were:
  - M.K. Croucher of Grand Prairie, AB (R.J. Pominville supervisor)
  - B.D. Laurie of Medicine Hat, AB (B.G. Clark supervisor).

2008 Membership Numbers

- With all membership renewals in, the 2008 membership figures included:
  - 64 licensed members (one retirement)
  - 16 Sask Land Surveyors in Training
  - 2 Student Land Surveyors
  - 15 Retired Members (with three more yet to confirm their membership)

Convention Planning

- The president noted that 2008 Convention Committee Chairman Brian Burridge had met with B.G. Clark and the convention coordinator at the Cypress Hills Resort and had confirmed that all of the facilities appeared to be suitable for the event.
- 2009 Convention Chairman M.E. Putnam had been in contact with the resort operators at Elk Ridge Resort and it may be necessary for some of the delegates to take rooms in Prince Albert National Park.
- A letter had been sent, by the president, to the Lieutenant Governor of Saskatchewan inviting him to be the guest speaker at the 2010 President's Ball and asking if it would be possible to hold the President's Banquet at Government House.

  (A letter has since been received tentatively confirming the participation of the Lieutenant Governor and the availability of Saskatchewan House for the President's Banquet.)

Committee Reports

- The Education Committee would be meeting on February 20 to review a sample of Continuing Education Reports drawn for the audit.
- The Auditor's Report for 2007 was received.
- The budget for 2008 was approved and included a projected deficit of $10,000 which would be recovered from money drawn from the Surveyors' Educational Crate Fund (interim payments for the project having been drawn from general revenue.)
- A revised Suggested Schedule of Fees for 2008, as proposed by the Practice Committee, was approved.
- Committee Chairman W.L. Jamieson and at least two other SLS members represented the SLSA at the University of Calgary Career Day on February 7.
- The Centennial Projects Committee would be meeting with Ed Willett, the writer who was prepared to work on the Centennial History Book, on Wednesday, February 13 and hoped to sign a contract with him at that time. Council authorized the Centennial Projects Committee to enter into a contract with Ed Willett of Regina for the writing of a book on the history of the SLSA.

2007/2008 - Meeting #6 MARCH 13, 2008

- The primary purpose of the telephone conference meeting was to review the practical experience reports submitted by the candidates who were planning to write their professional examinations in April, 2008.
- Practical experience reports were approved for Ryan Maloney, Travis Wolfe, Regan Rayner and Daniel Cook. A subsequent teleconference meeting resulted in the approval of the practical experience report of Malcolm Vanstone.

More About Jack

Perhaps one of the most recognized faces at land survey association annual meetings in Western Canada is that of J.H."Jack" Webb, SLS (Life Member), ALS, MLS, CLS. It was out of genuine admiration and respect that we received two notes related to Jack from SLSA members in the last few weeks.

The first came from Barry Clark who, on a recent trip to Los Angeles, noted that Jack Webb appears to have his own star on the Hollywood Walk of Fame.

The second came from Ryan Maloney, SLSIT who discovered a paragraph in an article by Jack in the January, 1982 edition of SLSA Newsletter and commented **"Who needs Nostradamus?"**. The paragraph was:

> ***"To illustrate my points I want to show you my latest invention for all future surveyors. It is called the vertical position site locator hooked up to a Gyro multi-floating multi-purpose receiver. The G.M.F.M.P.R. is good for not only signals from the site locator but will accept your favourite T.V. soap movies on site, latest stock market quotations, weather forecasts and your nagging boss on the truck C.B."***

Ryan noted that, not only had Jack envisioned the use of GPS, he had predicted the Blackberry and all its abilities!

Councillor's Corner

Ron Eichel
SLS, P. Surv., ALS, P. Eng. CLS
Councillor, Year 2

Membership Demographics – How do we measure up?

According to the federal government, Saskatchewan has transited from a 'have not' to a 'have' province. For the first time in a while, Saskatchewan will not be receiving any federal transfer payments. A sure sign that we have a healthy economy. Public opinion indicates that there is an abundance of optimism, but there is also a hint of wariness. A growing robust economy brings some challenges. As everyone is aware, the house prices have increased an average of 15%. Even with this increase in housing costs, Saskatchewan is a very attractive place to live. What's not to love?

With the anticipated influx of people and development, will the membership be able to fulfil their obligations in protecting the public while serving the public and their for-profit clients?

Here are a few demographics and comparisons:

- SLSs make up 0.006% of the population with 64 active members (approximately 50 reside in Saskatchewan).
- There are 17 SLSITs of which six have existing commissions and have entered the system via the Mutual Recognition Agreement. A ratio of one SLSIT per four SLSs! This matches our Alberta counterparts.
- Six of the candidates will be writing their Professional exams this April. Let's assume that all of the candidates pass their exams, which will be a 9% increase in membership in 2009.
- I have also made a bold assumption that there will be no retirements until the centennial of the Association has passed.
- I anticipate that, on average, the number of new members will equal the number of retirees for the next few years.
- We also have two Student Land Surveyors currently completing the national accreditation through the Canadian Boards of Examiner of Professional Surveyors (CBEPS).

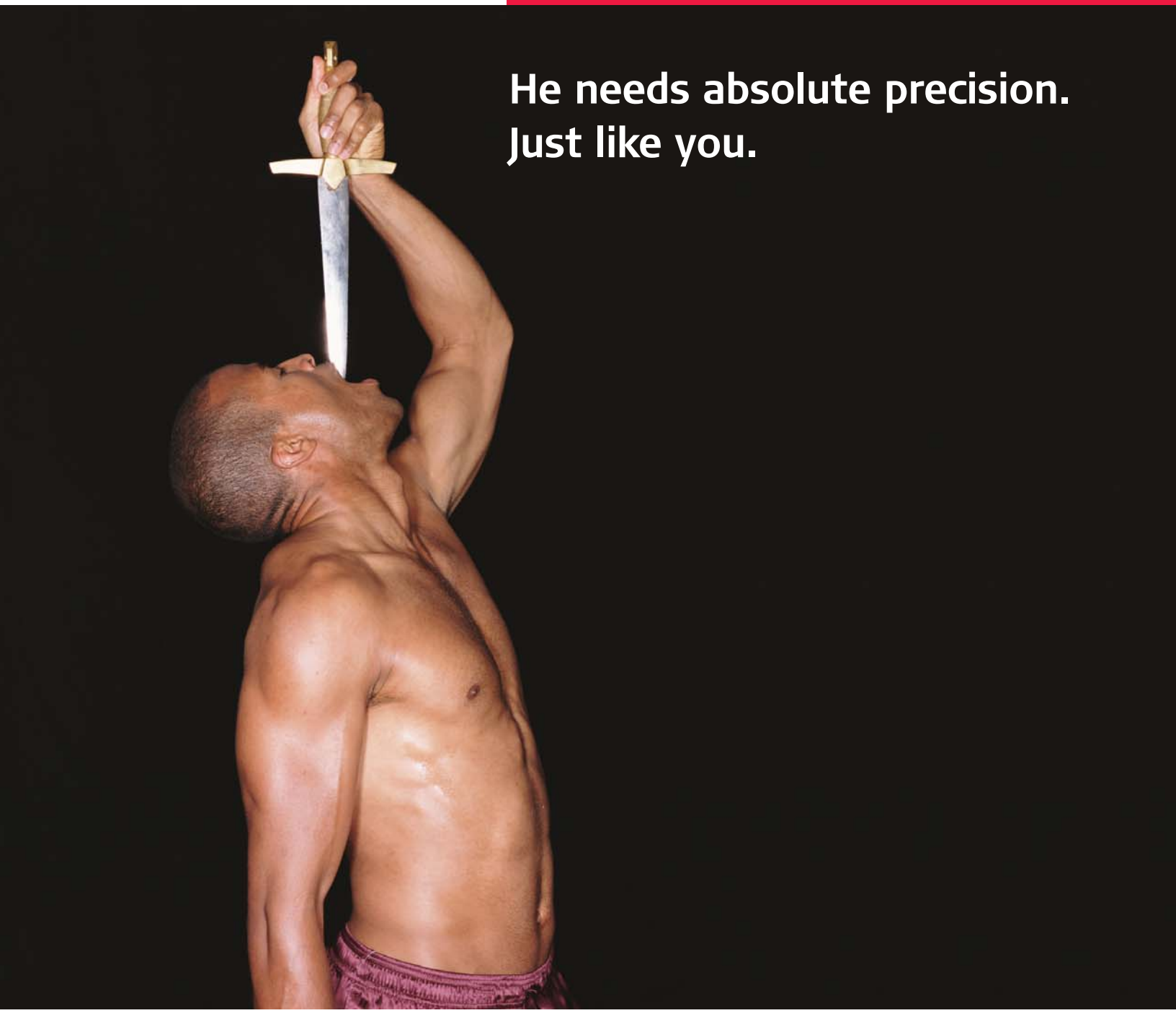
Below is comparative table that shows the current # of members per current population and also how many articled pupils there are in each of the western Provinces. The number of retirements per year will have a great impact on membership numbers. Each association is predicting large percentages of retiring members in the next ten years. Will there be enough new members to maintain total membership numbers?

The membership was addressed by the Presidents of the ALSA and ABCLS at last years AGM in Manitou with regards to the Trade and Internal Labour Mobility Agreement between Alberta and BC. The Saskatchewan government was soliciting input from various professions within Saskatchewan that would be affected by a similar Trade and Mobility Agreement if Saskatchewan were to sign on. The government eventually decided that was not the avenue to pursue. This concept will be brought up again in the near future, likely pushed from the federal level. Will labour mobility fill any void in provincial memberships that have too few members?

The Public relations committee has been working hard to promote the SLSA. This should help in the short term. The 'Surveyor in a Crate' program is a great marketing tool, but it will take longer to have an effect on membership numbers.

To sum up, with the upcoming increase in activity the membership will be very busy and will be at peak capacity for the short term but over the long term, if the initiatives for recruiting are maintained, I believe that the Association will be able to meet all of the demands.

Assoc.	# Members	% of Population	# Articled Pupils	Retirements
SLSA	64	0.006	18	?
ALSA	403	0.012	102	?
ABCLS	303	0.007	183	?
AMLS	48	0.004	14	?



At Leica Geosystems, precision is what we do.

The fact is, precision is what we've been doing for 200 years now. Professionals worldwide trust products and services from Leica Geosystems to help them capture, model, analyze, visualize and present spatial information. They know they can count on Leica Geosystems for great value, tremendous dependability and unsurpassed accuracy. Whether it's for surveying, civil engineering, construction, mining or transportation, our systems help them get their work done quickly and precisely. In short, we help them get their work done right. And we're ready to help you too. When you need absolute precision, turn to the people who've been innovating precision systems for 200 years—the people at Leica Geosystems. For more information call 1-800-746-3607 or visit www.leica-geosystems.us.

Grant Beach • Leica Geosystems Ltd. • 1-866-623-8206

- when it has to be **right**

Leica Geosystems

Looking Back - 1929 & Before

"JOTTINGS BY THE WAYSIDE" (dated 1929)

By: W.R. Reilly, PLS, DLS, SLS, ARCH (1857 - 1936)

As time rolls on we are reminded from day to day of the intensive desire to travel from place to place in the shortest space of time.

Since the first appearance of man on earth getting from place to place with the greatest possible speed and convenience has been one of his major concerns.

The whole record of historic time is fraught with the wanderings of the human race over the face of the globe. He travelled incessantly for war, for adventure and for gold. The prompting of these impulses lead to the discovery of this continent.

The call to adventure is still in the blood, but in this age of silk pyjamas, tiled baths and electric percolators, we are rapidly losing sight of what pioneering means.

The youth of today steps fourth to adventure in a beaver coat a straight eight, a flock of thermos bottles, canned delicacies, shaving lotion and a portable bath tub. What is wrong with this? Nothing. If there is a fault the fault is ours. We fail to teach the youth a true picture of first principles. When he gets well into mind the difference between the scheme that makes life a continuous joy ride, and the history of our first pioneers, who spent weeks in steerage to reach the unknown land, only then will he realize that they in their time were filling a niche in life the same as the youth of today. Our early Pioneers ventured fourth with crude equipment realizing that the task before them would be strewn with constant danger and hardship.

Early discoveries lead to the marking out and plotting of sea shores, Lakes, Rivers etc and a general survey of the country by magnetic compass.

My lot was cast in Western Ontario and during my apprenticeship time our surveys took us into the counties of Middlesex, Oxford, Elgin, Kent, Essex, Lambton and adjoining counties.

Generally speaking the land was laid out in two hundred acre lots varying in width and depth in different townships, usually thirty chains wide by sixty-six and two third chains deep.

Hardly any adjoining townships had the same survey, which were known as single front, double front, alternate front etc, as to the manner in which the survey was made, the posting done and the lots divided into one hundred acre plots the usual grant from the crown.

Roads usually, one chain wide. A Concession or a tier or belt of lots between road allowances ran clear across a township and lots were numbered consecutively from one side of a township to the other.

In many townships where old crooked stage and military roads existed before survey, similar tiers of lots paralleling the roads were laid out and designated ranges. After a number of ranges were laid out, straight concessive lines would start, which would leave a gore between the range and the concession.

Lots are all numbered from the same ends of concessions and usually are parallel to the end of the concession from which the lots are numbered. Side roads were left from a mile to a mile and a half apart.

Townships are of irregular size and shape and many gores and broken fronts occur as no regular system was followed as to size of township, direction of lines or number of lots.

One township was joined unto another in a haphazard way in many cases without regard to continuity of roads.

The whole country was solid bush at time of survey.

In most cases the side of one township became the starting point or base line for the next.

The instruments used were a magnetic compass and a Gunter's link chain. Concessions lines were run from the side of the township from which the lots were numbered, clear across the township and wood stakes scribed with the number of the lot were planted at lot corners, on one or both sides of the road, according as to whether it was a single or a double front concession. The governing line for the sides of the lots was in most cases the end of the concessions from which the lots were numbered to which line all lot lines should be parallel. In double front concessions side lines were run to the centre of the concession and the jog, if any, on account of a lot stake on one concession line not being opposite the corresponding stake on the other line, would be in the centre of the concession. In single front concessions the side lines were run straight across the concession and the jog, if any, would occur on the concession road. No side roads or side lines of lots were run in the original survey.

The variation of the Magnetic needle in this part of the country was less than two degrees, and very little if any local attraction hence compass surveys were made with a fair degree of accuracy. The trees on either side of a surveyed line

were well blazed. If a large tree stood on the line instead of being felled it would be blazed on either side facing the line with three single hacks about six inches apart below the blaze. The compass would then be set up beyond the tree and the line continued by the compass reading. As the compass needle is a very fickle thing, subject to local attraction, a steady yearly change and a varying daily change, accurate work could not be expected by its use.

Original surveys showed many bowed and crooked lines. According to Ontario law, any blazed line in the original survey was the true boundary.

The centre trees as described with three hacks below the blaze has figured in many disputes over original lines. Blocks chopped from such trees have bean taken into the court room as silent witnesses of the position of the original survey. I have re-traced many old lines allowing for the yearly variation of the needle and found original blazes and many centre trees in the heavy timbered country. This bush country has long since been cleared and it is doubtful if there is a single blaze left of the original survey in the whole of Western Ontario, from London to Windsor. The law of peaceable possession settled most disputes of old boundaries.

I had the privilege of serving my times with a surveyor who was in Canada before the advent of Railways and the general use of matches. Flint and steel produced the spark for fire and the flint lock was the only firearm in use.

Surveyors who did the original surveys worked under trying handicaps and had a hard task before them. Supplies had to be packed long distances through bush and swamp, and often their chief reliance for food depended on the game in the district.

At one time I left home and before returning in three weeks time, I made surveys in nine different townships all surveyed under different systems. Knowing the conditions under which these original surveys were made, I want to pay tribute to the work of those old timers who have long since past to their reward and trust their work shall not be fargotten.

I left home for Winnipeg in the latter part of February 1882, and a few days after arriving, the country had one of the worst blizzards experienced in twenty years. A trainload of settlers pulled into the station the night of the beginning of the storm which raged with such intense furry that it was impossible to move the coaches until after the storm abated. I was boarding in a house at the Dick and Banning Lumber Yards, just north of and adjoining the railway, opposite the old long frame station.

A couple of boarders and myself made a trip across to the station, when we struck the platform and made a dash for the door on the north side of the building, we were whirled past the end of the building and had to circle the building keeping close to the wall to make the entry on the north side. The waiting room was piled deep with snow at one end blown in at a broken pane in a window. After the storm abated, shoveling snow was the order of the day. It only took a short time to bring things back to normal.

The land boom was at that time at fever height. It seemed that about every other door on Main Street was a real estate office. Town Sites were springing up in all parts of the country.

The favored way of putting a Town Site on the market was by public auction. Two prominent auctioneers, Collican and

Winnipeg - 1881 - Looking North From Portage Avenue (Photo credit - www.gov.mb.ca/chc/archives/rearview/averill/5.html)

Wolfe were each kept busy every week-day night selling from large scale plans showing the subdivisions. These plans were tinted and bronzed in elaborate style to show to the best of advantage.

The Auction rooms were crowded to the doors and often when a lot was knocked down there would by many who would claim the bid. On the whole it was a merry time.

It was a simple matter to put a Town Site on the market. It was only necessary to have the outline of the property to be able to make a plot to cover the ground. Whether lots were on dry land or under water seemed to be of little account. Only a small percentage of the subdivision put up for sale were surveyed.

My first subdivision was 240 acres on the C.P.R. where the Railway crossed the Brokenhead River, forty miles east of Winnipeg.

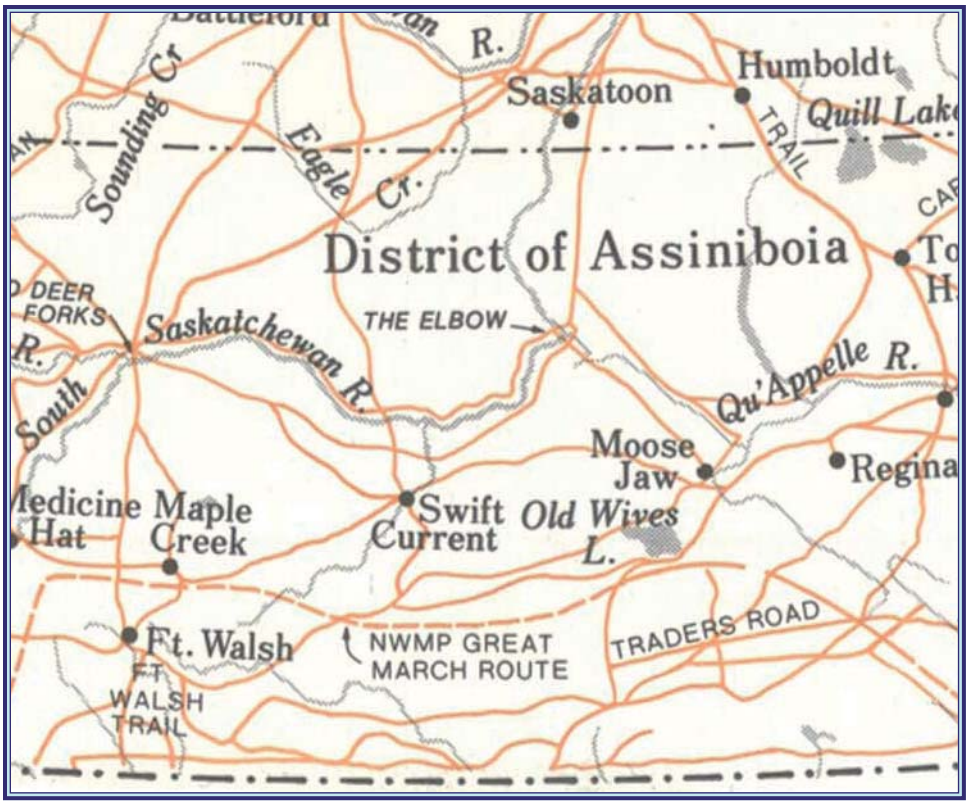
I traversed the river and run the outlines on show shoes. The snow was very deep at the time and when I came to make the survey, I found the brush out in the snow three feet high. Following the survey, I laid out a quarter section somewhere about ten miles west of Winnipeg. The reasons for making this survey was that a large part of it had been sold and the company wanted to be able to deliver title if ever called on to do so, but I do not think they ever were.

One night in June, I got my outfit and crew aboard a freight train. We were bound for Rapid City north of Brandon. We left Winnipeg at 10 o'clock at night and arrived in Brandon 5 P.M. the next day. Riding in a box car pretty well filled and a spare Railway Crew not one but all drunk, it was the roughest night I ever put in. We made the trip across Brandon to Rapid City on foot being lucky enough to engage a transport for our outfit.

I completed a survey of 800 acres into 25 foot lots. In one half section there was not a street in any direction that did not run into a slough or small lake, some places a half block under water.

When we got back to Winnipeg we found the company we had been working for busted. They had received full pay for the survey. The men got paid and I, by sheer luck, managed to get back expenses for the party which I had paid out of nay own pocket.

In the spring of 1883, I outfitted a party in Winnipeg for a subdivision survey running west from the South Saskatchewan River in Townships 19 and 20 into the Great Sand Hills. The transports were usually made up of Red River Carts and a single buckboard . Both oxen and ponies were used, but surveyors mostly used the ponies. I was fortunate in obtaining iron tired carts of a good make and a light democrat or freighter's wagon as it was then called.



Known trails in the area north of Swift Current
Photo Credit:
railways-atlas.tapor.ualberta.ca/cocoon/atlas/Images/Maps/EstablishedTrailsinWesternCanada.jpg

I loaded my outfit in a car and shipped to Waldeck then the first station east of Swift Current.

The end of the steel was then past Swift Current. Going north from Waldeck, before reaching the Swift Current Creek, I struck the old Hudson Bay trail to Edmonton, which passed through my townships, hence had little difficulty in getting on the ground.

My seasons work was uneventful. I had taken my cue in the manner of doing work, from men who had been doing the same class of work in previous years. The chaining was done with a one chain band and chainers, mound diggers and picket men would walk to and from work. Outline parties would camp on the base line, run the twelve miles north or south to the correction line, one day, and the corresponding line to the other correction line, the next day, then move camp the third day. This gave the men a twenty four mile

Big Bear Trading at Fort Pitt circa 1883 (Photo Credit - listingsca.com/common/gallery/4-0249.asp)

walk two days in succession. I soon found this to be a slow and unprofitable way at doing the work. I gave by mounders either a buckboard or saddle ponies. I drove a team in place of a single pony and buckboard and was able to carry chainmen and line men.

Land in this survey, that I classed as number one in 1883, I had the satisfaction of seeing 50 bushels of wheat to the acre, thrashed off it in 1915.

In 1884 I outfitted in Regina for a subdivision on the North Saskatchewan River at Fort Pitt. Profiting from my experience in previous years, I improved my tent and transport equipment in many ways, making light folding camp furniture.

I attached whiffletrees to the carts and used long tugs in place of the short hame tug to the shaft, this took the jar of the cart off the horses shoulders, allowing them free action and preventing sore backs and shoulders. When loading up at Swift Current, freighters told me that I could not make Fort Pitt in less then twelve or fourteen days and that my ponies would not take the loads I had put on about twelve hundred weight to a cart. I made the trip in eight days. The ponies never lost a pound nor was there a harness gall on a single pony. At Fort Pitt there was an attachment of about twenty North West Mounted Police, a Hudson Bay Store and a Post Office. On my way up I met W.F. King and Major Cotton at Battleford. Mr. King was inspecting the survey and the Major was outlining. The Major was advising me to make the best possible out of the work in hand as it would be our last for some time to come. He was nearly right, for the Rebellion the following year put a stop to the survey work of any extent for a number of years.

My survey covered a rolling to hilly country, cut with big gully creeks which ran through a deep depression into the Saskatchewan River.

I traversed many large stretches of water with flat shores and a number of deep lakes of recent formation, fringed with poplar trees. In places, green trees eight to ten inches indiameter stood in water four to six feet deep. I retraced the survey of these townships nineteen years after my first survey. The flat stretches of water had entirely disappeared and not even a hay marsh or slough showed where they had been. The lakes that were fringed with poplar were mostly dry and what was standing timber before lay in a fallen tangled weather-beaten state.

A son of Chief Big Bear who gave so much trouble in the Rebellion, stayed one night at our camp. He was on his way to see Riel at Battleford, carrying a sealed packet from the Chief to Riel. Had the warnings from men in the field to the Government, been given due consideration, the Rebellion would in all likelihood have been avoided.

William Robinson Reilly was one of the founding members of the Saskatchewan Land Surveyors Association and was granted SLS commission #007. He was born in the Village of Wardsville, County of Middlesex, Upper Canada on August 10th, 1857. His father, Francis Bell Reilly, came to Canada from the Parish of Killmore County of Armagh, Ireland. His mother, Elizabeth, was from Wardsville Village whose family had also immigrated from Ireland.

Mr. Reilly conducted surveys in Ontario and later in Western Canada as the Dominion Land Survey System was being developed. He was also trained as an architect and a steam engineer, and farmed with his son near Regina.

A more detailed biography for Mr. Reilly, prepared by J.H. Webb, can be found on the SLSA web site at:

www.slsa.sk.ca/biographies

Remembering W. M. "Bill" Schwartz, B.Sc., M.Sc., DLS, ALS, SLS (Life Member)

By. A. Carl Shiels, Executive Director

Death Notices - Regina Leader-Post - February 13, 2008

Victoria B.C.

SCHWARTZ_William M. (Bill) passed away in Victoria, BC at the age of 79. Bill was predeceased by his wife Connie in 1984, his parents Henry and Mary Schwartz, and his brothers George and John Schwartz. He is survived by his step-daughter Heather (Larry) Price of Yuma Arizona, brothers Albert (Jean) of Regina, and Gerald (Sally) of Hallonquist; sister-in-law Amelia Schwartz of Swift Current and several cousins, nieces, and nephews. Arrangements are pending.

This modest obituary sheds no real light on the person, land surveyor, computer genius and character that was Bill Schwartz , SLS (Life Member), ALS, DLS.

A somewhat clearer glimpse can be found in the following biography originally published in the September 1972 Supplement of *"Canadian Surveyor Magazine"* and now posted as Bill's biography on the ALSA member biographies web site at:

www.landsurveyinghistory.ab.ca/Characters.htm

———————

William Merriett Schwartz
(October 29, 1928 - February 1, 2008)

"Big Bill Schwartz stands out at any gathering, being distinguished by his size, his flamboyant ties and a torrent of ideas. During the coming year, by virtue of his recent election to the position of president of the Saskatchewan Land Surveyors' Association, Bill will be seen and heard at survey meetings across the land, and would like to give some slight warning of his coming.

Bill was born in Vanguard, Saskatchewan, in 1928, and raised on a farm near Hollinquist, Saskatchewan. He attended a country school with one room for eight grades, and ran through four teachers on his way through public school. He was boarded out in Prince Albert and Swift Current to attend high school and graduated as a 100-pound boy wonder. He attended the University of Saskatchewan, graduating in 1949 with a B.Sc. in engineering physics. He passed the preliminary DLS exams in 1947 and worked for the Legal Surveys Division of the federal Surveys and Mapping Branch as a summer student in 1947 under Dave Slessor on the Columbia River Project, in 1948 under Knox F. McCusker in the Yukon and in 1949 under Ralph Clark at Keno Hill.

Upon graduation, he was employed full time by Legal Surveys, was commissioned as a DLS in 1950, and was a party chief in the Yukon at the age of 21. He also qualified as an ALS later in 1950 and left the federal government to work for C.B.C. Donnelly, on a contract survey of the Northwest Territories -Alberta boundary.

From 1951 to 1954, Bill was in private practice, doing mineral claim surveys in the Yukon, He qualified as an SLS in 1953, and in 1954 was in charge of the Saskatchewan-Northwest Territories boundary survey.

In 1955 he returned to Legal Surveys and again worked on the survey of the Saskatchewan-Northwest Territories boundary until he made the mistake of stopping the tail rotor on a helicopter with his hand. This fast method of thumb amputation necessitated a trip out to hospital and Bill Blackie took over the boundary survey. In 1956, he worked in the Yukon with Bob McCurdy as his assistant. This was his final year with Legal Surveys. To clear up his office returns in a hurry, he had the memorable and outstanding assistance of Bob McCurdy, Ken Shipman and Tom Swanby (each of whom subsequently earned two commissions and a good deal of recognition).

In 1957 Bill was employed by the Saskatchewan Department of Natural Resources, as assistant to Controller of Surveys Abe Bereskin. In 1965, he returned to his studies at the University of New Brunswick, where he was also a part-time lecturer. He completed his Master's degree in surveying engineering in 1967, with a thesis on Plane Coordinate Calculations on the IBM 1620. In 1968, he succeeded Abe Bereskin as Controller of Surveys.

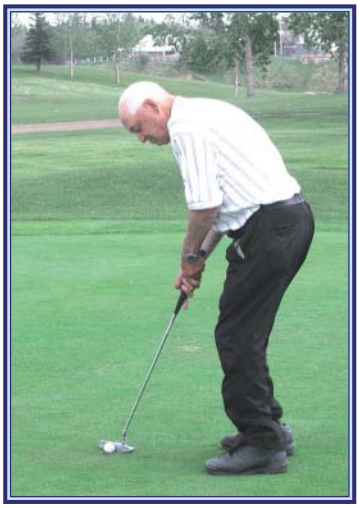
He was elected to the Council of the Saskatchewan Land Surveyors' Association in 1970, was vice-president in 1971, and president in 1972. He was elected a provincial councillor in the Canadian Institute of Surveying in 1971.

In 1961, he married Constance E. Fletcher, who laments being a golf widow, but is convinced that her Bill can do anything. Bill is proud of his stepdaughter. Heather whose postings with the Department of External Affairs have included Ottawa, New Delhi and Cologne.

Bill's major hobbies are golf and computer programming. This latter subject is of such full-time interest to him that he has taken up the sale of computer programs, and is listed as a consultant in Olivetti's sales literature. With his taste for flamboyant ties, he is delighted by the extreme range of size colour and pattern now available.

He is never slow to speak or reply. Ideas come tumbling out of him faster than objections can be brought to bear. As a member of a committee, he is liable to sound like the chairman, whether or not he actually is, by sheer force of words.

As a surveyor, his prowess is legendary; everyone who has worked with him has a story or two to tell. One of his proudest boasts has always been that he could find his way back to camp by travelling in a straight line, by day or by night, faster than his crew could arrive by following the cutline; as a rule, he was, indeed, home and eating supper when they arrived. Of course, the story they tell is of the time when he got lost, but it is the very rarity of that event that makes the story worth telling.



Bill lining up a putt at the 2003 SLSA AGM

Yes, Bill Schwartz is a character, but a clever one. This should be a year that the Saskatchewan Land Surveyors will remember."

———————

Everyone who got to know Bill throughout his career has their own stories to tell.

Ed Desnoyers, Controller of Surveys, worked with Bill for a number of years and recalls three aspects of Bill's life and career that stood out for him; Bill's skills with a computer, his flamboyance on the golf course and his peculiar giggle.

"When computers first came along, Bill was getting them to do things that even the manufacturers didn't know they could do" Ed recalls. "I think most surveyors in Saskatchewan ended up using computer programs that Bill developed, long before they were available commercially. On numerous occasions, Bill would corner one of us in the office and insist that we sit at the computer while he stood behind us explaining which keys to press to get his latest program to do some amazing new calculation. Each new discovery would be followed by one of Bill's odd giggles" Ed explained.

On a similar vein, Corner Post Editor and retired SLS Doug Bouck recalls being at a national surveyors conference at which Wang Laboratories was promoting one of its early non-mainframe computers to the survey industry. Bill apparently approached the sales reps with one of his hand-held computers at the ready and challenged them in a calculating competition. Needless to say, Bill won every competition and left the Wang representatives completely stunned at what he was able to do with a few key strokes on his hand-held calculator.

Dan Babiuk and Morley Seis, both of whom also spent many hours working with Bill, Agree that his single biggest contribution to surveying in Saskatchewan was the enthusiasm with which he embraced new technology. Dan recalls that the Department of Natural Resources was the first to bring in telurometres, geodometres and Hewlett-Packard Short Range Distance Meters, all at Bill's urging.

Apparently Bill's fascination with technology was only to supplement his innate genius at carrying out complex mathematical calculations mentally. When Morley Seis described Bill as a human calculator, Dan Babiuk was quick to cite an example. While working with Bill in a situation where they needed to take some star shots, Dan reached for the reference tables provided by the federal government to do his calculations. However, before he was finished, Bill wrote something down on a piece of paper and handed to Dan. To Dan's amazement, Bill had worked out the correct answer in his head!

On the golf course, Bill's main strength was in his putting. "On one occasion Bill boasted that he was probably the best putter in the world" said Ed Desnoyers, an assertion that may not have been all that much of an exaggeration.

I regret that I only got to know Bill during the declining years of his life. But even then there were clear indications of the man he had been. For example, he would occasionally stop by the office clutching a wade of papers with his latest writings on some aspect of surveying or survey technology - most of which was well beyond my very limited comprehension. After a short while, Bill would awkwardly take his leave, probably realizing that he was wasting his time on someone who really didn't have much of a clue.

Bill's nomination for life membership in 1997 was intended to recognize and celebrate his genius and accomplishments. But in Bill's incongruous way, he responded to the award by singing a hymn. I suspect that this was simply his way of masking his deeply emotional response to receiving such recognition.

I also remember Bill's determination - at the 2003 AGM in Moose Jaw - still playing a pretty respectable round of golf in spite of the gale force winds that were blowing at the time. By then, both of Bill's feet had been amputated due to complications associated with diabetes. Yet by steadying himself with his bum against the golf cart, he was still able to move the ball down the fairway with more accuracy than I have ever been able to achieve.

Neither time nor space can adequately paint all of the many colours that were Bill Schwartz. It can only be said that he will be unique and special in the memories of all who knew him.

Computerized Title and Human Error

By: Alec McEwen

Reprinted from "*GEOMATICA*" Vol. 61, No. 4, 2007

When an error occurs in a land title registered under a computerized systems its correction may involve much more than a simple technical procedure. An attempt to remove the error may conflict with the legislative principle that the indefeasibility of a registered title is a fundamental attribute of the Torrens system.

An interesting, if complex, example of how this conflict can arise in practice is provided by Jen-Sim Cattle Co. Ltd. v. Agricultural Credit Corporation of Saskatchewan et al. (2006), 268 D.L.R. (4th) 353, heard by the Court of Queen's Bench in Prince Albert.

In August 1985, the Bank of Nova Scotia granted a loan to Viggo Jensen, Barry Jensen and Garry Jensen for their company, V. Jensen & Sons Co-operative Stockfarm Limited. This loan, granted under the authority of the provincial Farmers' Counselling and Assistance Act and guaranteed by the Government of Saskatchewan, was secured by a collateral mortgage registered against a number of land parcels, one of which was the quarter section SW 10-48-24-W2, then owned by Viggo Jensen.

Viggo Jensen transferred the quarter section, subject to the bank's mortgage, to Barry Jensen in December 1989. When the loan later went into default, the bank requested payment from the provincial government and the bank's interest in the loan was assigned to the Agricultural Credit Corporation (ACS). A transfer of mortgage was registered against the title to the quarter section in June 1993.

The Land Titles Act, 2000, S.S. 2000, c. L-5.1, which came into effect on June 25, 2001, provided for the computerization of the land titles system in Saskatchewan. The certificate of title to the quarter section, still registered in the name of Barry Jensen, was converted from paper to electronic format. Under the new Act, transfers of mortgage are not registered against the title; instead, the name of the mortgagee is changed to that of the assignee or transferee of the mortgage. When the conversion took place, the Information Services Corporation (ISC) which, as part of its responsibilities, administers the Saskatchewan Land Titles system, neglected to change the name of the mortgagee from the bank to the ACS. This meant that the title to the quarter section, upon conversion, showed a mortgage registered in favour of the Bank of Nova Scotia, not the ACS as the bank's assignee.

Subsequently, the Rural Municipality of Prince Albert registered a tax lien against the quarter section. As part of the tax enforcement proceedings, the municipality and Barry Jensen entered into negotiations whereby the Provincial Mediation Board granted a conditional order that provided for the voluntary transfer of the quarter section by Jensen to the municipality but gave him 30 days to redeem the land by paying the amount of the tax arrears and costs.

Another error occurred when the municipality obtained a discharge of mortgage from the Bank of Nova Scotia with respect to the quarter section, even though the bank no longer held any mortgage interest in the property. The discharge was registered together with the transfer from Jensen, which meant that the municipality acquired title to the quarter section free and clear of any registered encumbrances.

Barry Jensen paid the municipality the funds needed to redeem the land in accordance with the conditional order. The money for the redemption came from Jen-Sim, a company in which Jensen is a director. Jensen then assigned his interest in the quarter section to Jen-Sim and directed the municipality to transfer the title to the company. On February 7, 2005 the municipality executed a transfer authorization in favour of Jen-Sim.

ACS, having searched the title to the quarter section on March 28, 2005 and discovered that its mortgage was no longer registered against the title, immediately contacted the ISC. As a result, a registrar's prohibition was placed against the title to prevent any registration or dealing with the land pending an inquiry by ISC into the discharge of the mortgage. On April 7, 2005, Jen-Sim submitted its transfer authorization for registration but this was rejected because of the registrar's prohibition.

In a letter dated April 26, 2005, ISC advised ACS that when title to the quarter section was converted, the mortgagee had been incorrectly identified as the Bank of Nova Scotia instead of ACS. ISC declared its inability to correct the conversion error and it lifted the registrar's prohibition. At the same time, ISS offered to reimburse ACS its costs for re-registering the mortgage, should it choose to do so. Accordingly, ACS re-registered its mortgage interest on May 2, 2005, a date when title to the quarter section was still registered in the name of the municipality.

A short time later, Jen-Sim re-submitted its transfer authorization, conditional on the registration of clear title in its name. Registration was rejected because of the re-registration of the ACS mortgage interest. Jen-Sim then applied to

the court under s. 107 of the Land Titles Act, 2000 to remove the mortgage interest from the title to the quarter section. The respondent ACS opposed the application.

Jen-Sim argued that because title to the quarter section had been transferred to the municipality free and clear of all encumbrances, the principle of indefeasibility prevented ACS from re-registering its mortgage interest against the land.

With respect to indefeasibility, Madam Justice Ryan-Froslie stated:

> *The principle of indefeasibility provides that when title to land is transferred, the new owner takes that title free and clear of all encumbrances except those registered against the title at the time of transfer. Registration is everything. It is conclusive proof of ownership and it is conclusive proof of any interests, exceptions and/or reservations that may affect ownership.*

The judge went on to say that in Saskatchewan the governing principle of land titles registration is immediate indefeasibility. The opportunity for rectifying a title is lost once a transfer of that title is registered, because at that moment the transferee becomes immediately entitled to the indefeasibility protection of the Torrens system. She pointed out that since ACS's mortgage interest was not registered against the title to the quarter section when the land was transferred by Barry Jensen to the municipality, the municipality obtained a free and clear title unless ACS can show its interest is an exception to the principle of immediate indefeasibility.

Exceptions to indefeasibility relating to clear title (that is to say, a claim of an interest in land that is less than full ownership) are governed by section 14 of the Land Titles Act, 2000 which states:

> *14. Every title is subject to:*
>
> *(a) any interest that is registered against the title pursuant to this Act or any other Act or law; and*
>
> *(b) the exceptions, reservations and interests that are implied pursuant to sections 18 to 20, whether or not those exceptions, reservations and interests are registered against the title or mentioned on any title.*

Judge Ryan-Froslie stressed that ACS had no mortgage interest under section 14(a) because it was not registered when title to the quarter section was transferred to the municipality. Nor could ACS claim a mortgage interest under sections 18 to 20, for it does not fall within any of the implied interests to which those sections apply.

ACS argued that the improper discharge of its mortgage interest was an error that should have been corrected by ISC pursuant to section 97 of the Land Titles Act, 2000. This argument failed because the section provides that the registrar may not correct an error or omission if the correction may prejudice "rights obtained in good faith for value". No such correction could be made without the possibility of prejudicing the rights of the municipality.

The judge also rejected ACS's argument that it was entitled under section 50 of the Act to re-register its mortgage interest. She pointed out that an assignment of a mortgage interest is not included in the definition of registrable interest relating to that section. Also, to allow re-registration after the transfer of title to the municipality would defeat the principle of indefeasibility and would allow a correction to the title that the registrar could not make under section 97. In addition, Jen-Sim drew the court's attention to section 131 of the Act which reads:

> *131. After a discharge of a mortgage is registered, the mortgage is not enforceable against the land, whether or not the obligation under the mortgage continues to exist.*

The judge held, therefore, that because the mortgage had been discharged it could no longer be enforced against the quarter section.

ACS argued further that section 26.1(8) of the Tax Enforcement Act, R.S.S. 1978, c. T-2, gave it a registrable interest in land after the title was transferred to the municipality. But that section can be invoked only where the 30-day redemption period has expired and the Provincial Mediation Board consents to an application for registration. Neither of those conditions existed in the present situation.

The issue of unjust enrichment was also raised. ACS alleged that since Barry Jensen, a director and shareholder of Jen-Sim, knew of ACS's mortgage interest, that knowledge should also be imputed to Jen-Sim which was unjustly taking advantage of the errors committed by ISC and the bank. Subsection 24(2) of the Land Titles Act, 2000 provides, however, that the mere knowledge of an existing unregistered interest does not constitute fraud. Judge RyanFroslie stated that such knowledge, by itself, is not sufficient to defeat the principle of indefeasibility.

After disposing of all the respondent's objections, the judge said that the registrar of land titles would be ordered to discharge the instrument that purported to re-register the ACS mortgage interest. She mentioned, however, that ACS could still seek a remedy. It had already obtained judgment against Barry Jensen personally, and might also have a claim against the Land Titles assurance fund for the loss it had suffered as a result of ISC's failure to register the correct mortgagee at the time of conversion, and against the Bank of Nova Scotia for its wrongful discharge of the mortgage.

When Do Monuments Govern?

By G.K. Allred, ALS

Reprinted from *"ALS News"* Volume 32-1 ... March 2003

The current debate in the ALSA is centred upon the question "When do monuments govern?" In particular, the argument relates to the establishment of the N 1/4 on a blind line. It was very interesting to read a 25 page, mostly verbatim, set of minutes of a recent meeting of the Ad Hoc Legislation Committee where the Committee and the Director of Surveys had an obviously extensive debate on the subject. It is clear that there are a host of different opinions on this very complex issue and. If we are to resolve it, we need to come to some consensus on some basic issues. I offer the following comments in an attempt to suggest some basic principles that need to be considered in order to ensure that we are all on the same wavelength.

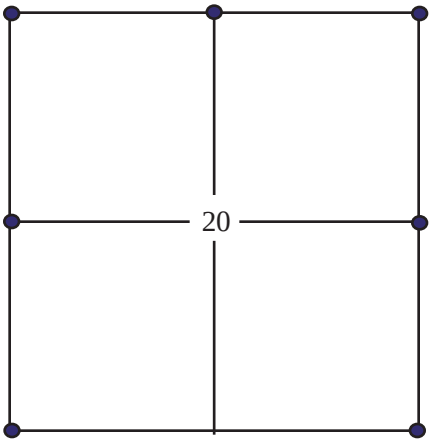
Part 2 Surveys

Under the Surveys Act, Part 1 establishes the General thrust of survey legislation and jurisdiction in Alberta. Part 2 sets out the framework for Surveys of Public Land in Unsurveyed Territory, Part 3 Surveys other than Part 2 and Part 4 deals with Miscellaneous items.

Surveys of Public Land in Unsurveyed Territory applies to the initial surveys of the Province of Alberta that subdivide Crown land into parcels that can be disposed of to the public. Without Part 2 surveys, no legal interest can pass from the Crown to a private party. Once a patent is issued to a private party, that party has a vested interest in a legally definable parcel of land. That parcel is defined by the Part 2 survey monuments placed along the road allowances and the various sections in Part 2 that verbally describe the boundaries of quarter sections, LSDs. and so on. Section 26(1) very clearly defines the position of a quarter-section corner along a blind line.

The boundaries of the SE 1/4 of section 20 are therefore fined by two monuments at the NE and SE corner of the quarter section, the midpoint between the monument at the corner of section 20 and the monument at the SE corner section 19 (after allowing for the road allowance), and intersection between that midpoint and the monument at the north 1/4 of section 20 with a straight line joining the monument at the E 1 /4 of section 20 and the E 1 /4 of section 19. (In all cases, we are speaking of original monuments.)

The legal boundaries of the SE 1/4 are abundantly clear. If a surveyor is engaged to establish those boundaries, his instructions are clear and there is only one solution.



Now, I think we all agree that we cannot sell what we do not own. Similarly, we cannot subdivide what we do not own. So if the owner engages a surveyor to subdivide the SE 20 and that surveyor makes a mistake and sets the midpoint of the south boundary of section 20, ten metres west of the midpoint, he is in effect attempting to subdivide part of the SW 20 as well as the SE 20. In fact, by the subdivision of the SE 20 and part of the SW 20 the owner of the SE 20 is illegally appropriating part of his neighbour's land. And I think we all agree in law that he cannot do that.

Now let's say that the subdivision of the SE 20 is divided into two eighty acre lots, each one with frontage on the road allowance, and rearage on the quarter line. When the owner of the SE 20 sells the most southerly lot (let's call it Lot A), a gore of 10 metres tapering to 7.5 metres of the SW 20 is also included in the lot. In law, you cannot sell what you don't own. The owner of the SW 20 still owns to the midpoint on the blind line but the bona fide purchaser of Lot A is entitled to all of Lot A which is governed by monuments on the ground.

... I would suggest that a court would rule that you can't sell what you don't own ...

The midpoint is still the midpoint and I would suggest that a court would rule that you can't sell what you don't own and the boundary of Lot A is based on the midpoint regardless of the Part 3 monuments placed. Now the purchaser of Lot A likely has an action against the owner of the SE 20 and through him the surveyor, but he has no claim against the part of the SW 20 that is purportedly within Lot A.

This is an attempt to simplify the situation but I think the principle is clear and I don't think you can legislate a retroactive provision that will take away someone's land without compensation.

Legislating a Tolerance

It may be feasible to legislate a tolerance, as Saskatchewan has done through section 29 of the Land Surveys regulations, whereby they have established certain standards of accuracy based on the dates of surveys and the standards of practice in those eras. I think the courts would accept a standard of accuracy as a means of determining where the true corner is or was originally located. Courts don't like to deal with trivialities, and if the monument was established based on reasonably acceptable standards at the time, I am sure the courts would accept that as reasonable. But blunders will not likely be accepted.

Part 2 vs. Part 3 Surveys

The argument is the same for Part 2 surveys as Part 3 surveys. In fact, the example I have described is really a Part 3 survey defining a point that is defined based on Part 2 methods and monuments.

The same principles apply - you can't subdivide what you don't own. The difference is that under Part 3, surveys for subdivisions, every corner is monumented and hence you don't have corners defined by written definitions. Essentially, a quarter section is a form of a legal description - same as a metes and bounds description or a description describing the west half of a parcel.

Standards of Accuracy vs. Evidence of Original Monumentation

Concern has been expressed where a midpoint has been established from original section corners which are now missing and have been re-established. Now, we have an entirely different situation. The midpoint which now does not fit with the re-established section corners is likely the best evidence of the location of the midpoint and may even be the best evidence for the re-establishment of the original section corners.

Ancient Blunders with Complex Subdivisions Encroaching

Let's assume the above-noted situation in the SE 20 happened sixty years ago and the entire SE 20 is now subdivided into urban lots with improvements right up to the quarter line. Now the situation is extremely complicated with multiple owners, probably no original parties to the subdivision being alive and, in general, a real mess. The courts have another couple of solutions in this regard. They could look towards adverse possession, acquiescence, estoppel, conventional line or some other remedy to resolve a problem of this magnitude. But it's not the surveyor's job to resolve the problem, only to determine the best evidence and report the facts.

Boundary Adjudication Board

When the new Surveys Act was passed in 1988, the intention of Section 9 was to establish a Boundaries Adjudication Board (BAB) to attempt to adjudicate on these types of problems or "survey errors" as they seem to be labeled. Section 9 was carefully designed so that it could be a 'court of first instance' which would hopefully give all parties an opportunity to be heard in an informal setting and, hopefully, the BAB would apply reasonable legal principles to come up with a fair solution to these types of problems. If the parties were not satisfied with the result, an appeal could be made to the courts but hopefully the Section 9 process would look after most of the cases.

Unfortunately, the administration of Section 9 seems to be avoiding the use of this method and forcing problems into the courts. Also, because of expensive and slow court procedures and relatively low land values, most of these problems likely get swept under the rug, only to be uncovered many years later when things are often much more complex and likely involving more parties.

Conclusion

This issue seems to have been raised by a concern expressed that the public should be able to rely on monuments placed by a professional land surveyor and that those monuments should govern.

In point of fact, Part 3 monuments do govern - if they are placed correctly! And that is the job of a professional surveyor to ensure that there are enough redundancies in the survey to ensure certainty that the boundary was established correctly!

Remember, redundancy is the means by which errors and blunders may be trapped!

A surveyor, just like any other professional, is engaged to render a professional opinion. This is not a question of blind trust, but rather a question of skilled practice in exercising one's professional responsibility and getting it right!

A Partial Book Review

"Historical Extracts from The Canadian Surveyor"

By T.N.H. Crump, SLS (LM)

As Reviewed By J. H. Webb, SLS (LM)

In 1969, Mr. T.N.H.Crump S.L.S., D.L.S. compiled a book for the Saskatchewan Land Surveyors Association titled "Historical Extracts from the Canadian Surveyor". The book reflects the historical past of the early Western land surveyor so students of the day, and of the future, obtain the feeling of the "old time surveyor".

The first 30 pages describe the progress of the Dominion Lands surveys across Western Canada.

The British North America Act of 1867 set out what the new Canada was all about. The new territory was "Rupert's Land" in 1869 and covered Western Canada, North to the Arctic Ocean and North East to Hudson's Bay and the Atlantic Ocean. This land was acquired by the Dominion of Canada (Britain) from the Hudson's Bay Company. A Provincial Land Surveyor, Lieutenant Colonel J.S. Denis, was given the job of devising a system of surveys, in 1869, for the vast territory in the West.

Mr. Denis established the Prime Meridian or Winnipeg Meridian, just West of Pembina, in 1869, and our present Dominion Lands survey system was commenced.

The Prime Meridian was established on the 49th parallel by observations for latitude and longitude based on many factors such as telegraphically determinations. The original concept was a rectangular system with each township nine miles square. This was changed in 1870.

It was Major A.C. Webb, Provincial land Surveyor who started easterly from the Winnipeg Meridian in 1869 to establish the baseline on the North boundary of Township 6 over to the Red River. However a party of Métis stopped him. Mr. Webb reported to the Minister of Public Works that the local Métis were irritated by the land surveys but the Government of the day disregarded these warnings. "This, it is said, was a major source of the Rebellion."

In 1870 a small portion of the territories was set aside to form the Province of Manitoba. No survey was performed on the area at that time. The then Lieutenant Governor, Sir Adam Archibald, suggested that the new survey system be fashioned after the American system but with road allowances added. The one and one half chain road allowance was created under the Dominion Land System in 1871 with each township six miles square plus the road allowances. This same year the Colony of British Columbia was declared a Province.

In the next few years the principle meridians were established, primarily by triangulation across the Prairies as follow:

- 2nd Meridian in 1875 by Lindsay Russell, D.L.S.
- 3rd Meridian in 1877 by Lindsay Russell, D.L.S.
- 4th Meridian in 1878 by J.S.Dennis (jr), D.L.S.
- 5th Meridian in 1879 by M.Aldous, D.L.S.

The initial observations, to obtain Longitude, was supposed to be based on the dependency of the telegraph but due to breakdowns on both the land telegraph and the C.P.R. telegraph lines the accuracy was unreliable and were not used. The establishment of the Meridians was primarily based on a series of triangulates or the survey of a system of blocks.

In 1882 the territory of Rupert's Land was divided into four provisional districts. They were Assiniboia, Saskatchewan, Alberta and Athabaska. The use of Iron posts to mark corners was introduced in 1882.

The 1883 Dominion Land surveys saw 27,000,000 acres of surveyed lands in western Canada which ranks high in magnitude in the history of land subdivision in any country. The surveys included 119 survey parties, 1200 men and 1200 horses measuring 81,300 surveyed miles.

The accuracy of these early surveys was often criticized by both government officials and the general public but one need only examine more recent surveys which, on the whole, shows these old monuments were fairly accurate and many of these corners still exist and govern. The usual error in a mile is about one foot. Please consider the equipment used and the end results are good. Yes the original surveys might have been crude in comparison with todays methods but even today human errors always creep in.

Maybe some day we will have an accurate coordinate system.

Executive Director's Note: a limited number of copies of "Historical Extracts from The Canadian Surveyor" are available for the asking from the SLSA office.

Meet the Newest Member of the Leica System 1200 Family

Search | Lock | Measure

Here is what the ⊕ means:

- ⊕ Greater range of reflectorless EDM – up to 1000 m
- ⊕ Accuracy to reflectors ±1 mm + 2 ppm up to 3000 m
- ⊕ High-resolution color display
- ⊕ Faster lock features

Introducing Leica TPS1200+, the fastest one-person total station in the world

Leica TPS1200+ is, without a doubt, the most comprehensive, everyday-use instrument available in the market. Whether you're doing land surveying, bridge monitoring, or construction, the performance provides your team with a big plus. This new family member pulls its own weight in every configuration. Robotic and manual versions guarantee you have the right tool for your job.

Take one out for a spin with your local Leica Geosystems representative today, or visit us online at www.leicaus.com/bigplus to view ALL the specs.

People you trust ■ Products you rely on ■ Service you count on

Visit www.leicaus.com/bigplus
or call 1-800-746-3607 for more information

Grant Beach • Leica Geosystems Ltd. • 1-866-623-8206

- when it has to be **right**

Leica Geosystems

Monitor structural movement in any kind of city. Well, almost any kind.

Introducing our most powerful surveying and monitoring system yet. The Trimble® S8™ Total Station. A top-of-the-line performer, it offers the ultimate in flexibility and surveying precision. The Trimble S8 also packs a punch with structural monitoring capabilities ideal for handling a wide range of applications, from tunneling to transportation, with unsurpassed ease and accuracy.

Featuring innovative new FineLock™ technology, the Trimble S8 can detect any structural movement—crucial, when working in high-consequence situations. Add to this, state-of-the-art software for lightning fast data analysis, and you have a total package certain to expand your options and your business, instantly.

Learn more about the all-powerful Trimble S8 for yourself.
Visit www.trimble.com/S8

Trimble®

TRIMBLE NAVIGATION LTD.
Tel: 1.800.563.7184 Fax: 1.416.252.8635 Email; info_trimble_canada@trimble.com

Architectural model courtesy of Archetype 3D and Riverfront Park.

Improving field crew productivity

Eliminate Base Stations!

Cansel Survey Equipment has launched Can-Net, a GPS reference station network across Canada that provides GPS data for real-time or post-processed applications.

Key Benefits

- Users require only a rover receiver, data collector and cell phone
- Hardware costs are virtually cut in half for new users
- Productivity increases are gained through elimination of base station set up
- Reduced theft risk—no base station to worry about
- Base station set up errors are eliminated
- Radio problems are eliminated
- Cable-free when using Trimble 5800 or R8 receivers

Trimble R8 GNSS Receiver

- 72-channel, multi-frequency GNSS receiver, antenna, and radio combined in one compact unit
- Supports GPS L2C and L5; GLONASS L1/L2

Trimble
Authorised Distribution Partner

Trimble 2007 DIMENSIONS
November 5 — 7, 2007
Mirage Hotel, Las Vegas
www.trimbleevents.com

1-888-222-6735 • www.cansel.ca

Cansel

Vancouver • Edmonton • Calgary • Winnipeg • Toronto • Ottawa • Montreal • Quebec • Halifax

— COMPLETE LINE OF SUPPLIES & ACCESSORIES —
— ON-SITE WARRANTY SERVICE FACILITY —

TOPCON

GPT-3000W Series
Reflectorless Total Station

- up to 1200 Meter Reflectorless range
- Bluetooth® Communications
- Precise measurements
- Dual Laser optics
- Visible laser pointer

starting from
$ 8,153

CST Optima Prism

- 0/-30mm offset
- 2-1/2" (62.5mm) polycarbonate prism
- Aluminum holder, target and yoke
- 5/8" x 11 bayonet adapter
- Lifetime warranty

150-0065 ..... $189.00

Heavy-Duty Quick Clamp
Wood/Fiberglass
Tripod $185.00

DUTCH HILL 1200 TRIPODS $295.00

SECO Aluminum Prism Pole w/TwistLoc

The SECO TwistLoc and TwistLoc with Vial (TLV) are wear resistant for long life. The soft rubber knob is easy to tighten or loosen, even wearing gloves.

150-0413 8.5' foot (2.5m) TLV $149.00
150-0836 12' foot (3.65m) TLV $209.00
150-0835 15.5' foot (4.7m) TLV $225.00

Surveyor's Cruiser Vest

Available in S,M,L,XL, XXL

Starting at $99.95

LMS LAND MEASUREMENT SYSTEMS INC.

1.877.291.7503
www.lmssurvey.com

CALGARY (403) 291-9575
EDMONTON (780) 444-8819
WINNIPEG (204) 231-0613
VANCOUVER (604) 460-9575

An Introduction to Civil Procedure and Evidence for the Land Surveyor

by John Briscoe

Reprinted from "Wisconsin Professional Surveyor" No. 212 December, 2007

The Course of a Lawsuit

1. The filing of a complaint begins a lawsuit. "Plaintiff ' is the person or entity (partnership, corporation, state, federal government, etc.) who files the complaint. A "defendant" is a party sued. In a dispute concerning land title or boundaries, the complaint alleges, in varying ways and degrees of particularness, that plaintiff is the owner of the disputed land and defendant is not.

   There are different forms of actions (lawsuits) in which the title to or boundaries of real property may be determined. Some of them are:

   a) **Quiet title**: the most common form of title action. The action may be in **personam** (i.e., against named defendants only) or in rem (against all persons, known or unknown, claiming an interest in the real property). There are special kinds of quiet-title actions for suing government entities, because of the doctrine of sovereign immunity. See, e.g., 28 United States Code §2409a (quiet title against United States). Historically an action in equity, and hence there is no jury. The judge acts as fact-finder.

   b) **Ejectment:** essentially to recover possession of real property; title must necessarily be determined, for if plaintiff cannot show title in himself, he is not entitled to possession. Historically an action at law, and thus either party is entitled to a jury.

   c) **Trespass:** to recover money damages for injury to real property (e.g., flooding, removing coal, etc.). Title or boundaries may be placed in issue, since if plaintiff does not own the land "trespassed" upon, he is entitled to nothing. Like ejectment, a legal as opposed to equitable action; thus a jury is available.

   d) **Injunction:** may be used to prohibit defendants from doing some act, such as asserting title to the disputed land, removing timber or coal, etc. An equitable action; no jury.

   e) **Declaratory Relief:** available in federal and many state courts; may be used in many kinds of controversies, including disputes over title or boundaries. In many states, one advantage of this form of action is priority in getting to trial. This form of action is a modern creature of statute; in title cases, where it closely resembles the quiet-title form of action, a jury is ordinarily unavailable.

2. **Answer and Cross-Complaint**: The answer is defendant's reply to the complaint; in a title case, it consists principally of a denial that plaintiff owns the property in question. A cross-complaint is frequently filed, for without one (in a quiet-title action, for example) defendant may defeat plaintiff's title but in many states cannot have title quieted in himself

3. **Discovery:** procedures whereby each party can learn (with many exceptions) the other party's contentions and knowledge of the facts of the case. Frequently used discovery procedures:

   a) Interrogatories—written questions to other party, to be answered in writing, and under oath.

   b) Depositions—the taking of the sworn oral testimony of a witness, without the presence of a judge.

   c) Requests to Inspect Property—while in certain states not necessary for land surveyor performing work in connection with a survey (see, e.g., Calif. Civil Code §846.5), useful in cases of other experts who do not enjoy the special status of surveyors.

4. **Trial:** Some of the proceedings and concepts of trial:

   a) Order of Proof (with vast discretion in judge): (1) plaintiff presents his case first, then (2) defendant, then (3) plaintiff ("rebuttal"), then (4) defendant ("surrebuttal"). Rebuttal and surrebuttal are limited to matters raised by opponent during the immediately preceding phase of case.

   b) Burden of Production—To be distinguished from burden of proof. In general, burden to introduce the minimum evidence necessary to avoid a finding against you on the issue. A somewhat technical concept.

c) Burden of Proof (or of Persuasion). An example: To have title quieted in himself, plaintiff must establish each element necessary to his title (e.g., government patent and chain of title through to himself) by a "preponderance of the evidence." Similarly, to have title quieted in himself, a defendant who has filed a cross-complaint must also establish each element necessary to his case (e.g., 5 years' possession, payment of taxes, etc.) by a "preponderance of the evidence." The degree of proof required in most civil cases, a preponderance of the evidence, is to be distinguished from the degree required of the prosecution in criminal cases: proof "beyond a reasonable doubt." Some issues in civil cases require a degree of proof somewhere between these two: "clear and convincing evidence."

d) Examination (questioning) of witnesses:

Direct examination: by attorney calling the witness. No "leading questions" allowed, unless the witness is "hostile," i.e., the opposing party or one somehow affiliated with him. A leading question is one that suggests the answer ("isn't it true that ....")

Cross examination: by opposing attorney. Leading questions allowed. Limited to scope of direct examination.

Re-direct examination: like direct examination; limited to scope of cross-examination.

Re-cross examination: like cross-examination; limited to scope of re-direct examination.

5. Appeal: After judgment in trial court, the loser may appeal to a higher court. Appeal is generally limited to questions of law, and no new facts may be introduced, with one major exception: facts which may be "judicially noticed." Such "facts" include plats and field notes of government surveys, patents, etc.

General Comments for the Land Surveyor Preparing to Testify

1. Learn as much of the rules of evidence as possible. Your knowledge of these rules can help you as well as your attorney.

a) Relevance - Relevant evidence is evidence which tends either to prove or disprove a factual matter in issue.

b) Authentication - How can you establish that a document is what you say it is (e.g., field notes of a particular survey)? Continued on page 25

c) Best evidence rule - If a document you wish to introduce is a copy, where is the original? This rule prohibits the introduction of a copy of a document; it has several exceptions.

d) Hearsay - You contend the river cut through an ox-bow during the 1860's, and you find a newspaper account of a devastating flood in 1865. How can this help you, if at all? On what matters may a surveyor reasonably rely in his profession? Definition of hearsay: Evidence of a statement made out of court, offered to prove the truth of the statement.

e) The rule requiring first-hand knowledge - Often confused with hearsay rule. Before a "percipient" (as opposed to expert) witness may testify to an event it must be shown he observed (heard, etc.) it. Thus one who would testify to what occurred at the scene of an automobile accident must first be shown to have been there and observed the events.

f) The opinion rule - The rule arose at common law that a witness could testify only to what he perceived, and could not offer his opinion. (Is the statement, "The defendant was drunk," an expression of opinion? Must the witness testify, "Defendant smelled of alcohol, walked unsteadily," etc.?) Later, when a subject entailing knowledge beyond that of the ordinary layman was in issue (e.g., the cause of a train collision), the opinion testimony of one shown to be an expert in the field was allowed.

g) Judicial notice - It is by virtue of this principle that a litigant need not formally prove, for example, that the earth is round, or that Christmas falls on December 25. Official acts of the government, as in renouncing a treaty, are also recognized by a court through use of this principle.

Whenever you wish to introduce into evidence a government document, obtain a certified copy. Certification obviates authentication, best-evidence-rule, and some hearsay problems.

2. Insist that your attorney depose the surveyor who will testify for the opponent. If you do not know the reasoning of your opponent, the results can be disastrous.

3. Do not let your attorney persuade you to testify beyond either your competence or your knowledge. Examples:

   a) "My opinion is based in part on the instructions to the deputy surveyors" (which, not having been reviewed, or even looked for, are found to have been burned in the San Francisco fire of 1906).

   b) "My opinion is based in part on the Treaty of Guadalupe Hidalgo," etc.

   Aside from damaging your reputation, such forays can destroy the otherwise solid aspects of your presentation.

4. In giving your qualifications, emphasize those that pertain most directly to the testimony you are about to give. If your testimony relates to the recovery of an original corner, it is not particularly important that you have done 200 site surveys for construction projects.

5. If you feel someone else is better suited to the task, e.g., a geologist, an expert in monument recovery, say so. Your candor will do far more for your esteem in the community than undertaking a project that may be beyond your competence. Also, when you later assert that a task is within your ability, you will have the full confidence of your attorney and the other experts.

6. Perform the tasks requested, but don't hesitate to offer suggestions for investigation, argument, etc. The land surveyor's perspective can be extremely valuable to the attorney and to other experts.

7. When you are cross-examined, be direct. When appropriate, answer firmly, even when the answer may appear harmful to your position. "You are correct, sir." "Certainly." (That is not to say you shouldn't balk at a question which assumes something untrue: "Have you stopped beating your wife?") This kind of directness conveys your confidence in your position, and bolsters your credibility. In any event, thorough preparation should have disclosed any weaknesses in your position and developed the best explanation for them.

8. Strive to be fully prepared on even picayune matters, but if your memory fails, admit it promptly. ("Sir, could you explain how mean sea level, Sea Level Datum 1929, and the National Geodetic Vertical Datum differ?")

This article is one of many that Mr. Brisco wrote and presented at surveying seminars in the western states in the early '80s. He has granted us permission to copy the article and tells us it was the basis of a book he has since written on the subject, and that he continues to give seminars on legal issues for surveyors.

Words of Wisdom from Winston Churchill

Reprinted from "Treasure State Surveyor"
Volume XXXVII, January 2008 Issue I

"Courage is what it takes to stand up and speak, courage is also what it takes to sit down and listen."

"You have enemies? Good. That means you've stood up for something, sometime in your life."

"It is always wise to look ahead, but difficult to look further than you can see."

"Perhaps it is better to be irresponsible and right, than to be responsible and wrong."

"Success consists of going from failure to failure without loss of enthusiasm."

"A pessimist sees the difficulty in every opportunity, an optimist sees the opportunity in every difficulty."

"We make a living by what we get, but we make a life by what we give."

"History will be kind to me for I intend to write it."

"A fanatic is one who can't change his mind and won't change the subject."

"A politician needs the ability to fore-tell what is going to happen tomorrow, next week, next month, and next year. And to have the ability afterwards to explain why it didn't happen."

"Attitude is a little thing that makes a big difference."

"I have never developed indigestion from eating my words."

"If we open a quarrel between past and present, we shall find that we have lost the future."

Public Relations

By Bruce Drake, ALS

Reprinted from "ALS News" – December 2007, Vol. 36-4

Although this is my second term serving on the Public Relations Committee, this is my first opportunity to submit an article. The typical first article for ALS News usually involves phrases like "Webster's dictionary defines...," or "On the advice of Brian Munday...," or "past issues of ALS News have dealt with...." Not being one to buck a successful trend, I am choosing option three.

The past two years of ALS News Public Relations Committee articles have dealt with getting the message out. Issues such as recruiting new members to our profession, promoting our profession and our professional image to the public, and addressing challenges to the future of our profession have been raised and discussed by past and current Committee members. These topics, and the discussions they generate, demonstrate our members' broad commitment to getting our message out.

I do worry, however, that sometimes we focus so much on getting the message out that we forget to let messages come back in. I always reflect on this whenever I open our Manual of Standard Practice, and re-read the Code of Ethics, especially Clause 1 (with commentary):

> *"An Alberta Land Surveyor shall serve society, his clientele and his profession with the ultimate objective of contributing to the knowledge of land, to the better management of land and to the preservation of peaceful and lawful enjoyment of land.*
>
> *• This public interest must be greater than the interest of any individual client of the Alberta Land Surveyor...."*

I have often commented to employees that when you read this clause, society is listed before clientele. What does this mean in daily practice? Whose role is it to ensure that this service to society is being met? What role, if any, does our administrative and technical staff play in this? Does serving the public interest always mean carrying out a survey, or is there something else we can do? Is it possible that the best way to serve the public is to sometimes do nothing? In our daily practice, what if we spent less time promoting and more time listening?

One of the most influential books I have ever read, and re-read, is *"How to Win Friends and Influence People"* by Dale Carnegie. Written in 1936, the book contains many ideas that are still valid today. The core of the book's message involves avoiding conflict, finding common ground, and resolving issues before they escalate into intractable situations. Valuable tools for a professional that is often called to stand between two landowners!

We have all received calls from landowners, or other members of the public with questions regarding surveys, survey crews, or boundary issues. When I get these calls, I try to understand not only the issue being presented by the caller but the issue behind the call. This involves listening, asking questions, and most importantly, relating to the caller.

Has one of our crews, in the performance of its work, failed to show courtesy and respect to the public, or were they just trying to do their job as quickly as possible? Has one of our administrative staff been so convinced the paperwork was correct, that they came across as abrupt and harsh?

Sometimes, we get calls because the caller is frustrated and needs someone to listen to their frustrations. An example will help illustrate the point.

I was with a junior crew, reviewing evidence for a boundary survey of a quarter section. We parked our trucks off of a main road in an approach, about 75 metres from a quarter pin to be found.

While reviewing plans, a water truck pulled up and asked if we could move a bit so he could deliver water to a residence. We moved our trucks to the sides of the approach, into a field, as there was high traffic on the road, and no safe place to park on the shoulder.

My party chief and I found the posts we were looking for, and were discussing what additional evidence was needed. I looked up to see a gentleman walking (stomping might be a better descriptor) towards

us, obviously in a high state of agitation. He asked who was in charge, and when I took responsibility, he proceeded to launch into a tirade about how sick and tired he was having his driveway used to store equipment, change diapers, do drugs and, in general, ruin his life. This was his day to defend his property against all invaders, and we were his enemy.

I did the only thing possible in the situation. I listened.

He told me he was tired of having his driveway blocked.

I agreed, and said that was why I had moved out of the way of his water truck.

He told me how he had single-handedly shut down the construction project on the other side of the road.

I agreed that I didn't need my project shut down.

He complained that there was so much traffic on the adjoining road, that he felt safety was an issue.

I agreed that safety was one of my primary concerns. At this point I asked, based upon his local knowledge, where did he think a safe place would be to park my trucks?

Now that he had his chance to vent, he told me he felt that the best place to park while near his property was exactly where we were parked.

I thanked him for his help, and he went away happy in the knowledge that he had put me in my place, and was gracious enough to allow me to continue doing exactly what I was doing anyway.

In preparing this example, I noticed that I had used ten of the Twelve Ways to Win People to Your Way of Thinking outlined in Carnegie's book. Not too bad for 71 year-old advice. And all we had to do was listen, see his point, and go on about our business.

Our service to the public as a self-governing profession is a tremendous responsibility. Our training, skills and knowledge should be used for the public.

Sometimes, all the public needs is an audience. We should make sure that is part of what we do. This is not to say the public is always right. If they were, we wouldn't be needed. Rather, the public has the right to an opinion.

2 - President's Message

promotions and recruitment campaigns at the career fairs in the high schools.

The population of Saskatchewan has swelled to over one million people, and it is having an effect on the real estate industry. The heightened real estate activity in Saskatchewan in 2007 has resulted in Information Services Corporation (ISC) reporting record profits, and all indications are the market will continue to be strong throughout 2008. The RBC Financial Group, in its Provincial Outlook report, is predicting Saskatchewan will see growth in new home construction in 2008. The report is also predicting that Saskatchewan will be the leader in economic growth for the next two years. I heard on the news that the average house price in Saskatoon is higher than in Edmonton where the market has softened somewhat. The Co-op Refinery-Upgrader Complex in Regina, and the Potash Corporation's recently announced plans to expand and upgrade their facilities over the next few years, have both hit the headlines, as well as the sale of IPSCO. Highways and Infrastructure has a record budget of $513 million for over 1,400 kilometres of construction and maintenance projects. These are all indications that a lot of construction activity can be expected over the next few years.

Premier Brad Wall's promotion of the oil and gas industry and his pledge to make no changes to the royalty structure appears to be paying off. Saskatchewan Energy and Resources is achieving record breaking sales of Crown petroleum and natural gas rights after their April sale raised $265 million. The February land sale raised $197 million, breaking the previous record of $85 million that had stood for 14 years. The Bakken oil play in the Weyburn-Estevan area is dominating the sales followed by the Shaunavon oil play in the Swift Current area.

It has been both a privilege and a pleasure to serve as your President over the past year. The council members and our public member Lloyd Gillies deserve a lot of thanks for their understanding, patience and dedication to the Association and to me over the past year. Carl Shiels deserves a big expression of THANKS!!! for all the hard work and dedication he has put into his work for the Association during my term as President.

I have found the experience of serving as President to be an eye opening and learning one as I travelled across Canada. I would strongly encourage any members who have not yet served as President, not to hesitate in stepping forward to be nominated for the position.

Avoiding the Profit Squeeze

By Pro-Form Insurance Services

Reprinted from "The Link" – December 2007

The following material is provided for information purposes only. Before taking any action that could have legal or other important consequences, speak with a qualified professional who can provide guidance that considers your own unique circumstances.

You are nearing project completion. Overall, its been a pretty successful and trouble-free venture - but it hasn't been perfect. Your client hit you with a few surprise project add-ons that resulted in a bit of scope creep. You've had to put in a few extra hours and pay overtime to both your staff and your sub consultants. Plus, your costs for fuel, equipment and supplies are sure a lot more than you anticipated.

Suddenly it hits you. The extra time and money you've put into this project is taken a sizable bite out of your projected profits. Any more surprises and you may not be making a profit at all. You went into the work with a pretty tight margin in the first place because you really wanted to work with this new client, hoping for more lucrative work in the future. But now your rather low bid isn't looking like such a smart idea. There's a possibility you may be losing money on this deal.

So what do you do? Do you start taking shortcuts to squeeze as much profit out the project as possible? If you avoid any glaring errors or omissions the client will probably not notice that a little quality control is being sacrificed.

Do you, instead, ask your client for an increase in fees due to the scope creep that occurred during the project? The client may understand, or it may consider such a move highly unprofessional.

Or, do you simply bite the bullet? Do you continue to perform all services asked for and sacrifice rightfully earned profit to keep your client happy?

None of these three options is ideal. The best option is to avoid this predicament in the first place. Here are a few tips to help you ensure that you end up with a satisfied client and an adequate profit at project completion.

Develop a Full Scope of Services

Developing a comprehensive scope of services is an essential first step to basic project and budget management. The scope should identify exactly what you are being paid to do as a design consultant and, equally important, what you are not being paid to do. A comprehensive scope allows you to budget time for your services more effectively and, as a consequence, quote a more accurate and adequate fee.

Discuss your scope of services with your client. Explain clearly the full scope of services you feel is necessary for a successful project. If the client chooses to forgo recommended services, document your client's decision in writing, explaining that those services were recommended and offered. If the client asks for extended services, this gives you ammunition for establishing an adequate and itemized budget.

Do not let your client forego services that you feel are critical to a successful project. In the event of a future claim, a judge or jury is likely to believe a plaintiff's argument that you, as an experienced professional, were in a far better position to know what was and was not needed for successful project completion. Accordingly, you could be found negligent because you did not insist upon performing a critical service whose omission feasibly allowed a problem to occur. Never mind that you told the client that the service was needed. Never mind that the client expressly said the service would be unnecessary or performed by others. You will likely be held liable.

Charge an Adequate Fee

Don't undersell your services. Sure, there is always the temptation to shave a few dollars off of your bid in order to increase your chances of getting the job. But do you really want a client who is looking for the lowest bid?

Keep abreast of prevailing fees in your industry and locale. Is your fee structure in line considering your areas of expertise and years in service? When was the last time you increased your fees? Have your costs increased for subconsultants, overhead and other expenses? Balance these factors with what you think the market will bear.

Similarly, if you are asked to provide cost estimates in your bid, be as realistic and thorough as possible. Make sure you are using up-to-date figures for materials, systems, etc. Present these figures as "opinions of probable costs." Let your client know these are not guarantees and that actual costs may differ.

Document All Changes in Scope

Consider this scenario: The project's design phase is complete and you present the client with an unanticipated, several-thousand-dollar bill for a wide array of changes you did not bother to document at the time each was performed. Some of these changes are the result of add-on

requests from the client once the design work began. Others are the result of your own oversights that didn't become apparent until your design work commenced.

How do you suppose the client reacts to these added charges? Does he say, "No problem!" and merrily sign the invoice to authorize payment? Or does he say, "What's this? Had I known this work involved an extra fee, I never would have authorized it!"

Too often, the latter attitude prevails, creating the seed from which claims and lawsuits emerge. The client can refuse to pay, and you very well could wind up having to sue the client for payment of additional services. The client's likely response would be to sue you for negligence. Alternately, to keep the client happy, you could simply eat the extras and hope for a break-even project when all of your unbudgeted bills are paid.

To avoid this problem, it is critical to document every change in scope, including its cost. When the client authorizes you to go beyond the original scope, prepare a written change order or memo of acknowledgement indicating what the extra comprises and how much it will cost to perform. Be sure that your form or memo references the basic contract, so all its terms and conditions apply.

Whenever possible, obtain the client's acceptance of the change order in writing. By presenting your overall change budget buttressed by individual, signed change orders, your client will be far more willing to pay the extra cost and far less likely to sue you for negligence. Better yet, submit your change-order bills on a regular basis, so you can avoid the presentation of a mountain of additional charges created from multiple changes over the life of the project.

Ask For a Contingency Fund

Relatively few projects evolve exactly as originally planned. Educate your client about the possibility that he or she will be required to pay for a certain threshold percentage of project omissions or errors, and encourage the client to plan for the resultant extra costs by setting up a contingency fund.

A contingency fund establishes a certain percentage of the project budget to cover the normal "extra" costs that pop up in almost every project despite your best efforts to provide an accurate budget and perform to the prevailing standard of care. The percentage set aside in the fund should take into account the size, complexity and duration of the project. A 5%-10% contingency fund is not unusual for a standard project while a larger fund may be necessary for a highly innovative project with many unknowns. Also, try to negotiate a clause in your contact which states that your client will not sue you for extra costs that are within reasonable range of the contingency amount.

All changes paid for by the contingency fund need to be documented. To an extent, these added fees will fall into the category of "known unknowns," and, because they will have been budgeted, they should create little cause for concern.

When Necessary, Bite the Bullet

Biting the bullet means providing everything the client expects or has been led to expect (via the scope of services) at the agreed-to fee. The logic for biting the bullet is basic: It is better to keep the client happy than to make the client unhappy, thereby risking loss of the client -- and client referrals. More to the point, the dollar loss associated with performing professionally - i.e., applying the appropriate amount of quality control - is a prudent investment in risk management, especially given the dispute costs associated with litigation.

But biting the bullet should not be your first choice. Many clients have been in similar financial situations themselves and will be sympathetic for pragmatic reasons: They understand that firms performing services at a loss are probably not going to perform those services as well as they otherwise could, to the client's ultimate detriment.

In short, your first choice should be speaking with your client to obtain the amount to which you believe you are entitled. In many cases, clients are willing to pay the additional amount, in full or at least in part. In some cases, they pay nothing at all, but --even then -- quality control should not be sacrificed. Professional performance is your top priority. By taking this approach, you should avoid problems, retain a client for the future, and learn an important lesson.

Can We Be of Assistance?

We may be able to help you by providing referrals to consultants, and by providing guidance relative to insurance issues, and even to certain preventives, from construction observation through the development and application of sound human resources management policies and procedures. Please call on us for assistance. We're a member of the Professional Liability Agents Network (PLAN). We're here to help ...

Pro-Form Insurance Services

15 Allstate Parkway, Suite 220

Markham, ON, L3R 5B4

Phone: 905-305-1054

Fax: 905-305-1093

Web Site: www. proforminsurance. ca.

What is our Legacy?

By Bob Wallace, ALS

Reprinted from "ALS News" – December 2007 – Volume 36-4

In Alberta we are planting pins in the ground (defining boundaries) at unprecedented rate. The big question is, how many of these remain over time?

Landowners rely on these pins to construct improvements, including houses, garages, fences and other landscaping features. The survey pins let them know the limits of the land they own. Those associated with development are also concerned with boundary locations to ensure that what is being constructed is done so in the proper location. Those involved in the energy industry realize the safety issues created if a pipeline is not put within the right-of-way boundaries.

As land in Alberta becomes more expensive, boundaries become more crucial, together with our job as surveyors, to define these locations.

I believe we have a large problem with the preservation of survey pins in all sectors of the province, but primarily in the urban areas. In the energy industry, boundaries are usually well staked and machine operators understand what a survey pin is and its importance to the task they are performing.

This is not the case in the towns and cities. The only group of people that understands the importance of survey pins is the surveyors themselves. Part of the blame is the system and the remainder is a lack of understanding of the importance of a survey pin. In Alberta, there is also very little consequence for the removal of a survey pin.

Our system of only posting a subdivision once prior to the registration of a survey plan, in many cases, leaves a very small percentage of survey pins remaining. Those that are left are damaged and unreliable. In some subdivisions, there are no pins remaining whatsoever. This is typically bare land condominiums where considerable paving, concrete poured and landscaping is completed after the plan has been posted.

In delayed posting plans, pins are often planted prior to landscaping being completed and the same problem exists with pins being removed and damaged, but perhaps not to the same extent.

In Ontario, subdivisions have development agreements requiring the developer to post a bond that is used to repost the subdivision after construction is complete. The result is a complete survey fabric that can be used for future boundary determination. Would this work in Alberta? Perhaps this may work, as well as other options—one being a coordinate based cadastre.

In many older areas, the disappearing survey fabric is making boundary re-establishment much more difficult and uncertain. The public demands one boundary, not uncertain opinions from two or more surveyors who are trying to piece together a complicated jigsaw puzzle with missing pieces.

The largest obstacle, as I see it, is the lack of understanding of the importance of survey markers by everyone. The ALSA has done a great job of heightening the awareness of its members. Maybe it is time to change course and educate people on boundaries and the importance of survey markers. Developers and municipalities must make an effort to preserve survey pins and implement penalties for those who damage or remove pins. The ALSA must develop a system to allow for the simple re-establishment of a removed or damaged pin.

The City of Winnipeg is proactive in preserving survey pins and enforces penalties to those who damage or remove pins. New Brunswick has a similar system.

Our municipalities are unaware of this issue and remain a large contributor to the problem with infrastructure construction which removes survey pins in large numbers.

In Calgary, 16th Avenue has been widened, destroying old survey evidence which dates back 100 years. No effort was made to reference and witness this evidence, even after requests by concerned surveyors. It wasn't in the budget.

The ALSA continues to dialogue with the municipal and provincial governments on an ongoing basis. This topic must be raised and solutions found and implemented.

Is this an ALSA problem? Partly, because we are the keepers of the survey fabric. It is also the problem of whoever destroys or disturbs monuments. It is also the responsibility of our provincial government who charges fees for the registration of titles and the creation of new land parcels. Part of the integrity of the Torrens System is its structure in the ground. The title insurance companies would have us ignore these issues, build where we want and sweep it under the rug under the guise of a title insurance policy.

As surveyors, being on the front lines, you must be proactive in the area you work to ensure that the survey fabric is preserved and your local government, developers and construction companies are aware of survey markers and that they leave them alone. In a circumstance where that is impossible, there must be a provision to restore the damaged monument.

That would be our legacy!

Fences as Boundary Evidence

by Dexter M. Brinker

Reprinted from "*Wisconsin Professional Surveyor*" No. 212, December 2007

One of the few truly professional services offered by the land surveyor is the analysis of existing land boundary evidence. Perhaps the hardest question he has to answer is, "When is a fence a boundary monument, and when is it just a fence?" The following discussion will not solve the problem but will outline for the beginning land surveyor some of the main considerations facing him and the profession as a whole when dealing with boundary fences.

Early in my gyrations as a land surveyor I heard the expression, "Oh, he's just a fence-line surveyor." From the way it was said, 1 knew it wasn't a compliment. The implication was that the person being referred to would assume that existing fences were in the right place (that is, on the property boundaries), make the measurements necessary to delineate these fences, and furnish the client a pretty map showing everything in order. Obviously, this method eliminated the need for either record or monument searches and gave this surveyor a great price advantage over the one who insisted on performing all of those wonderful and professional acts of searching and evaluating! Since I was young and idealistic, I determined that I would never resort to being a "fence-line surveyor."

I also formulated "Brinker's Law of Fences," namely, "All land surveyors, lawyers, landowners, and judges will evaluate the same fence differently."

A few years later, however, I found myself involved in restoring a section corner. The original stone was probably part of someone's fireplace, but there was a good assortment of right-of-way fences that seemed to perpetuate the original location of the corner. I knew that if I measured from the nearest available monuments and did a lot of questionable proportioning, I would surely come up with a different location which would probably not be as valid as the one I already had and which would certainly cause a lot of trouble for all adjoining landowners. So, all of a sudden, I became a "fence-line surveyor."

Good, Bad, or Questionable Fences

As years went by, I learned that there were "good fences," "bad fences," and "questionable fences." I also formulated "Brinker's Law of Fences," namely, "All land surveyors, lawyers, landowners, and judges will evaluate the same fence differently." All of which brings up the basic question, "Why does anyone want to be a land surveyor and take the risk of making fence line decisions?" If you insist on being a land surveyor, you had better know your fences!

A very pertinent remark was made by A. C. Mulford in his booklet, "Boundaries and Landmarks." He said, "Loose, faulty and ignorant conveyances, the use of perishable landmarks or no landmarks at all, the temptation to build fences 'off line' for a dozen reasons, good and bad, and innumerable other things have conspired to render the boundaries of land the most uncertain of all things."

In an expansion of this idea, Russell E. Kastelle presented a very interesting gaper at the ACSM 1985 Fall Convention in Indianapolis. His discussion, entitled "Fence Lines, Title Lines and Property Lines," explains some of the reasons why fences often are not where you might expect them to be. On the other hand, you must not ignore the possibility that fence lines may be the best possible collateral evidence preserving previous survey monument locations. In some cases the fence may actually define the original boundary intent.

Some Guidelines for Evaluating Problem Fences

The fundamental problem is being able to prove, or at least develop a preponderance of evidence to show that the fence can be relied on. Not an easy task! However, here are a few guidelines to help you evaluate problem fences:

(1) Try to date the fence. Sometimes the material and condition will help you determine the age. Examine the part that is in the ground for rust or rot. Compare with fences of known age.

(2) Ask adjoiners and nearby residents if they know the history of the fence in question.

(3) Search records for names of previous landowners in the vicinity. Send them a short letter explaining your need and a brief set of questions for them to answer. Perhaps you would want to ask them to phone you collect if they have pertinent information.

(4) Study aerial photographs if available. Fence lines are amazingly visible, especially if animals have walked along them.

(5) Try to visualize the terrain, vegetation, land values, and usual surveying techniques at the time the fence was built.

(6) Study the differences between agreement fences, fences of convenience, fences of acquiescence, fences of adverse possession, and fences built at a time when one party owned the land on both sides.

(7) If at all possible, learn whether the fence was built before or after conveyance, and whether it was built before or after a survey. These facts may help establish the intent of the conveyance. However, in all cases, the possibility of a defective survey must be considered.

(8) Remember that before 1919 many land surveys were done by engineers and other "non-surveyors," but the resulting fence lines, built in good faith, may indeed be title lines even though recorded dimensions do not agree with ground evidence. Master your state statutes and case law on the subject and learn the fencing customs peculiar to your region.

(9) Even if the fence were built after a proper survey by a competent licensed land surveyor, you will have to deal with the problem of "acceptable positional tolerance at the time the survey was done."

Keep in mind that many physical objects or conditions, other than fences, may be considered as collateral evidence. These include, but are not limited to, retaining walls, building walls, party walls, hedges, roads, utilities, changes in sidewalk construction, paths worn by animals along previous fences, rows of rocks thrown from cultivated fields, and variations in vegetation. All should be subjected to close scrutiny on the chance that they may indicate where an ancient boundary was.

If a group of fences seems to fit a recorded plat but does not agree with a survey monument, consider the possibility that the monument may be wrong!

Whether restoring aliquot lines in the public land survey system or ancient boundaries created by any other method, never disregard a fence that may be more than a fence; it may be a survey monument. Conversely, do not assume that every fence is a boundary; do your homework!

Examples of Fence Problems

Once I was retained by an irate landowner who wanted me to assure him that the fence which he had recently built was in the correct position. It was a beautiful redwood fence solidly set in concrete, but the neighbor claimed it was on his property. I did a meticulous survey to establish the lot line. However, before setting the lot corners I got out not only my dip needle but also my trusty shovel. No response on the dip needle, but the shovel revealed a brass rod at each end of the lot line within 0.02 ft. of where I would have set my markers. These corners were set long before numbered markers were required, but the brass rods were a "trade-mark" of an earlier surveyor in the area known to have done quality work. I felt good about my survey but had to inform my client that the fence was, indeed, a foot into his neighbor's land. "How," I asked my client, "did you establish the line for your fence?" "Well," he said, "I bisected the distance between our garage roofs." I guess that has to be a classic example of a "bad fence."

Let us now consider an example of a "good fence," but one not completely free of problems. Several years ago my wife and I were negotiating to buy an 80-acre (more or less) parcel of land described in government survey terminology (i.e., the 5112 SW 1/4 of a section). We told the realtor we would buy it if he could acquire for us a road easement across an adjoiner's land to give us access to a nearby county road. The realtor was successful, but in describing the easement relied on an incomplete and defective land survey. Neither monument which controlled the boundary from which the easement started was in existence, and it appears that a theoretical tie was made to an existing quarter corner about 1500 ft. away using the still too prevalent assumption that all sections are exactly a mile on each side and are perfectly square.

Some time later, after we had completed the purchase of the land, our new neighbor and I met on the ground and agreed on the intent of the easement location as marked by several centerline stakes. I proceeded to build a fence on the sideline of the easement at the prescribed distance from the centerline. Later, when the road was built, the original survey markers were lost, but as far as our neighbor and we are concerned, this is a "good fence"; that is, it is in the intended location.

However, consider what could happen if we both sold our land before the statutory acquiescence period (20 years in Colorado) expires, and one of the new owners insisted on a resurvey of the easement location. The discrepancy between the record and field location is so great that the easement could easily be moved 100 ft. from its present and proper location unless the new surveyor accepted the fence as collateral evidence defining the original survey. It is very likely that some land surveyors would, indeed, accept the fence, but others would rely on the recorded description. In addition, the uncertainty of the starting boundary, coupled with confusion over the basis of bearings, could lead to a wide assortment of solutions. Hence the new owners would probably end up turning their problem over to lawyers and courts with no assurance of ending up with the correct decision.

In our particular case, I hope to avoid such future problems by recording a boundary agreement plat, signed by our neighbors and us, with an appropriate note indicating that the fence, as built, is to control over the recorded verbal description.

Digital Data Transmission: Security and Safeguards

By Knud E. Hermansen and Carlton Brown

Reprinted from *"The Nevada Traverse"* Volume 34 - Number 2 ... 2007

As seen in "The Link" Volume 30, Number 4, December, 2007

There are few surveying and engineering firms that have not had to transmit or been asked to transfer surveying and engineering data in electronic format. The requests for electronic surveying documents rather than paper documents are expected to grow.

Many procedures employed by a firm to insure data accuracy and integrity using paper documents are now outdated in the digital age. In this age of data transmission, illicit data swapping, data alteration, and even entire counterfeit digital documents can be produced without easy detection. Image-editing tools can make pixel by pixel changes that alter the font, color, intensity, size, shape, and placement information without visual recognition.

Accordingly, new procedures must be considered and employed.

Any procedure for the transmittal of digital data should address four aspects:

1. authentication,
2. data integrity,
3. end-to-end accountability, and
4. fraud prevention or detection of fraud.

Authentication addresses whether the document is genuine. Previously, the use of a watermark on paper, seal, signature, etc. was used to authenticate the document issued by the surveyor or engineer (though not necessarily the contents of the document). Thus, a plan that contained a seal and signature of the professional issued in the stream of commerce could be relied upon. The presence of the seal and signature provided authentication to the reliant party that the source of the plan was a professional.

While a seal and signature can be used to authenticate a document's source, the seal and signature do not address data integrity. Data integrity deals with the validity of the data within the document. For example, were the format, color, lines or words within the document added or altered after leaving the creator's possession but before being used by a reliant party (e.g., public)? In the past, the difficulty of alteration without removing or defacing the signature and seal made authenticity and data integrity almost synonymous. This is not true any more.

End-to-end accountability addresses the ability of both the sender and user to guard against unauthorized modifications or additions to the digital data. In the past, end-to-end accountability was assuaged by use of the United States Postal Service. While there are numerous examples of postal service misfeasance, the number of problems were so low as to give both the sender and receiver considerable comfort. Now, data is sent through numerous routers and third parties. Data corruption occurs along with viruses, worms, and trojan horses that can attach to the file and infect computers and systems. Fortunately, this problem is being addressed by inexpensive anti-virus software, firewalls, etc.

Finally, fraud detection or prevention deals with both, making it difficult to perpetuate fraud on the one hand. and easing its detection if fraud is present on the other hand. In the past, the high cost of printing or skill of the forger made undetectable fraud unlikely. Now, the availability of inexpensive software that does pixel-by-pixel changes has made undetectable fraud likely.

Accordingly, a procedure for the transmittal of digital data should address three concerns (assuming the professional and user have anti-virus software and firewalls):

1. assurance of the unaltered substance of the document;
2. the authenticity of the sender; and
3. the inability or impracticability of falsifying or altering the contents without detection.

There are several procedures and techniques that are available to the surveyor and engineer to deal with one or more of these concerns.

Embedded Information

Historically a watermark, seal, or signature was used to authenticate a document. Only the sender had that paper, seal, or unique signature (for a watermark detection, a reader would hold the paper up to a light source to view the watermark in order to authenticate the document). Rather than embed a logo in the paper fabric, digital embedding places security identifiers in the data that are unique to the sender and vary with the digital document (i.e., digital watermarking).

Digital watermarking injects information within the transferred document that is read by security software.

The digital watermarking often consists of imperceptible or unnoticeable vectors within the digital elements found throughout the document, or sometimes concentrated within a decorative motif. In other words, it may be in the form of pseudo-random digital noise in the data or part of a decorative element. In any event, the code, wherever found, can only be detected and decoded by special software. The content of the motif or the aggregate of the imperceptible changes can only be detected and read by the receiver's software. The software will verify the authenticity of the document and identity of the sender, thereby making alterations detectible to the user.

Even if a forger is aware that embedded information exists, there is little likelihood the forger can identify the code or find ways to vary the code to match the changes that have been made by illicit actions. Using a simplified example, an embedded digital code attached within this article may contain the word or letter count for the entire document. If the end user's count of the words or letters in the document they have received does not match the word or letter count within the embedded code, the user can presume alterations have been made.

Embedded digital codes have the advantage of allowing the receiver to authenticate the document, providing a forensic analysis if the document has been altered, and determining the identity of the issuer by the contents within the embedded information. The disadvantage of embedded information is that the sender and receiver must have the appropriate hardware and software to make and interpret the embedded information.

For additional information about embedded digital information, the reader can view websites of some of the companies that use this technology:

www.digimarc.com
www.enseal.co.uk
www.mediasec.com

Digital Signatures

Digital signatures are a form of cryptography (transforming messages into seemingly random forms of data and back to the original form again). Digital signatures have two different keys: 1) private and 2) public. The private key is generated by software in the possession of the sender. The public key is used in software in the possession of the receiver that interprets the encrypted message.

The private key turns the data into seemingly unintelligible form during transmission, while the public key turns the unintelligible form back into readable form. The public key can be sent to the end user or published on an on-line repository usually maintained by a trustworthy third party. A simplistic example would be for the sender's private key to be a series of numbers or code that generate the number 13. The public key would be the number 13. If the sender's document did not generate the number 13, it could not have been sent by the proper party.

Fixed Format - Probably the most common manner of secure digital transmission is done by fixing the form of the data into a proprietary format. Adobe PDF is probably the most widely recognized proprietary format for transmission of digital data. In this case, fixing the format of the data requires the purchase of proprietary software (Adobe Acrobat Distiller). On the other hand, reading the proprietary format is done by a free reader available to anyone for downloading.

Summary

Surveyors and engineers who are sending digital information should consider adopting some of the software safeguards outlined in this article. Commercial software is available that not only fixes the format, but provides digital signatures and other security measures that can be employed in digital document transfer.

Knud E. Hermansen, PLS, PE, Esq. is a professor in the College of Engineering at the University of Maine.

Carlton Brown, PLS, PE is an assistant professor in the College of Engineering at the University of Maine.

Nominees for Council 2008 - 2009

David Lee Gurnsey, Nominee for Vice-president

- Born Moose Jaw, SK
- Graduated Central High School, 1973
- Graduated STI - Diploma, Survey Technology, 1975
- Articled to W.J. Schoenfeld (#226)
- SLS Commission #239, 1982
- CLS Commission, 1996
- SLSA President, 1988
- Chairman, Board of Examiners for SLS - 1998 to 2007
- Employed with Condon Survey Group - 1975 to 2007
- Vice-president, ALTUS Geomatics, 2008
- Married to Linda
- Daughters Marie & Carrie

Prepared to Take the SLSA Into Its Second Century

When Dave Gurnsey accepted past-president Bob Webster's invitation to let his name stand for vice-president at the 2008 Annual General Meeting, it was with the full realization that it could mean his name going into the history books as the member who presided over the Centennial Anniversary of the Saskatchewan Land Surveyors' Association.

This would not be Dave's first stint in the presidential cycle of the SLSA but it would be his longest. He had been 'fast-tracked' into the president's chair in 1987 when Murray Skelton became Executive Director.

While presiding over the association during his first time around, Dave was able to welcome two new commissioned members, Peter Unger and Alikhan Hasham. Also in that year, the annual meeting in Saskatoon saw the annual fees increased from $700 to $800 (they had increased from $550 the year before) and the role of executive director, filled by Murray Skelton, SLS, became a paid contract position. The concept of a "Suggested Schedule of Fees" replaced the former "Minimum Schedule of Fees" which had ceased to be an option in the face of growing concern from government regulators.

That was also the year in which a motion from the floor at the annual meeting was passed establishing a requirement for all members practising in Saskatchewan to have an office in the province. The restriction was subsequently overturned by the courts and has since been made even more implausible by the Mutual Recognition Agreement, and more recently by the Trade Investment and Labour Mobility Agreement, both of which are aimed at eliminating all possible barriers to inter-provincial trade and labour mobility. As it turned out, Dave was appointed the SLSA representative to work on the inter-association committees dealing with both of those agreements.

In Dave's address to the members at the 1988 AGM he pointed out that:

> *"Our association has just come through one of the greatest periods of growth in its history, comparable to the 1950's. Out of 103 active members on our annual register, there are 49 who have been commissioned as a Saskatchewan Land Surveyor for 10 years or less."*

Ironically, the membership of the association has declined significantly in recent years as those recently commissioned members in 1988 are now approaching retirement. On the other hand, with eighteen Saskatchewan Land Surveyors in Training on the register, and a growing number of students interested in the revitalized Student Land Surveyor category, by the time 2010 rolls around the association is sure to see a rebound in membership numbers. Such growth will be spurred on by both the association and individual survey companies taking a more pro-active approach to attracting students into the profession. The fact that the economy of Saskatchewan is expected to lead the country in the next year or two should also create a climate conducive to reaching that objective.

Hopefully, the president who presides over the 2010 annual meeting will be able convey the same notes of optimism that Dave presented in 1988, as the association moves forward into it's second century.

Nominees for Council 2008 - 2009

Lee Anders Andersen
Nominee for Councillor

- Born Meadow Lake, SK
- Graduated Carpenter High School, 1992
- Graduated U. of C. - BSc., Geomatics Engineering, 1997
- Articled to W. L. Jamieson (#217)
- SLS Commission #281, 2000
- ALS Commission #721, 2004
- Employed with Tri-City Surveys Ltd. in Saskatoon until 2001
- Employed with Interprovincial Surveys Ltd. in Lloydminster 2001 - present
- Enjoys hockey, fishing & hunting

Jack Stewart Redding
Nominee for Councillor

- Born North Battleford, SK
- Graduated U. of S. - BSc., 1972
- Graduated STI - Diploma, Surveying Technology, 1973
- Articled to A.G. Reimer (#192)
- SLS Commission #229, 1979
- Employed with Coursier, Reimer Surveys, Prince Albert, SK
- Employed with Reimer & Redding Surveys, Prince Albert, SK
- Employed with Tri-City Surveys, Prince Albert, SK
- Married to Fiona
- Daughter Sarah

The Cypress Hills

A Vantage Point To The Recent - And More Distant - Past

By A. Carl Shiels, Executive Director

Visitors who travel across the prairies, along the #1 Trans-Canada Highway, are often left with the impression that this is a vast expanse of boring, flat land. Even those who cast their gaze to the south in the area around Piapot, Saskatchewan and get a hint of the height of the Cypress Hills will completely miss the fact that they are geologically, topographically, archeologically and historically a very unique part of Canada.

The Cypress Hills rise more than 600 metres above the surrounding prairie to a maximum elevation of 1,466 metres above sea level and were an island in a sea of ice during the Wisconsin Glacial Period that lasted approximately 100,000 years and ended between 10,000 and 15,000 years ago. As a result of that special status, there are flora and fauna in the hills that are more consistent with those found much further west in the Rocky Mountains. There are believed to be eighteen species of orchids growing in the hills, some of which are rarely found anywhere else in Canada .

The conglomerate cliffs in the west block of the Cypress Hills Inter-Provincial Park are a photographer's paradise but they also tell a visual story of the geology of the hills.

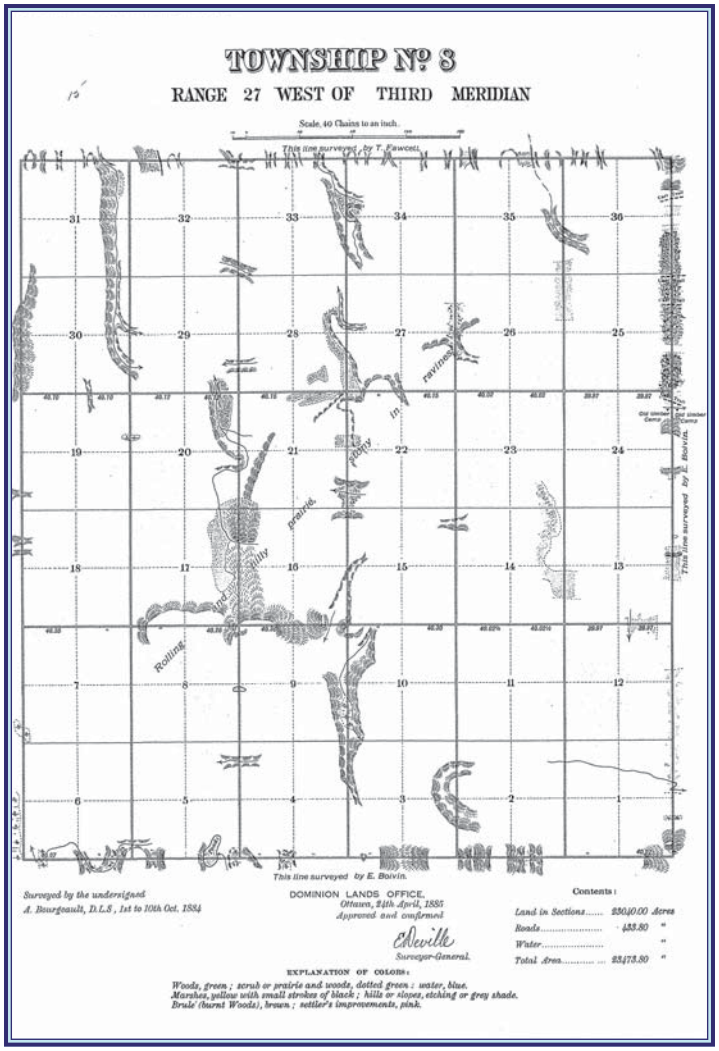
In more recent times, the hills were a favourite winter refuge for the nomadic plains natives because of the abundance of wild game, fuel - the Lodge Pole pine trees that could also be used to build their lodges - and the warm Chinook winds that would frequently extend east from the Rocky Mountains providing welcome relief from long cold winters.

The early interaction between the white man and the native inhabitants of the area saw a number of acts of inhumanity including the Cypress Hills Massacre in which a group of white wolf hunters and whisky traders murdered several dozen Assiniboine men, women and children, because they had incorrectly assumed they had been stealing horses.

Historic Fort Walsh, as an early base for the Northwest Mounted Police, has its own stories to tell including the October 1877 meeting at which Lakota Chief Sitting Bull met with representatives of the American government to negotiate the conditions of his return to the U.S. after his humiliating and decisive defeat of General Custer in 1876.

When the area around the Cypress Hills was first surveyed, the township plan was simply imposed upon the remarkable landscape as it had in most other areas of Saskatchewan and Alberta. Copies of plans provided by Controller of Surveys Ed Desnoyers indicates that Twp 8 Rge 26 W3 was first surveyed by Elz. Boivin, DLS between June and August of 1884. The first edition of the Township plan was Approved and Confirmed on April 29, 1885 and shows several old cart trails through the hills, the location of an old timber camp, and the houses of Andrew Elliotte and William Mills. This serves as a reminder that there had been significant white settlement and development in the area even before the land was surveyed.

The plan for Twp 8 Rge 27 W3 indicates that it was first surveyed by A. Bourgeault, DLS between October 1 and 10 of 1884 and the first edition of the township plan was Approved and Confirmed on April 24, 1885. Mr. Fawcett, DLS



surveyed the North boundary of both townships two years earlier - in 1882.

The interface between those early surveys and the early history of the area is still evident there today. "It is not uncommon to find pits and mounds in the virgin prairie of the Cypress Hills right next to numerous teepee rings" recalls Ed Desnoyers from his personal experience conducting surveys in the area. This was echoed by Jill Burridge, SLS who is just getting to know the area. "We frequently have to relocate the sites of oil wells in the hills in order to avoid interfering with archeologically significant sites" said Jill.

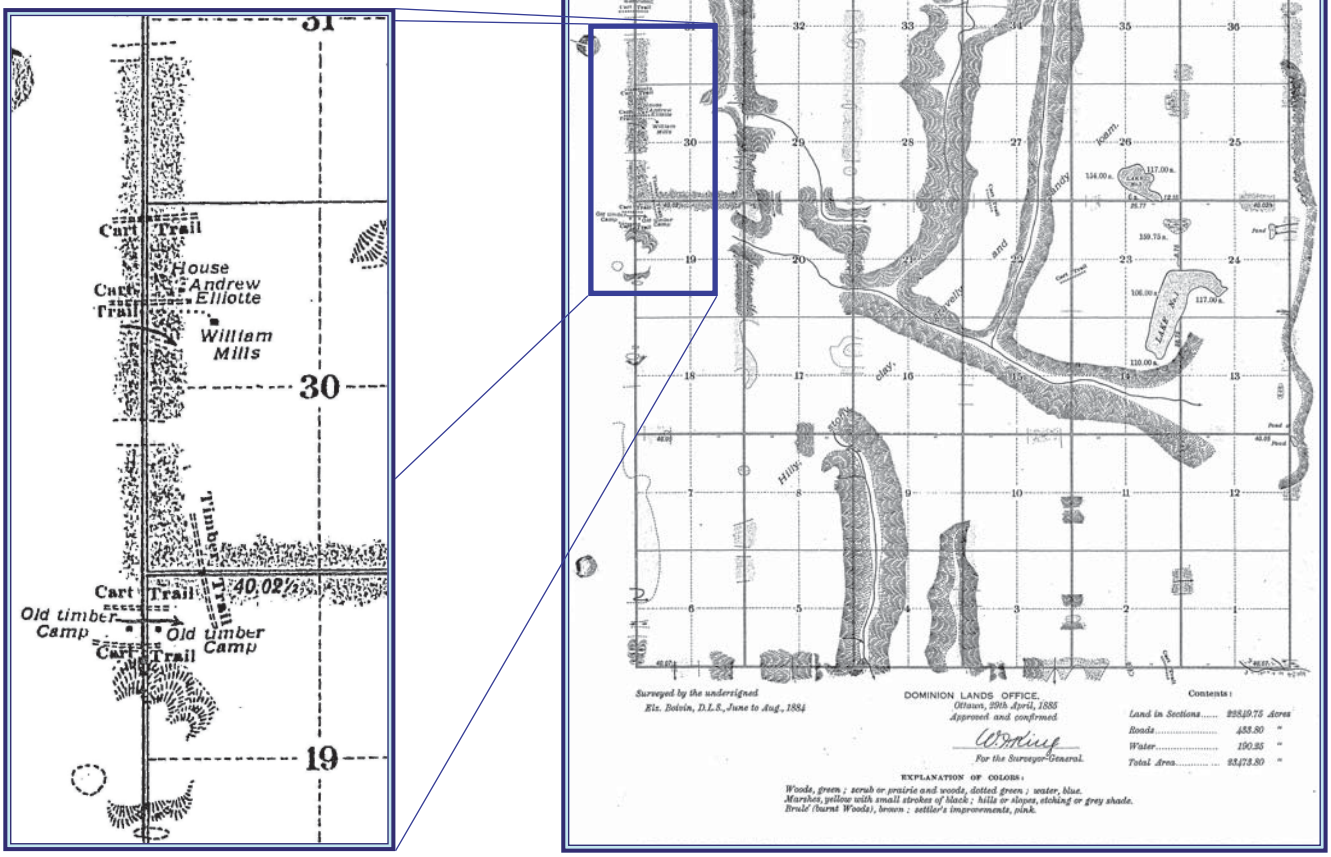
Roger Morrow, SLS, who has surveyed for many years in the Cypress Hills and who plans to prepare an article on his experiences for the Centennial edition of the SLSA Corner Post, agrees. The farmers and ranchers in the area are pretty careful about who they allow on their land - primarily out of concern about fires - but in some remote pasture areas there are numerous stone monuments, two feet high, that are still in pristine condition. "They are right out of the pages of Bulletin 38" said Roger. "Even the pits are full depth because there has been so little soil erosion in the area."

Roger also knows of some fascinating archeological sights. One he recalls was pointed out to him by an archeologist as a popular location for Indian vision quests. It is at the edge of sharp cliff on one side a deep ravine. According to the archeologist, this would have been where some Indians would sit alone after taking hallucinogenic herbs in order stimulate a vision of what their future might bring. "The archeologist's description at the time actually sent little chills down my back" said Roger.

These are only a few of the features of the Cypress Hills Inter-provincial Park that will make the 2008 SLSA AGM particularly memorable. Although the accompanying persons' program has been planned to give brief glimpses of the park and some of its fascinating past, visitors may want to plan a few extra days to pan for more nuggets in this little gold mine of history on the prairies.

References and related Internet sites:

Fort Walsh - National Historic Site of Canada
http://www.pc.gc.ca/lhn-nhs/sk/walsh/natcul/histo_e.asp#Indian
Lodge Pole Legacy
http://www.virtualsk.com/current_issue/lodgepole_legacy.html
Wikipedia - Cypress Hills (Canada)
http://en.wikipedia.org/wiki/Cypress_Hills_(Canada)
Wikipedia - Cypress Hills Interprovincial Park
http://en.wikipedia.org/wiki/Cypress_Hills_Interprovincial_Park



spatial TECHNOLOGIES

www.spatialtechnologies.ca

Calgary:
P: 403.252.0070
F: 403.259.3992
TF: 1.877.252.0070

Edmonton:
P: 780.486.2111
F: 780.486.2155
TF: 1.877.990.7788

Everybody's Talking.

Here's what some of our clients are saying...

"Thanks to Spatial and Leica, ARC and USWFM run the best equipment on the planet."

Darryl L. Larson
Athabaskan Resource Company / USW Surveys

"Spatial provide excellent support. Matt and Keith really jump to the pump when we need something"

Bob Ireland, Challenger

"You can buy equipment anywhere. Knowledge, service & support are harder to find. In a push button world it's nice to deal with people who really know and care. That's why we've counted on Rick & his team for over twenty years. They know their stuff, they understand surveying, and they are there when you need them – face to face."

H. W. (Hal) Janes, MMM Group

See for yourself.

Now you've heard what everyone has to say about us, give us a call and try the Spatial experience on your next project.

when it has to be **right** Leica Geosystems

spatial TECHNOLOGIES

www.spatialtechnologies.ca

At Your Service.

At Spatial Technologies we take pride in the quality of service and training offered at both our Calgary and Edmonton locations.

Our expert and knowledgeable staff have over 100 years industry experience.

With two professional land surveyors as an integral part of our team we understand your needs in this demanding profession.

Calgary:
P: 403.252.0070
F: 403.259.3992
TF: 1.877.252.0070

Edmonton:
P: 780.486.2111
F: 780.486.2155
TF: 1.877.990.7788

We're here for you.

From in-house formal training sessions to on-site support our goal is to ensure you get maximum productivity from your surveying equipment.

when it has to be right

Leica Geosystems