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ABOUT THE COVER

The cover photo is of a wooden post marking the corner of a timber berth on the north slope of Puddingburn Mountain, about 10 kilometres south of Kimberley, B.C. The wooden post was found in 1982 on the survey of a microwave relay line from the top of Puddingburn down to a transmitter on the St. Mary’s River.

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ALS NEWS

SUMMER ISSUE, 1989 VOLUME XVIII.3

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President’s Message

— a burning issue —

The time has come, as “the walrus said,” to write another president’s message for ALS News.

The only burning issue which exists, and I expect the only one which has ever existed, is the question of what land surveyors are paid for their services. For the most part, we are paid very poorly for our services. This is not a result of the public’s perception of what our services are worth. It is I think, a combination of several factors, and the responsibility for these rests squarely on the shoulders of the members of this profession.

A. FEAR
B. WRONG PERCEPTION
C. LACK OF BUSINESS KNOW-HOW
D. LACK OF GUTS (COURAGE)

The surveyor/proprietor seems to live in fear of losing the meager income derived from whatever client base he may have established. He is afraid that if he doesn’t buy the latest technologically advanced equipment, his competitors will out pace him with their toys. He is afraid that if he spends the necessary field time to carry out his work in accordance with the adopted standards of the Association, he will lose his clients to the low-ballers around the corner. He is afraid to pay his technical and professional staff a respectable salary, and provide that staff with a reasonably secure employment situation, because that would increase his operating costs and make him uncompetitive. He is afraid that if he doesn’t send his crew out on Friday night to complete a wellsite by Monday morning, the oil company will go to another surveyor. This fear tends to cloud the thought processes of the normally astute land surveyor, and the self-destructive cycle is started.

Our perception of the value of professional survey services is clouded by doubt and insecurity. The lawyers rant and rave when the price of a Real Property Report approaches the level of their fee for a property transaction (a fee they receive for their secretary’s efforts in shuffling a few papers, a few minutes of professional time, and a trust account). Resource development companies seek the services of the lowest bidder, get the poorest quality service, and come back to our members with the view that we are not a very professional group. Governments, with a few notable exceptions, to do exactly the same thing. The pressure is constantly there to reduce fees. As a result, we begin to believe that our services are really not worth very much; it is our own perception, not the public’s, that is in need of review!

It has been my observation that surveyors generally do not appreciate the real cost of doing business. Depreciation costs, interest costs, supplies, communications, training costs, research costs, legal and accounting fees, upgrading costs, insurance, etc., etc., all contribute to the expense side of the income statement. All these costs continue to escalate regularly, and government seems to find new and ingenious ways to increase the cost of doing business almost daily. I was recently reviewing my Fee Schedule file, and I noted that the 1983 ALS Fee Schedule included an ALS at $75/hr. and a two person field crew at $65/hr. The 1988 Recommended Fee Schedule (the last one published) includes an ALS at $75/hr. and a two person field crew at $70/hr. I doubt very much that many of the hours that we and our staff work are being charged at these rates. Even if they were, we would still be out to lunch! How can we expect to maintain educational currency and remain technically relevant if we will not increase our fees?

It has been said by more than one surveyor, and most recently by an eloquent gentleman at the Northern Regional meeting in Edmonton on September 19th, that we lack the guts to do something about our situation. Our fear of losing our livelihood, losing our exclusive right to practice, being taken to court over combines legislation, or appearing self-serving in the public eye, has prevented us from assembling the group courage which is necessary to move forward as a profession. To repeat the words of that gentleman again, we have circled the wagons, but are confused about whether to shoot into the circle or out from the circle!

...continued on page 9
research, search, and more research

The surveyor’s most exacting task in conducting any boundary survey is research. Every boundary decision made by a land surveyor will be scrutinized by succeeding generations of surveyors and may be examined by a court of law.

Even before he sets foot in the field, the surveyor must search all available documentary files to uncover the steps of those surveyors who have gone before him to determine what marks they have left and what evidence of those marks others have found. The ALSA Manual of Good Practice lists ten sources of documentary evidence which are readily available to the land surveyor. A moment’s reflection could easily add several other items to that list.

When the surveyor goes into the field, he must have a clear idea of what survey evidence he is likely to encounter, whether it is likely to be original or re-established, and whether its authenticity may be questionable or reliable. He will also be aware what his options are likely to be if he cannot locate original monuments or if the monuments he does find do not corroborate the documentary evidence.

Upon arriving in the field, the surveyor’s intuition will no doubt assist him in finding a starting point from which to orient himself and assist him in searching for the physical evidence of the boundaries on the ground. Legal principle requires that the surveyor follow in the footsteps of previous surveyors and re-establish those boundaries, not where they should have been established or were intended to be established, but rather where they were actually monumented on the ground. The retracement surveyor must make an exhaustive search for those original monuments or evidence of where they were originally placed. The mathematical statement of the position of the original monument is not recognized by the law as conclusive evidence of the monument’s position.

Even after finding primary evidence, the surveyor must satisfy himself (and in so doing, conclude that he can satisfy a court of law) that the monument found is the original and is located in its original position.

Only after an exhaustive search for physical evidence of the original monument, can a surveyor resort to using secondary evidence of the original location such as fence corners, fences, hedges, and other lines of occupation. By the conscientious use of the spade and pin finder, a surveyor can often find evidence of original monumentation which has long been obliterated.

Secondary evidence should always be corroborated by oral testimony (parol evidence), measurements, or other secondary evidence such that the surveyor is personally convinced that no other surveyor could subsequently find better evidence that might invalidate his work and place his client (and himself) in a difficult position as a result of a subsequent survey.

Only in the event that no primary or secondary evidence is found, may a surveyor resort to the mechanical method of re-establishment. In resorting to the use of measurements, the surveyor should be doubly cautious to avoid upsetting lines of occupation. Long established lines of occupation may in fact, represent lines run when original monuments were available and readily visible. A concerted search must be made for old time residents or persons who may remember the erection of these fences, etc. Unless the location of these fences, etc. can be conclusively refuted, there will remain a possibility that a survey based on measurements may be proven wrong at a later date.

When the surveyor returns from the field, having overturned every possible stone, he must continue his research, checking with other surveyors and perhaps even searching again for further lay evidence which may shed some light on the erection of improvements based on original evidence.

Only after assuring himself that he has conclusively established the boundaries in their original position, or based on such evidence that will be totally irrefutable in a court of law, can the surveyor rest assured that he has done his job.

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*WILD LEITZ*
Councillor’s Forum

...to grow we have to increase our market share...

In this rapidly changing world, the profession has to grow (to expand) in order to survive. Are we growing in numbers and thereby growing in influence and status? Recent statistics from our association indicate otherwise. For example, in our 80th year (i.e. 1990) the association will likely grant no more than three new commissions.

The law of supply and demand is the biggest single factor that influences growth and during the history of our association, since 1910 we have seen the boom and bust in the economy affecting the size of our profession. Mr. J.H. Holloway, A.L.S. in “A History of the Alberta Land Surveyors’ Association” indicates that the 50's was the decade of rapid membership growth and the most active and progressive period in the Association’s history due to the development and change in the provincial economy. On the other hand, during the period 1931 to 1934, surveying activity was at a low ebb and the membership of the Association dropped in numbers. In fact, during those lean years, annual meetings were attended by about fifteen members, the majority of whom were salaried surveyors employed by government and railway companies.

Astute businessmen and economists will tell you however, that there is another important factor that can influence the growth of a company/business and that is market share. It is known to us that the earlier land surveyors in Western Canada were involved in a variety of survey-related activities. For instance, at the annual meeting of the ALS Association in 1923, Mr. A.W. Haddon, Edmonton’s City Engineer, made a presentation on the relation between the work of the land surveyor who, said Mr. Haddon, plans and lays out a town or City, and the municipal engineer who constructs, maintains, and operates it. However, over the years, land surveyors have lost a big slice of their share of survey-related activities to other professionals with the result that we have been hit, especially during periods of slower economic growth, with a double whammy, i.e. a smaller piece of a smaller economic pie.

The proposed “Surveying Professions Act” should have a very positive bearing over the future growth and influence of our profession. By allowing members practicing in related fields such as photogrammetry, geodesy, hydrography, land information, and others to join our association, we will be expanding the market share of our members. Also, having members of related disciplines in our midst can only encourage land surveyors to expand their scope of services beyond cadastral surveys.

Rahim A.L. Lakhoo, A.L.S.
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Survey Law Seminar
Scheduled for November

The first of a series of intensive seminars on survey law is scheduled for Edmonton and Calgary on November 21st and 22nd and November 23rd and 24th, respectively.

The seminars will deal with five chapters from the text, Survey Law in Canada, recently published by Carswell - publishers of law books. The text was commissioned jointly by the Canadian Institute of Surveying and Mapping and the Canadian Council of Land Surveyors and features 12 chapters prepared by 12 Canadian survey and legal authorities.

Izaak de Rijcke, O.L.S., LLB., the author of Chapter 7 on Evidence and co-author of Chapter 4 on Boundaries, will present two of the four half day sessions. Gerald Gall, LLB., Professor of Law at the University of Alberta and author of the text The Canadian Legal System now in its third printing, will present the opening session on the Alberta/Canadian Legal System with an introduction to contracts, real property law and liability.

Ted Allen, N.B.L.S. and head of the Public Lands Documentation Section of Forestry, Lands and Wildlife will present the final half day on the topic of Water Boundaries which is Chapter 6 of the text.

The seminar is designed for surveyors, lawyers, public officials involved in boundary matters, articled pupils, and anyone with an interest in the law pertaining to surveying and land boundaries.

Further seminars will deal with the remaining chapters of the text and other legal issues of interest to members.

President's Message
Continued from page 4

Term of Reference No. 6 of the Practice Committee as published in the summer issue of ALS News states, "Investigate options for the creation of an organization of land surveyors or land surveying firms that would promote and market the interests of land surveyors". This was a result of a motion made under new business at the 80th annual meeting. Whatever recommendation comes back to Council from this committee, it is in my view time for land surveyors to work together towards a solution to this one burning issue. That is to increase fees and income levels so we at least can establish the financial basis for the survival of the profession into the 21st century.

I.C. Maltais, A.L.S.
President

Subdivision Regulations Amended

The Subdivision Amendment Regulation (AR 193/89) was recently passed by cabinet and filed on August 3, 1989.

Despite the fact that the majority of the amendment is concerned with correcting incidental words and figures, there are some substantive changes that all land surveyors should be aware of. For instance, Section 21 has been amended to re-define "unsubdivided quarter section", a definition that is integral to whether a further subdivision may be allowed.

A new Section 29.1 has also been added by the amendment. This section deals with "Fragmented Parcels" and requires a subdivision approving authority to make a decision within 30 days rather than the normal 60 days.

Copies of the amended regulation will be distributed to all members and articled pupils when a consolidation is available from Queen's Printer.

Surveyors on the Move

Tim Chan has accepted a position with Canadian Engineering Services Ltd. in Edmonton.

Bill Edgerton of HIW Surveys Ltd. in Grande Prairie, has received his commission as a Canada Lands Surveyor.

Dick Fox joins the D.A. Watt Consulting Group in Calgary.

Denis Hosford has left Alberta for the golden fields of Saskatchewan as Director of Topographic Mapping with the Central Surveying and Mapping Agency of the Saskatchewan Government. He can be reached at 4527 Queen Street, Regina, Sask. S4S 5X2 (phone: 306/787-4883).

Richard Schlachter also joins CSMA.

Lyall Pratt has taken up employment with Hamilton and Olsen Surveys Ltd. in Edmonton.

George Smith returns to Red Deer with the firm of Bemoco Land Surveying Ltd.

Peter Walker and Polaris Surveys Inc. have relocated to Calgary. The new address is 1430 - 6A Street N.W. T2M 3G7 - Phone: 284-1940; Fax: 284-1960.

The permit number for The Cadastral Group Inc. is P 152, not as indicated in the ALSA Register.
Surveyor's Diary

October 19: ALSA Council Meeting
November 5-7: GIS/LIS Putting the Pieces Together - Edmonton Convention Center (URISA)
November 8: Automated Data Collectors - Edmonton Petroleum Club (CISM)
November 18: Government Structures in Canada - Fort Garry Hotel, Winnipeg (ACLS)
November 21-22: ALSA Seminar - Survey Law in Canada - Edmonton Petroleum Club
November 23-24: ALSA Seminar - Survey Law in Canada - McEwan Hall, U of C
November 30: ALSA Council Meeting
March 19-24, 1990: ACSM/ASPRS Annual Meeting - Denver, Colorado
April 18-20: ALSA 81st Annual General Meeting - Jasper Park Lodge
May 22-25: CISM Convention - Ottawa
June 10-19: XIX Congress FIG - Helsinki, Finland
June 24-29: XII North American Surveying Teacher’s Conference - Toward World Surveying and Mapping Education - Banff Centre, Banff

Calgary Regional Meeting

Raises the Issue of Technician/Technologist Membership with the ALSA

At the Regional Meeting in Calgary on September 14, 1989, the question or providing membership in the ALSA was raised. Syd Loepky, who has the responsibility of outlining options to the membership on how the technicians/technologists could be dealt with, asked Stephen Nichol to develop the reasons behind the motion presented and passed at the annual meeting.

There was extended discussion on this item with no strong objections being expressed. It is hoped that Syd Loepky’s committee will be encouraged to come forward with an outline or options for dealing with this important issue that will generate serious interest among the members.

Bernard Lamarche ably chaired the meeting and had put together an interesting and varied agenda. Other items included a video presentation on Turtle Mountain and the monitoring of the Frank Slide area. Terry Ingraham of Alberta Environment was present and answered questions about this project.

Tony Steven of ASSMT spoke on the activities of his group and on the reasons they are having problems attracting people to a land surveying career.

Ian Crain of the University of Calgary, Survey Engineering Department, attended the meeting and spoke on some issues about the Survey Information Centre Proposal. Ian has recently been appointed to the Spatial Information Chair at the U of C.

Syd Loepky raised a number of issues being dealt with by Council. The most controversial was a discussion paper on Professions and Occupations by the provincial government. The Association has been given the opportunity to respond to a statement on the operation and structure of self-governing professions. The government appears to require more public participation on association board of management.

The meeting was attended by twenty-one members, who lead lively discussions from the floor. We encourage you to attend the next one to be held in January.

STEPHEN NICHOL, A.L.S.

Knowledge shrinks as wisdom grows; for details are swallowed up in principles.
ALFRED NORTH WHITEHEAD

Lot Grading Guidelines Adopted

In response to storm drainage problems in recent years, the City of Edmonton has adopted lot grading guidelines which require before and after approval of lot grades to ensure that all private lands will drain to the street. Recent heavy rainfall problems have caused basement flooding problems as well as problems with storm water entering the sanitary sewer system.

Don Barry, Development Coordinator with the City of Edmonton, Land Development Branch, and Denis Cole, Manager of the Building Inspection Branch, recently advised the Northern Regional Meeting of the ALSA that the simplest method to prevent similar problems in the future was to require approval of before and after lot grading plans.

At the Building Permit stage, a surveyor’s site plan will be required and it will be necessary to contain the following statement: “The elevation of this house has been designed so that it will be in conformance with the lot grading plan.” At the occupancy stage, a Real Property Report/Lot Grading Certificate must be provided and must state that the lot has been graded according to the approved lot grading plan and that house elevations are in accordance with the lot grading plan and that positively graded swales exist between properties.

This new requirement of the City of Edmonton displays the increasing complexity of urban development and the need for coordination of the development process for the protection of the future homeowner and the taxpayer. The expertise of the land surveyor is necessary to provide factual information on the as-built situation to ensure that the built environment conforms to design standards and that unsuspecting purchasers don’t end up paying for mistakes or shortcuts made at the development stage.
ALS News

ALS 25th Annual Golf Tournament

The 25th Annual Golf Tournament of the Alberta Land Surveyors’ Association was held at the Sylvan Lake Golf and Tennis Club on August 18th. Thirty-five golfers partook in this event and probably the only ones who went away disappointed where the more serious golfers who were upset about their scores.

Believe it or not — the day turned out to be sunny! Linda Arcand and Sharon Stecyk were the only “cold” people as they were stuck on a couple of holes on the course sampling and handing out refreshments to some very thirsty golfers.

Ron Hall and Bruce Winton assisted me in organizing this event. They contacted many survey supply companies, breweries, and airline companies to obtain all the wonderful prizes and refreshments that were available. These consisted of:

- Engraved Beer Stein
- Engraved Silver Tray Desk Set
- 12” Oscillating Fan
- Propane Lantern
- 3 Golf Bags
- Master Golf Game
- Mr. Coffee Maker
- Ceramic Figurine
- 2-100’ Meas. Tapes
- Lots of Golf Balls
- Gas Barbeque Cooler Set
- Cordless Drill/Driver
- 4 Golf Umbrellas
- HP22S Calculator
- Ball Retriever
- Golf Bag Travel Cover
- Rules of Golf
- 3 Tote Bags
- 1-Tee Shirt

The Table of Prizes

Look what some of you missed! Cash donations were provided by: Leslie, Wright & Rolfe, Micro Solutions, Butler Survey Supplies, Cansel Survey Equipment, and Grove Rentals and Leasing. Some of the cash donations were used to purchase extra prizes and to supply the free refreshments on the golf course.

Other companies that donated prizes were:
- CYS Scientific Instruments Ltd.
- Cansel Survey Equipment
- Geodimeter of Canada Ltd.
- Intergraph Canada Inc.
- Labatts Breweries
- Norman Wade Company Ltd.
- Wild Leitz Canada Ltd.

Many thanks to all these organizations. Without their support we couldn’t keep this event going. It was also nice to see the boys from Cansel attend: Guy Anderson, Don Perrin, and Bill Walton.

Unfortunately no one won either of the hole-in-one prizes that were donated by Canadian Airlines International and Air Canada. MAYBE NEXT YEAR!

Now for the big winners:

Rainer Keglowitsch Cup: 1st - Keith Smith (72)
2nd - Dave Holmberg (75)
3rd - Roy Devlin (75)
4th - Alex Hittel (77)
5th - George Baerg (79)

A.L.S. Open: 1st - Sean Bunting
2nd - Norm Speedy
3rd - Mary Hicks
4th - Len Leiman
5th - Bill Walton

J.H. Holloway Challenge Cup:
1st - Walter Kiriak
2nd - Ron Hicks
3rd - Tim Martin
4th - Grant Cross
5th - Paul Ellegood
In addition to the 1st place winners in each category getting their names engraved on the trophies and plaque, each of them got to take home some pretty good prizes as did the 2nd to 5th place winners. Different hole prizes were also awarded. The most honest golfer award went to Donna Martin.

In recognition of Ranier Keglowitsch in the early days of the tournament, the A.L.S. Cup was changed to the Ranier Keglowitsch Cup. It was really nice to see Karin Keglowitsch, her son Peter, and grandson there for the barbecue.

The steak dinner was excellent with corn on the cob, baked potatoes, beans, salads, garlic bread — a feast fit for a king. Vic Wolchansky did a great job of cooking the steaks, while Shirley Hall, Betty Devlin, and Donna Martin slaved away in the kitchen and set up the buffet table. The cake served at the end of the evening was tasty and unique. Linda Arcand (your friendly secretary from the ALSA office) and Sharon Stecky continued taking care of the refreshments, as that is what they do best.

A good time was had by all and, hopefully next year we will have an even better turn out!

ROY DEVLIN, A.L.S.
CHAIRMAN, GOLF TOURNAMENT ORGANIZING COMMITTEE

Continuing Education

**October 12:** Archaeological Sites in Souther Alberta - U of C Continuing Education

**October 13-14:** How to Start and Run a Consulting Business - Grant MacEwan Community College

**October 14-15:** Public Speaking - A Self-Confidence Builder - U of A Extension

**October 16:** Computer Applications in Surveying - NAIT

**October 17-18:** Giving Verbal Presentations - U of A Extension

**October 20:** Technology and Jobs: The Next 10 Years - U of C Continuing Education

**October 24 - November 28:** Introduction to Airphoto Interpretation - U of A Extension

**November 4:** Environmental law - Alberta Law Foundation

**November 5-7:** GIS/LIS: Putting the Pieces Together (Alberta Chapter - URISA) - Edmonton Convention Centre

**November 8:** Automated Data Collection (CISM Edmonton Branch) - Edmonton Petroleum Club

**November 9:** Environmental Law - Alberta Law Foundation

**November 9-10:** Law of Not-for-Profit Organizations - U of A Extension

**November 9-10:** Geomatics II - A Future in the Making - Palais des Congres, Montreal

**November 14:** Mapping Systems - NAIT

**November 15-16:** Public Speaking - A Self-Confidence Builder - U of A Extension

**November 16:** Writing for Business

**November 18:** Government Structures in Canada - Fort Garry Hotel, Winnipeg (ACLS Continuing Education)

**November 21-22:** ALSA Seminar - Survey Law in Canada - Edmonton Petroleum Club

**November 23-24:** ALSA Seminar - Survey Law in Canada - McEwan Hall, U of C

**November 23-24:** Effective Speaking - U of A Extension

**November 25:** Environmental Law - U of A Law School

**November 29:** Top of Bank Technology - U of A Extension

**December 4-5:** Planning Law - U of A Extension

**December 13-15:** Technical Management for Middle Managers - U of A Extension

**January 27:** Small Claims Court - Alberta Law Foundation

**February 1:** Small Claims Court - Alberta Law Foundation

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Public Relations Committee

The Public Relations Committee is currently updating its mailing list for Boundaries and other mail-out information. Members are asked to forward any company names, addresses and contact persons’ names to the Association office. This list will be used exclusively by the Association office and will not be made available to the general membership.

We are currently distributing the new ALSA Speakers Bureau brochures to all of our members and to other interested groups. Again this year, Stan Hutchinson is coordinating this activity and it is expected that there will be a substantial demand for speakers.

If you would like to be a “volunteer” for a speaking request, please contact Stan at 495-6173. Should we be faced with a shortage of speakers, don’t be surprised when you receive a call. (Stan is currently reading a book called *The Art of Persuasion.*)

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THE ALBERTA PARCEL MAPPING PROGRAM

by

BRUCE FLETCHER, A.L.S.
Land Information Services Division
Alberta Forestry, Lands and Wildlife

Introduction

Alberta Forestry, Lands and Wildlife, Land Information Services Division, is managing the Parcel Mapping Program. This program will compile, in a digital graphic format, every survey plan currently registered in the Edmonton and Calgary Land Titles offices. The survey plans will be compiled and mapped onto the Alberta Township System base. When completed, the digital graphic files will be available for sale on a per township basis for all of Alberta.

The driving force behind creating a digital parcel base is to eventually provide the public and private sectors with a product to which they can relate parcel based land information. It is recognized that there is a difference between a surveyed parcel base and an ownership parcel base; it is the latter that is required to support parcel based land information systems. Clearly, a long term objective is to provide an ownership parcel base; however, the parcel mapping program is limited to compiling the surveyed fabric. Concurrent with this program, the Attorney General’s department is automating Alberta’s land title system to provide automated access to land titles. On completion of these two initiatives, the records will be matched. Land titles that do not have a matching survey parcel will be identified, and a corresponding graphic parcel created. Both the survey parcels and ownership parcels will be used to create the LRIS Network spatial database or base referencing fabric.

Background

Digital parcel mapping originated in the Urban Survey Control and Mapping Program in the 1970’s, which was designed to provide survey control and large scale mapping (1:1 000 and 1:5 000) to municipalities of 3,000 or greater on a cost sharing basis. This program is called the Municipal Integrated Surveying and Mapping (MISAM) Program, and as of March 31, 1989, the surveyed parcel base in 66 urban and rural municipalities across the province has been completed. The program has been revised slightly and now includes 12 municipalities with a population of 1,000 to 3,000. There are 11 urban municipalities with over 3,000 population that are currently not under this program. Municipalities under the MISAM program will not be recompiled under the Parcel Mapping Program. Incentive for providing a province wide parcel base originated with the utility companies who found that the data they each collected and mapped could not be shared. Subsequently, the Land Information Services Division conducted a pilot project to determine the requirements for the Parcel Mapping Program. It was decided that the compilation process for the program would be performed by registered Alberta land survey firms. Eligible firms had to prove their competency in parcel mapping by compiling a township comprised of 54 registered plans. This was conducted during December 1988, and 48 of 87 interested firms submitted sample map products. Thirty-four of these met the criteria, thus qualifying them to participate. The Parcel Mapping Unit will hold additional qualifying tests to provide firms with an opportunity to qualify to do work under the program.

The quality control and maintenance functions are contracted out to firms selected from the qualified group. The Parcel Mapping Unit staff will oversee the entire process, liaising with all firms to ensure uniformity, quality, and completeness of the final product.

Format and Coverage of Digital Files

The format of the Parcel Mapping Program is designed to map one township in one digital graphic file. In each file (township), the northerly and easterly mapping limits are defined by the posted limit of the township, and include the linework between these posts. The southerly and westerly mapping limits include the road allowances adjacent to the south and west boundaries of the township; however, the lines defining the south and west boundaries of these road allowances will be captured in the adjacent township files. This definition for mapping limits is to be followed for all cases including those townships abutting correction lines. The intent of this definition is, among other things, to avoid duplication of linework in adjacent township files. Contractors are responsible for edge-matching where plans cross file boundaries of MISAM program maps.

In cases where the township being compiled contains a municipality that has been mapped under the MISAM program, the necessary materials will be supplied to facilitate edge-matching between the municipality mapping boundary and the remainder of the township being mapped under the Parcel Mapping Program. As stated previously, it is not the intent of this program to recompile the data in any of these...
municipalities; however, there are some exceptions. The MISAM mapping boundaries for a municipality do not always coincide with section or quarter section lines. Therefore, quarter sections which have been partially completed under the MISAM program will be recomplied under the Parcel Mapping Program.

Map Projection

The conformal map projection being used in the Parcel Mapping Program is the Universal Transverse Mercator Projection with the defined central reference meridians of 111° and 117° west longitude. The fifth meridian of the township system is being used as the zone boundary between UTM reference meridians 111° and 117° to ensure that any townships that extend slightly east or west of 114° are compiled within one UTM zone. An average combined scale factor is provided for each township by the department. This factor is applied to all plan dimensions during the computation/compilation process.

Design Scale

The design scale for map compilation is 1:5 000; however, text sizes have been selected to allow hardcopy plotting at scales of 1:1 000, 1:5 000 and 1:10 000. It should be noted that not all textual features (e.g. plan dimensions) will be legible at all three plotting scales, nor are they intended to be. It was anticipated that users would desire some map generalization at smaller scales and more detail at larger scales. Therefore, the design text sizes were chosen to suit the scale(s) at which they would normally be plotted.

Framework

The framework within which all plans of survey are compiled and controlled is the Alberta Township System. During the past four years, a program has been in place to derive a digital file of geographic coordinates (commonly known as the ATS file) which define key positions in the township system. This file was derived using the data shown on official township plans in conjunction with field measurements which connected the Alberta Township System to the Alberta Survey Control System. ATS coordinates are being used to depict the township system in the 1:20 000 Provincial Digital Base Mapping Program. Although the Parcel Mapping Program will also use this file of coordinates, improvements will be made to the ATS coordinates where registered plans of survey identify significant differences with respect to official township plans. More specifically, in cases where differences of three or more metres (in angular or linear measure) are identified on quarter lines between plans of survey and the ATS file, Land Information Services Division will attempt to reconcile the differences which normally will result in a change to the ATS coordinate file for the respective ATS points. The intent of this exercise is to attempt to achieve a maximum relative error of less than three metres within any quarter section between the Parcel Mapping base and the physical evidence on the ground.

Current Status

As a result of funding which was received in November, 1988, 95 townships were compiled under contract. These township files are currently being quality controlled after which they will be available for sale through MAPS Alberta.

The Parcel Mapping Program was approved early in 1989 but unfortunately funding was postponed after budget review at the beginning of the new fiscal year. However, Land Information Services Division is optimistic the project will still proceed this year and alternative methods of funding are being pursued.
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ALBERTA MUNICIPAL INTEGRATED SURVEYING AND MAPPING PROGRAM — MISAM —
A Foundation for LRIS

by
Ron Anderson
Assistant Director, Municipal Mapping, Mapping Branch

Bill Mintz, A.L.S.
Assistant Director, Municipal Integration, Land Survey Branch
Land Information Services Division, Alberta Forestry, Lands and Wildlife

Abstract
An integrated survey control and mapping system provides the basic framework for the development of a land related information system. Such a system was initiated in Alberta twenty years ago. This paper describes the MISAM Program, available products and present status.

Introduction
Land related information systems are not new, they are just becoming automated. Dominion land surveyors started compiling information in the late 1800's in Alberta when the townships were being surveyed. They collected land classifications, land value, soil conditions, hydrographic information, etc. Alberta has been using the township system to record land related information ever since. Today, with our information overload, there is a great demand for more accurate and up-to-date information plus a demand for easier assessment and correlation of this data; therefore, computers and geographic information.

For processing of land related data, a map foundation is required. Alberta recognized this need for a coordinate referenced land information system and initiated an integrated surveying and mapping program for urban municipalities in the late 1960's; thus, today's Municipal Integrated Surveying and Mapping (MISAM) Program. The scope now includes the establishment of a survey control network, coordinates for all points in the land survey system, a photogrammetric control data base and a base mapping system. The program is formalized through an inter-governmental agreement which defines the area of coverage and sets out the respective responsibilities for each party. The MISAM Program is basically a two year program with immediate and futuristic benefits.

Year One
- Planning and Signing of Agreement
  - defining area of coverage with emphasis on present requirements and a view of a 20 year growth potential
- Field reconnaissance for Placement of Control Markers
- located in public lands where possible
- visibility between markers
- Installation of Survey Control Markers
  - 8" helix with brass cap
  - 400m in developed areas
  - 800m in non-developed areas
- Field Measurements Between Markers
- Survey Ties From Markers to Strategic Points of the Land Survey System
- Geodetic Computations
  - integration of the survey control markers into the Provincial and Federal networks

Year Two
- Manuscripting of Surveyed Property Boundaries
  - entails reviewing all plans of survey and certificates of titles to determine present status
  - transferring information to a rough drawing for computations
- Cadastral Computations
  - establishing x and y coordinates for each lot and block corner based on field ties to survey control markers
- Cadastral Mapping
  - digital mapping of the surveyed property boundaries and related data (e.g. plan dimensions, lot and block numbers, registered plan boundaries, etc.)
    - 1:1 000 and 1:5 000 scales
- Targeting of Survey Control Markers
  - 80% to 100% markers targetted
- Aerial Photography
  - 1:8 000 for one metre contours
  - 1:25 000 for orthophotos
- Aerial Triangulation
  - bridging of aerial photography
  - results retained in a photogrammetric control data base for future use
- Orthophoto Production
  - 1:5 000 scale
- Hypsography Production (Topography Relief)
  - generation of one metre contours from a digital elevation model derived from the 1:8 000
photography
- 1:5 000 scale

Products (Digital/Hard Copy)
- Alberta survey control coordinates and identification records
- Cadastral coordinates
- Photogrammetric control coordinates
- 1:1 000 cadastral base
- 1:5 000 cadastral base
- 1:5 000 cadastral/orthophoto/contour base and Digital Elevation Model
Available to the municipalities, government departments and agencies and private industry.

Current Status
- Municipalities Under Agreement
  - 52 over 3,000 population including Edmonton and Calgary
  - 12 between 1,000 and 3,000 population
  - 2 rural municipalities (County of Strathcona - 60,000 pop.; and Improvement District #7 - 1,145 pop.)
- Municipalities over 3,000 population yet to obtain agreements with:
  - Barrhead
  - Beaumont
  - Devon
  - Didsbury
  - Fairview
  - Gibbons
- 77 Municipalities in Total

Another way of viewing the progress is that only 0.6% of the area of Alberta may be mapped but 78% of the population has large scale mapping.

CISM Happenings

The Edmonton Branch of the Canadian Institute of Surveying and Mapping has several events planned for the fall season.

A dinner meeting will be held Tuesday, November 7th, featuring Mr. Owen Beatty, the anthropologist who is famous for his work on the fate of the Franklin Expedition. He has carried out new work in the Arctic and is very keen to discuss it at our meeting.

The next day, Wednesday, November 8th, we are holding a one-day seminar on Automated Data Collection. Vendors and those with field experience will make presentations. This should be a lively day and would be of interest to all ALSA members.

We also have a commitment from our national President, Mr. Tim Koepke, to be the feature speaker at a fall meeting (date not yet confirmed). He will speak about the recently settled Yukon Indian Land Claim and also new initiatives within CISM.

The Branch is also co-sponsoring two Survey Law Seminars to be held in late November.

In other news, the Executive Director of CISM, Mr. Bill Blackie, retires at the end of September, Mrs. Sandra O’Connor will be the new Executive Director.

At the Edmonton level, the 1989/90 executive consists of Stan Hutchinson, Chairman; Dawn Rogel, Vice Chairman and; Janis Simanovskis, Secretary Treasurer. Akbar Karsan and Mike Michaud are members-at-large.

For information about any of the above events, please call Janis at 427-6279.

STAN HUTCHINSON, A.L.S.

Kurt Gesell Named to ALSA Council

Mr. Kurt Gesell, M.L.A. for Clover Bar, was recently appointed as a public member on the Council of Management of the Alberta Land Surveyors’ Association.

Kurt brings to his position as public member, an impressive background in urban and regional planning in Alberta and in Ontario. He is currently a principal in Akley Design Ltd. located at South Cooking Lake.

Kurt has served as a school trustee and councilor for the County of Strathcona and was elected to the Legislative Assembly in March, 1989 for the constituency of Clover Bar, east of Edmonton.

In his position as M.L.A., Mr. Gesell is Chairman of the Standing Committee on Laws and Regulations, Vice-Chairman of the Environment Caucus Committee, Vice-Chairman - RDA Task Force; and a member of the Education Caucus Committee, Forestry and Natural Resources Caucus Committee, Standing Committee on the Alberta Heritage Savings Trust Fund Act, Standing Committee on Public Accounts, and the Board of Directors of Edmonton Northlands.

Council of the ALSA welcomes Kurt and looks forward to his active participation in Association affairs.

"...battles may lead to an instantaneous change in power but the changes in the hearts and minds of people are rarely a discontinuous function."

PETER F. DALE
Are you afraid to charge what you're worth?

by Daniel Beardslee

Daniel Beardslee is a land surveyor in Washington state who lectures on business management for surveyors.

Let's confront this subject head on. To be successful, land surveyors must make a substantial income. To make a substantial income, they must charge a fee that is well above the cost of providing the service.

If they charge enough to make a substantial income, they will be respected in the community. They will be considered professionals — the much sought-after recognition we all talk about at society meetings. If they make a substantial income, and are thereby regarded as professionals, a different set of youngsters will consider entering the profession. Income opportunities will attract young, bright, motivated individuals who now enter professions that already offer substantial incomes and prestige — such as engineering, medicine and architecture.

The only thing on this earth that will result in surveyors being regarded with the prestige we crave is to raise the overall income level.

The obvious conclusion, of course, is that we now charge too little for our services. If we did charge enough, more universities would offer surveying programs and more students would seek entry into the profession. If we did charge enough, we wouldn't have to worry about being regarded as professionals.

That happens to be the truth of the matter. The only thing on this earth that will result in surveyors being regarded with the prestige we crave is to raise the overall income level. No amount of paper writing, lobbying, tie wearing, talk giving, brochure and film producing, or anniversary celebrating will achieve the results we seek. Only an improvement in our income level will do it.

What do we do about this dim-witted situation we have allowed ourselves to fall into? It does not take a genius to see that the prevailing rates charged by surveyors promise no more than a lower middle class income to members of this profession. The bigger step is dealing with an old argument — how can we raise rates with the spectre of competition being what it is?

I believe the answer only takes some rational thinking and, more profoundly, courage? The first logical step is to analyze the cost of doing business. I have been all over the country lecturing to land surveyors, and I find that they universally have little knowledge of the actual costs of conducting their businesses.

In every circumstance, when a cost analysis is constructed using rational input, the surveyors conclude that they couldn't possibly charge the kind of rate it would take to make a substantial income. They feel they would price themselves out of business. The implication is that the "competition", who would charge less, would have it all. Do you think that is really true? I certainly don't.

Like any other service, land surveying is a matter of value. Consider if you will the impact of changes in surveying technology in the past 15 years. Instead of three people yelling at each other while dragging around transits, 300-foot chains and five-place trig tables, we now work with auto-reducing total stations. We routinely use powerful hand-held electronic calculators and portable radios. The same work that once took three people can be accomplished by two people in a fraction of the time.

Who has benefited most from these improvements? Is the land surveyor better off? Or have things actually gotten worse?

Keep in mind that surveying a property boundary is the equivalent of providing boundary insurance. It is single premium, unlimited liability, unlimited term insurance that extends to third parties who you may not even know.

Real property has appreciated at a proportionately higher rate than other assets. It would seem that the value of determining the boundaries of that real property would appreciate accordingly. If we were still using the old technology, would boundary surveys cost more or less? It seems to me that surveying would cost about the same.

So why do we use new equipment? Do we make more or less money? Is the survey of property boundaries a higher or lower fraction of the total value of the real property?

It seems to me that if a boundary survey were typically worth four percent (just to adopt a figure to work with) of the value of the property, it still should be worth the same proportionate amount using new technology. Given that land surveyors typically charge by the hour for their services, does it make sense to do the job faster, with more accuracy and with fewer people? If we can do the same job in half the time, should that increased efficiency be represented by higher profits and better salaries for land surveyors or should it be passed along to the land
owners?

If the service is as valuable as it has always been, is it immoral to charge what it is worth in a higher priced economy?

I find no reason to spend $50,000 on computers, total stations, plotters, software, radios and calculators so
that I may work three times as fast, charge my clients less, and have to scrape up three times as many jobs just to
make the same, or relatively the same, revenue as I did with the old gear. On top of that I am still faced with the
cost of acquiring all that new technology, not to mention the learning involved and the late-night hours spent
fussing over software that doesn’t work like it’s supposed to.

Who should benefit most from your efficiency?

You or your clients?

Many surveyors do just that without reflecting it in their charges because of fear that the guy down the street
will do it for less. What about that guy down the street, then? He has the same problems that you do. We all do
more or less the same thing.

What do you think the guy down the street would do if he found out, for instance, that you have taken this
matter to heart, and that you are charging $700 for a lot survey instead of the prevailing rate of $200? What’s
more, what will he think when he finds out you are getting it? Do you think he might be inclined to think about
raising his rates a little? If he found out that you were charging four percent of the assessed value of the
property (regardless of the hours involved), do you think he might want to have some of that action?

Does it make sense for only the client to benefit from your more efficient work, or should you? Would you feel
better or worse about the profession if the average income were twice what it is today?

Work out the math sometime. LAND surveyors are good at arithmetic. What would happen if you were to
double the price of surveying and lose half your work? Would you make more or less money? Think about it.

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The Professional Liability Insurance Corner
by Gordon A. Webster, S.L.S., C.L.S., Chairman Professional Liability Insurance Committee Canadian Council of Land Surveyors

The following column is a regular feature and will attempt to give examples of claims made against the CCLS insurance program. The examples will relate to problems incurred against the program anywhere in Canada and may or may not have resulted in a settlement. Claims may be closed or open and the opinions given are that of the author. It is the intention of the author to maintain confidentiality in all examples.

The following claim arises from the conversion of an existing apartment building into a condominium. The surveyor had obtained a set of the original building plans and had prepared the condominium plan using both the building plans and measurements he had obtained during the completion of the necessary field work required to determine the unit boundaries. A portion of the building shown on the original drawings, and actually examined in the field, was intended to be common property as it contained storage lockers, a laundry room and an electrical room.

After the surveyor had entirely completed the plans, his client advised that a decision had been made to convert the area shown as storage lockers and laundry room into an additional unit. The surveyor then revised the condominium plan, without a further field examination, and made the assumption that the entire common area was to become the new unit. Of course this proved not to be the request as the electrical room was still required to be included as common area.

The error was not discovered until several years later and a claim was launched by the unit owner, to recover losses in extra expenses paid due to the error in the unit’s size. Through negotiations by the insurance company and our insured, the unit boundary error was resolved by the preparation and registration of a new plan which only included the unit involved in the original mistake. The one unit was subdivided into two and the area in the electrical room was then transferred to common property. As a result of the negotiations by the insurance adjuster and resulting solution, costs were kept below the deductible.

Although this claim did not cost the program anything other than adjusting expenses, I think there is a lesson which can be learned. Any surveyor doing surveys and preparing plans for any type of condominium must be aware of the possibility of changes to unit boundaries. Any changes made to plans should only be made following a field examination. This is equally important in new construction as last minute construction changes may make your plan in error. A last minute field check, prior to submission of your plans, may prevent you from incurring this type of problem.
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The column Guardpost is intended to be a regular series of articles by the Chairman or members of the Practice Review Board to relate matters to the membership which they deem important. The PRB, through their study of the practices of land surveyors in general or perhaps with specific regard to insurance claims or other matters, have occasion to preview problems which can and often do grow with time or neglect. The purpose of this column is therefore, to inform the membership of practices which they may wish to “guard” against.

The Practice Review Board has a change in composition this year. Bill Hunter, former chairman, has retired. We welcome Wayne Wesolowsky as a new member to join John Deynole, Norm Mattson, public Board member, Charlie Paquin, and yours truly, as the new chairman.

On behalf of the Board members, I wish to express our thanks to Bill Hunter for the endless hours he devoted to Board business over the last several years, and especially for the excellent advice and understanding he brought to the Board as chairman. Should his successor be half as competent, it will be an achievement.

The Board has come of age through experience and the input of the membership. Whereas the Board is appointed under Sec. 121 of the Survey Act and its duties are outlined in further sections, the operation of the Board is somewhat apart from Council in that we have been allowed the discretion to carry out our responsibilities in the manner we deem to be most effective and efficient. This is essential in that we are thereby removed from some of the political considerations that elected bodies must contend with.

The creation of the Professional Audit Branch and position of Inspector of Surveys has greatly increased the responsibility of the Board, while at the same time, providing us with the tools to more capably carry out our main role of assessing and reviewing the competence of practitioners.

In the past, the Board has been very involved in the review of liability claims as brought to our attention. Fortunately, these have decreased significantly in the last year or so and we hope this will continue. The awareness of members to potential problems has, no doubt, played a large role in their manner of practice and the avoidance of errors.

The foregoing was primarily one of reaction of the Board to specific circumstances. This will still be a natural process for the Board. However, with the advent of the Professional Audit Branch, there is now the opportunity for the Board to develop a more positive approach with respect to the maintenance of acceptable standards of practice and competence of practitioners.

We have interviewed a great number of members over the last while, especially in the area of Real Property Reports, and the majority of the concerns we had, have been responded to by those members in a responsible fashion.

The policy of the Board has been to focus on technical and professional competence. We refrain from becoming involved directly in the economics of surveys. While we recognize, and perhaps even sympathize, with the position of some of the practitioners, we maintain the firm position that technical short cuts must never be condoned to meet economic conditions. We are fortunate to have the privilege of being legislated as a self-governing body and must exercise our responsibility to maintain competence accordingly.

Those practitioners that fail to appreciate the foregoing will no doubt, be at odds with the Board from time to time. While we intend to continue our policy of review, interview, and general cooperation with practitioners, there will be times that a firm position will be required. The second time around will be looked at much less favourably in the future. The honeymoon will not go on forever. The credibility of the Board and the membership as a whole would suffer greatly if this was the case.

While we recognize the desire, and rightfully so, of members to exercise their own professional judgement, there must nevertheless, be an accepted level of performance adhered to by all. Some of the items that have come to our attention and that you may expect a firmer position from the Board on in the future are:

1) The establishment of boundaries: We are of the opinion that all boundaries purported to have been defined by a surveyor must be established in accordance with the provisions of the Surveys Act. Regardless of the type of plan produced and whatever or not it is specifically referred to in any statute or regulation, if the plan is prepared by a surveyor the public expects and has the right to have the confidence that the property lines shown thereon have been properly determined.

2) Inadequate research and/or assessment of evidence: Several inspection surveys have indicated an insufficient search for evidence. This borders on unskilled practice and appears to us to be often an indication of improper professional supervision.

3) Failure to monument: Several instances have been found where monumentation on the ground has not been carried out in accordance with that indicated on the registered plan. This is especially true with respect to the placement of marker posts.

Should a surveyor have to delay posting for any reason whatsoever, please follow the legislated process or don’t register your plan until all monumentation is in place. The affidavit signed pursuant to section 10 of the
Surveys Act is a “certificate under oath” and thus specifically certifies that all monuments have been planted in accordance with that Act.

(4) Plan examination: Approximately 35% of all plans examined by the Inspector of Surveys have been found complete in all respects. An additional 45% have been found to contain minor drafting and calculation discrepancies. Plan corrections have been requested on 16% of the plans examined and field corrections have been required on 4% of the plans examined. These statistics exclude the few surveys that have been completely screwed up and require a considerable amount of field and office work.

Being somewhat generous, we can say that 80% of the survey plans examined have been generally satisfactory. We would encourage the membership to strive to increase this to at least 95%. You would hardly expect the service you receive from other professional people, i.e. lawyers, accountants or medical to have a 20% chance of error.

The cost of inspecting and reinspecting improper surveys can be significant which reflects on the overall budget to maintain the ALSA office and Professional Audit Branch which ultimately comes from the pockets of the membership.

(5) While the use of contract field crews on a piece meal basis has not been a burning issue to this point, the writer is of the opinion that this is a dangerous practice and should be curtailed as much as possible. Similarly, the use of remote field offices not supervised on a regular basis by a surveyor, will no doubt, be a more pressing concern in the future.

In conclusion, I would like to remind the members of the remarks made to us at our last Annual General Meeting by the representative from Consumer and Corporate Affairs. “The government has provided us with the legislation to manage our affairs and ensure our own competence which will not be unduly interfered with. However, they will not become involved with the determination of fees.” It is our responsibility to carry the ball from there and we must react accordingly in a professional manner or suffer the ultimate consequences.

The economics of our practices must be dealt with in a mature fashion through cooperation and understanding. Surely as mature individuals, we can resolve this over the long term to everyone’s satisfaction. The foregoing remarks are those of the author and while I believe I have portrayed the position of the Practice Review Board in the issues discussed, the interpretation is mine alone.

HUGH IMPEY, A.L.S.
CHAIRMAN, PRACTICE REVIEW BOARD

LAND SURVEYORS
PROFESSIONAL LIABILITY INSURANCE

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MOVING FENCELINES
It’s Ewing vs. Barnes
by Colin Simmons

Colin G. Simmons is a lawyer with Macleod Lyle
Smith McManus in Calgary and Airdrie and is a
regular contributor to Alberta FARMagazine.

Ever wondered if your property lines were correctly
located? And what if they’re not? Perhaps you already
know they’re not or that the boundary fence with the
neighbour is in the wrong place. Many aren’t concerned
whether their property lines or boundary fences are
located properly. Often, misplaced property lines go
completely undetected; nobody suffers because of it. Still,
there have been and always will be occasions where
neighbours dispute the location of a property line.
Frequently a misplaced property line has been discovered
when a survey is performed in the course of drilling an oil
or gas well on the property.

Property line disputes have been dealt with by
various laws for centuries. However, most Albertans are
unaware of how the current laws in force in this province
deal with the subject. The resolution of these disputes
often depends on how long the property line has been
incorrectly located. Alberta law strives to reflect the policy
that after a certain period of time, people should be able to
rely on a situation that has not changed for a number of
years. Those who could have asserted their rights but
have neglected to do so for a long time, will eventually not
be permitted to assert these rights.

Section 20 of the Alberta Law of Property Act
basically states that when a person, at any time, has
made lasting improvements on land under the belief that
the land was his own, that person is
"entitled to:
(a) a lien on the land to the extent of the amount by which
the value of the land is enhanced by the improvement; or
(b) entitled to or may be required to retain the land if the
Court is of the opinion or requires that this should be done
having regard to what is just under all circumstances of
the case.
The person entitled or required to retain the land shall pay
any compensation that the Court may direct."

When a boundary fence or property line has been
incorrectly located for a long time it is quite common
someone has had a mistaken belief that the land was his
own when it actually was not.

However, whether or not lasting improvements have
been made is a question of fact. There are cases that have
decided that construction of wire or board fences alone is
not a lasting improvement since they are easily removed.
However, other improvements of a more lasting nature
may allow someone to take advantage of section 60 of the
Law of Property Act.

In Alberta, the law relating to adverse possession
also affects property line disputes. Basically, if a
neighbour (named “Ewing” for simplicity’s sake) has had
adverse possession of land belonging to a registered
owner (whom I’ll refer to as “Barnes”) for more than 10
years, then Barnes can not legally recover this property
from Ewing. This could happen if a boundary fence had
mistakenly been placed several feet onto Barnes’ land
and Ewing had been using this strip of Barnes’ land as his
own for more than 10 years. Section 18 of the Alberta
Limitation of Actions Act states that “no person shall take
proceedings to recover land except
(a) within 10 years next after the right to do so first
accrued to that person;... or
(b) if the right to recover first accrued to a predecessor in
title, then within 10 years after the right accrued to that
predecessor.”

In our example, Barnes would have first had the right
to recover the strip of land from Ewing at the time when
Ewing first took possession of it. However, if Ewing’s
adverse possession had occurred for longer than 10
years, the Limitation of Actions Act would then have
prevented Barnes from taking legal action to recover this
land. To be in adverse possession, someone would have
to have had “possession, and occupation inclusive,
continuous, open or visible and notorious” for the 10 year
period. This can occur when, for more than 10 years,
neither neighbour has been aware that their mutual
property line or boundary fence is misplaced.

Barnes could have taken legal action to recover his
strip of land from Ewing before the expiry of the 10 year
period. However, after the expiry of the 10 year period,
the Land Titles Act of Alberta allows a person in adverse
possession of land to obtain a judgement giving him
exclusive use of the land and eventually ownership of it.

Complications arise when the registered owner
transfers this land to a third party after the 10 year period
but before the person with adverse possession has filed a
Caveat against the Certificate of Title for this land or has
initiated legal action to obtain exclusive possession and
ownership.

In our example, we will assume that Barnes has sold
his land to Windell, including the strip of land that is
adversely possessed by Ewing.

Our Land Titles system provides that a “bona
fide purchaser for value” of land is entitled to rely on what is
registered against the Certificate of Title held at the Land
Titles Office. Therefore, if at the time Windell purchased
this land, there was nothing registered against the
Certificate of Title to indicate Ewing’s right to possession
or ownership of the strip of land due to adverse
possession, Windell is entitled to ownership and
possession of this strip of land. He is entitled to take legal
action to recover possession of this land from Ewing and
the 10 year period starts over again.

The stability that the law relating to adverse
possession was supposed to provide has been destroyed
in this type of situation.

This treatment applies only to a bona
fide purchaser for value. If Windell had been given the land for nothing or
had paid a purchase price to Barnes which was
substantially below fair market value, he would not have
been a purchaser “for value”. He would then have taken
the land subject to the same law relating to adverse
possession that Barnes was subject to and there would

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als news fall, 1989
have been no renewal of the 10 year period. Ewing could have kept the disputed strip of land.

The same result would have occurred if, before he purchased the land, Windell had known that Ewing had adverse possession of the strip of land. He could still purchase the strip from Barnes but his knowledge of this situation would disqualify him as a "bona fide" purchaser. Therefore, he would not be entitled to a new 10 year period to legally recover possession of the disputed land.

The legal course of action available when a property line or boundary fence is in the wrong location depends on a variety of factors. Important to remember is that no matter what your legal rights are with respect to misplaced property lines, you will probably still be living next to your neighbour. You may be wise to disregard these legal rights or to even ignore the task of locating the correct property line just to maintain peace and harmony between neighbours.

Even if you are successful in asserting your legal rights with respect to a property line or boundary fence, your problems with the neighbour may not be over. Often this type of dispute leads to a continuous series of other disputes with the same neighbour for as long as they remain neighbours.

These disputes provide great script material for TV soap operas where people like the Ewings and the Barnes fight it out on a weekly basis. However, in real life, things are tough enough without having to constantly slug it out with the neighbours.

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**SEPTEMBER, 1988**

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**SUCCESSFUL TRIMBLE EXPERIENCE IN CANADA FROM 1987**
Inspector Wolley-Dod

Inspector Clouseau and Kato spent the last two weeks of August fighting mud in the Peace Country. Grande Prairie celebrated our arrival by dumping an all time record decimetre of rain upon us in a twenty-four hour period.

Inspections were carried out in Grande Prairie, Peace River, High Level, and all points in between. The Inspector waxed nostalgic upon visiting many areas last seen over thirty-five years ago.

Work performed by almost all Peace area surveyors was inspected. The surveys were generally found to be of good quality with one or two minor exceptions. Reports will be sent to the practitioners involved in due course.

During the course of field inspections over the summer, a number of deficiencies were noted. Many iron posts found were not stamped with permit or registration numbers as required by section 13(2) of the Survey Regulation and Chapter 3-9 of the Manual of Good Practice. Furthermore, in some instances, legal descriptions, road post numbers, and company initials were not marked on the planted posts.

Prior to February 16, 1912, all lot corners in subdivision surveys were monumented, usually with wooden posts or timber spikes. These lot corner monuments constitute governing evidence and must be properly searched for and, if found to be original undisturbed monuments, accepted. The same premise applies to subdivision surveys conducted under the provisions of the Surveys Act, 1988 as all corners must now be posted with statutory iron posts.

Inspections have revealed the occasional case of an iron post planted in the centre of a mound where it should have been placed on the north edge. Surveyors must ensure that their field personnel are thoroughly familiar with the monument descriptions contained in Bulletin 38.

Many areas of the province are almost totally devoid of original monuments, fence lines, or other signs of possessory evidence. In these situations, and barring the possibility of reliable parol evidence, the surveyor has no other recourse than to resort to the mechanical methods of re-establishment.

The surveyor should always adhere strictly to the hierarchy of evidence, bearing in mind that mechanical re-establishments should only be used as a last resort. It is the surveyor's responsibility to assess all available evidence including possessory evidence and monuments from prior plans when re-establishing a lost monument. Sections 40(2) and 42(2) of the Surveys Act refer to re-establishments being made "...in a manner that carries out the evident intention of the original survey...."

In the course of our field inspections, we have noted a number of plans which show "Fd. no mk." at section and quarter corners at which there was no sign that any digging had taken place. The lost monuments had been re-established by mechanical means.

In our view, the reasons for adopting this type of practice are two-fold. With the advent of EDM instrumentation, it is far simpler to zap off a couple of miles and bang in the intermediate lost posts than it is to properly search for and assess all available evidence. Furthermore, many surveys are awarded on the basis of competitive bidding and for the contracted price, the surveyor cannot afford to do a thorough job. Pause and reflect on the fact that every time you plant a section or
quarter corner post, you may be adversely affecting the
property of at least four landowners.
Many right of way plans are still using angles rather
than full circle bearings as required by section 12(a) of the
Survey Regulation and Chapter 6.13 of the Manual. It has
been argued that the client requires angles. If this is the
case, angles could be added to a reproducible copy of the
legal plan for the client’s use.

Chapter 6.16 of the Manual calls for complete
reporting of the condition of all monuments found and
placed. While most surveyors appear to do a thorough job
in this regard, our inspections are still finding pits,
mounds and marker posts which are not noted on the
plans. Field crews must be encouraged to record all
pertinent information.

On a positive note, of 220 reports of plan
examinations and field inspections sent to practitioners to
the end of August, approximately 80% of the surveys and
plans either complied completely with existing standards
and regulations or contained minor errors or omissions.
Keep up the good work and let’s see the figure raised to
90% by this time next year.

The Practice Review Board is about to do battle with a
long standing problem; the retracement of curvilinear
boundaries and the merits of accepting intermediate
posts in the ground or showing them to be off the curve.
Comments or opinions from members on the matter of
retracement of curvilinear boundaries are invited and
would be appreciated. Stay tuned for the next episode in
this continuing saga!

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Nastajus v. Edmonton Beach (Summer Village) et al. and Edwards 92 A.R. 363

A summary of the decision of Justice Miller of the Alberta Court of Queen's Bench was reported in the Summer, 1987 issue of ALS News on page 18. Following is the entire text of the decision of Justice Belzil for the Alberta Court of Appeal.

Summary:

Numerous lake front lots were created around a lake near the City of Edmonton. For some unexplained reason the water in the lake receded for a number of years and then stopped. This created a strip of land between the original boundaries of the lake front lots and the water. A dispute arose over ownership of the strip of land. This case involved the claim of the third parties respecting two lake front lots that they had acquired riparian rights to the accreted lands.

The Alberta Court of Queen's Bench, in a judgement report 76 A.R. 87, held that the third parties should be entitled to exercise their riparian rights over the strip of land and extended the boundaries of the lots to the water's edge. The province appealed.

The Alberta Court of Appeal allowed the appeal and set aside the trial judge's decision.

Belzil, J.A. (Orally). This is an appeal from a judgement of Queen's Court declaring that the respondents (third parties) are the owners of accreted lands at Edmonton Beach. (See 76 A.R. 87).

The respondents (third parties) are the registered owners of Lots 2 and 3 in Block 8, Plan 4880 S, a subdivision of part of the S.E. 30-52-1 W4 registered in the Land Titles Office at Edmonton in 1907. The relevant portion of the plan of subdivision is here reproduced:

![Diagram of Spring Lake and Land in Question]

The western limit of the subdivision is shown on the original registered plan as following the sinuosity of the lakeshore but Block 8 is shown separated from the water's edge by a strip of land some 60 feet or more. This strip is not dedicated for road or other public purpose and is claimed by Edmonton Beach Resorts Ltd. as successor in title to the original subdividing owner.

Since 1907, the lake has receded substantially. The respondents (third parties) claim to be entitled to the accreted lands to the front of Lots 2 and 3.

Counsel for the respondents (third parties) concedes that they could not at law be entitled to accretion unless their lots were bordered by the waters of the lake. She argues that, notwithstanding that the western boundaries of their property are fixed by the registered plan some sixty feet or so from the water's edge, it was the intention of the subdividing owner and surveyor to have that fixed boundary coincide with the lakeshore. No evidence was adduced to support this except some expert evidence that this was sometimes done by surveyors drawing a free hand boundary of a lakeshore.

In arriving at his conclusion supporting the claim of the respondents (third parties), the trial judge seems to have been guided by the fact that in subdivisions of other lands along the lake, registered at other times by other owners, lots fronting unto the lake bordered on the water, and in the spirit of his usual fairness he was of the view that all waterfront owners on the lake should be treated alike. With all respect, this was an irrelevan consideration.

In the absence of other cogent evidence with respect to this particular subdivision, the registered plan of subdivision must be accepted as conclusively fixing the boundaries of the lands owned by the respondents (third parties), and as conclusive proof that these lands do not border the waters of the lake. There has accordingly been no accretion to them.

The appeal is allowed, the judgement of the learned trial judge is set aside, and the claim of the respondents (third parties) is dismissed. By agreement the parties will bear their respective costs.

Appeal allowed.

Calgary Corridor Study Released

The provincial government has released a major reassessment study of the Calgary Transportation/Utility Corridor. The Corridor, located inside the 0.8 km wide Restricted Development Area surrounding Calgary, was established in 1976 to provide space for a ring road, pipelines, powerlines, and other utilities and for open space. The consulting company of Stewart, Weir & Co. did the study. The assessment reports and maps are available through Alberta Environment's Library at 9820 - 106 Street in Edmonton, or by calling (403) 427-5870. Copies can be borrowed from the Environment library for up to three weeks.
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Survey Technician Program
Alberta Vocational Centre
Lesser Slave Lake
Grouard Campus

The Survey Technician Program has been offered at the Alberta Vocational Centre in Grouard since 1984. The length of the program is eight months - running from early September until the end of April. It was primarily offered to meet requirements for local, trained, survey technicians in northern Alberta. Because the Centre as a whole, concentrates on adult education, students enrolling in the survey program are now coming from many areas of Alberta and the Northwest Territories, utilizing the dormitory and family housing facilities on site.

The purpose of the program is to train students as field personnel (survey helpers, instrument operators, and junior party chiefs working under supervision). The training stresses, and is heavily oriented towards fieldwork with 60% being fieldwork and 40% classroom training. The classroom instruction is geared towards field computations.

Safety courses included as modules within this program are Basic First Aid, C.P.R., H2S Alive, Underground Pipe Location, and Power Saw Safety.

Due to the proximity of Grouard to large green areas, and a 2,000 acre study forest, many survey projects involving traversing and line cutting are used each year.

The minimum requirements for entry are an age of 17 years with a minimum of Grade 10 Math and English.

The aim of the Survey Technician Program is to provide good, basic training that does not conflict with the technological institutes, and to prepare adult students for employment in a fairly short period of time.

This year, due to the increased activity in northern Alberta regarding pulp mills, etc., the survey program is also being delivered in Grimshaw through the North Peace Education Consortium.

Enrollment in the program in both locations totals approximately 40 students at this time, with 20 at each Grouard and Grimshaw.
GIS FOR THE 90s
Second National Conference on Geographic Information Systems
March 5 - 8, 1990 Ottawa, Canada

In recognition of excellence and progress in GIS, Canada hosts a meeting of the best minds in the industry to meet the global challenges of the 1990s. The conference addresses topics ranging from GIS data sharing, technologies and current research, to the role of GIS in such important issues as sustainable development.

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Spatially-Oriented Referencing Systems Association
Tri-Committee of Ontario
ASSMT Lives On

History
In 1965, a meeting was organized and held in Red Deer by a handful of Alberta land surveyors. The positive feeling towards establishing an organization for support staff of the ALSA was evident. As a result, the ground work took place over the next short while, which led to the incorporation of the Alberta Society of Survey Technicians and Technologists in 1970. During the 70's, the membership grew to approximately 125 after pamphlets were distributed and courses were organized. During the 80's, our membership tapered off as applications became fewer and existing members became commissioned land surveyors. We distributed a newsletter called the "Iron Post" to our members. We also experienced a name change to the Alberta Society of Surveying and Mapping Technologies. As the 80's drew to a close, so did the Society. Seminars were no longer held, meetings were poorly attended, and the Society became dormant as very little business was conducted.

Current happenings
Recently, a questionnaire was circulated to our last recorded membership, providing them with three options. These options were:
- a) Dissolve the Society;
- b) Transfer to another Society;
- c) Achieve recognition through the ALSA.

The response to the questionnaire indicated that efforts should be made to revive the Society and operate as an independent group with our own identity. This led to a May, 1989 annual general meeting and the establishment of a new executive. This new executive is charged with organizing regional group meetings and seminars, the first of which is to be held in Calgary on September 19th of this year. Further details will be released later regarding this event.

You will find enclosed with this newsletter, an application form to join ASSMT (forms were sent to all firms and agencies employing land survey personnel). We ask that you make a sincere effort to have one of your employees complete and forward this form to us. More forms are available if necessary. I must stress that we need your support! We know the interest is there to have the Society survive — so please do your part.

J. WAYNE HUGHES, C.S.T.
PRESIDENT

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Professional Image of the Land Surveyor

by David C. Clark, N.S.L.S.
Chairman, Survey Profession Committee

The rapidly changing technology of recent years has revolutionized the practice of land surveying and is molding land surveyors into highly specialized professionals. Higher educational requirements and adherence to regulated standards for our professional services have all contributed to the betterment of the profession. As land surveyors, we have long known that we are professionals, but only recently have we come to recognize the necessity of presenting ourselves in a favourable manner in order to obtain the professional respect we deserve.

It has become increasingly apparent from our recent differences with a sister Association, that land surveyors lack credibility as professionals in the minds of others. Some of these other professionals have formed strong opinions of us, based upon hastily preconceived notions concerning our qualifications and capabilities.

Land surveyors are suffering from this unfavourable image. In the eyes of many people, the stereotype surveyor is seen as the unkempt transitman standing beside an instrument, holding up traffic in the midst of highway construction. The personal appearance of some land surveyors while dealing with clients and the business community may unknowingly perpetuate this image.

Personal appearance plays one of the greatest roles in the formation of first impressions. Persons with whom we come in contact will form their first opinions of us based on how they see us. Each of them will make decisions concerning our character, success, social position, trustworthiness, sophistication and education, based on our appearance. They are much more likely to deal in a professional manner with those who conform to their perceived image of a successful professional.

The dictionary defines image as being “a representation in the mind of how one perceives something to be”. It has been stated by Dr. John MacLaughlin, that a professional is 70% substance and 30% image. Do land surveyors have the substance but lack the image? If such is the case, are we satisfied to be 70% professional?

Unless actually working in the field, the professional land surveyor should wear appropriate attire (dress shirt, tie and jacket). Let us shed the red checkered shirt, bush boots and plumb bob holstered on the belt image. Obviously, professional dress should be worn when meeting with lawyers, engineers, developers and other clients. When in court, a business suit is a must, so why not when meeting with clients, governments officials and other professionals? And when our picture is to be reproduced in the Nova Scotian Surveyor, or other professional publications, let us make the effort to supply a suitable photograph. Field clothes give the impression that a person is a technician, not an educated professional.

Let us consider the mental image that we might create in the eyes of a client by some of our business practices. Transportation of the crew to and at the job site with a rusty old vehicle does not enhance one’s image. Neither does having an office in a corner of the basement of one’s home, especially if access is through the living quarters. A potential client is rarely impressed when a young child answers the business telephone.

There are numerous ways that land surveyors can display professionalism and help to change the attitude of the public. The business office should be well organized, neat and show pride in the land surveying profession. A certificate of qualification should be displayed in a prominent location. The filing system should be tidy and orderly, and the entire atmosphere of the office should convey to the client the professional manner in which he may expect his job to be performed.

The land surveyor’s advertising, stationery, business cards and survey plans create a picture in the eyes of the public of the type of individual doing business. Similarly, the promptness and courtesy we display in returning all telephone calls and correspondence, will demonstrate our attitude of concern for the well-being of each person with whom we come in contact. All of these factors indicate the degree of pride and enthusiasm we have for our profession.

As land surveyors, we have to learn to communicate better and more correctly. We must concentrate on cleaning up sloppy language, slang and incorrect grammar in our speech, and make every effort to eliminate spelling, punctuation and typographical errors from our written communications. Concern for proper use of our language should be applied to employee relations, client relations and public relations.

The way individual land surveyors interact with associates is extremely important to the way the entire profession is perceived. Disputes between surveyors which become widely publicized, immediately ruin a carefully cultivated image of the profession. When adjoining owners of a “bar cluster” dispute with their surveyors, it can become a very damaging public action. It is understandable that measurements are not absolute; what is not understandable is why surveyors do not communicate with one another before meeting in public. Collaboration with others is one of the most important arts we must learn as professionals.

Sharing information is an opportunity to display professionalism. Cooperation with a fellow practitioner, by providing access to plans and field notes, is likely to produce a more confident solution to a problem and a better service to our clients. Many times, talking over a thorny situation with one of our peers will give a better insight on the subject and the end result will be a better decision.

Land surveyors should seek opportunities to become involved in community organizations. Every calling has its requirements, but beyond these are the self-expression and extra effort that one can contribute, that will give that...
extra margin of service to the common good. Memberships in service clubs and participation in community affairs are an excellent way to network with others and present oneself as a professional.

The true professional has only one standard of workmanship - always and only the best. The true professional is not content to end his education on graduation or on attaining professional status. With the rapidly changing technology of these times, we must maintain our competency and continue to learn through work experience, continuing education programs, and participation in our professional organizations.

Not only has technology changed with the times, but so have the attitudes of society. Land surveyors are working closer together and dealing more closely with the public. We are becoming more and more exposed to public scrutiny, so we must become more conscious of the way our actions portray ourselves. Human nature being what it is, if the image that we portray is seen to be unprofessional, then doubts will arise concerning our competence to perform professional services. The well dressed professional however, will have less difficulty commanding professional fees and will be less apt to be asked to justify the tariff for services provided.

We now stand on the threshold of a new era in our profession; an era in which we will embrace a whole new philosophical concept in surveying - the geographic information system. In order to gain our rightful place as stewards of the land tenure system during this era, we must act as professionals and command respect as professionals.

Land surveyors must come to realize that it is our responsibility to make changes happen. It is up to us, individually and collectively, to improve the way we are perceived. Part of the professional responsibility is the personal contribution we make along with others in the support and enhancement of the land surveying profession. So let us present ourselves with an attitude and an image which will command the respect of our fellow citizens. Let us take positive action to ensure that there is never a need for the public to even question our professionalism.

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Assistant Surveyor General of Canada

Michael J. O'Sullivan, Canada Lands Surveyor and Ontario Land Surveyor has been appointed Assistant Surveyor General of Canada. Michael is currently president of the Association of Ontario Land Surveyors and prior to his appointment as Surveyor General, he was in private practice in Ottawa, Ontario.

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Quotes From Hansard

Following is an excerpt from Alberta Hansard dated August 16, 1989 on the subject of use of old Real Property Reports. It is interesting to note that the Minister is of the opinion that “the survey certificate...should not be passed on...”

Survey Certificate Requirements

MR. PAYNE: Mr. Speaker, the Alberta Mortgage and Housing Corporation has implemented a policy that’s adding several hundred dollars to the costs incurred by Albertans in purchasing homes from the corporation. Under this offensive policy, purchasers are being denied access to the property’s survey certificate, and consequently they have to order a new survey, even if a copy of the existing certificate is totally acceptable to a private-sector lending institution. Mr. Speaker, can the minister responsible for the housing corporation justify such a policy?

MR. R. SPEAKER: Yeah, it’s time for another committee.

To explain the matter, Mr. Speaker, in academic terms, because I can’t do it in legal terms, the survey certificate is the property of the mortgagor, or the person who is borrowing the money to buy a certain piece of property. When Alberta Mortgage and Housing Corporation foreclosed on the units in question that are now being sold in the private market, that survey certificate came with the foreclosure on an as-is basis, and we in turn became the owners of it, in a sense, at that point. But it was not a survey certificate that was made through an arrangement between Alberta Mortgage and Housing Corporation and the respective surveyor. We feel that the survey certificate, because it has legal liabilities, should not be passed on to the person who is purchasing foreclosed property because of the liabilities we may face as Alberta Mortgage and Housing Corporation. That’s the reason for it. If there are ways of getting around that, as a minister, I’d certainly like to enhance the program. At the moment, I’ve asked the people in the department to look at it from a legal perspective. If we can, we will.

MR. PAYNE: Well, Mr. Speaker, my constituents who have been caught in this legalistic trap are seeking simple fairness and justness, not simple legalistic defences. Will the minister be prepared to ask the corporation to review its present policies, particularly in light of the fact that those purchasers who are arranging their financing through the corporation appear to be exempt from this very offensive policy?

MR. R. SPEAKER: Mr. Speaker, what I have attempted to do is put a disclaimer with the survey certificate so that we would not have legal liability. That doesn’t seem to be possible, and other alternatives will be looked at for the hon. member.

MR. PAYNE: Mr. Speaker, as a bare minimum, would the minister be prepared to direct the corporation to provide purchasers the name and contact information of the surveyor who prepared the original survey certificate if it has on file so that a certified copy could be obtained from the survey at a cost much lower than the cost of a new survey?

MR. R. SPEAKER: Mr. Speaker, yes, we would certainly do that. We have been doing that, but if we haven’t been doing it as well as we should have, we’ll improve that facility for the public of Alberta.
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Supplement to the
Register - 1989

The following persons/firms became registered
subsequent to the 31st day of January, 1989.

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<table>
<thead>
<tr>
<th>Name</th>
<th>Registration Number</th>
<th>Address</th>
<th>Date of Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carley, W.C.</td>
<td>550</td>
<td>708, 45 Rivermead Dr., Chatham, Ont. N7M 6B8</td>
<td>April 3, 1984</td>
</tr>
<tr>
<td>Chan, T.P.</td>
<td>504</td>
<td>17207 - 106 St., Edmonton T6X 3G9</td>
<td>Jan. 19, 1976</td>
</tr>
<tr>
<td>Cloake, D.A.</td>
<td>587</td>
<td>113 Dickens Dr., Ft. McMurray T8K 1N1</td>
<td>April 10, 1989</td>
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<tr>
<td>Devlin, R.</td>
<td>519</td>
<td>55507 Rosenhall Dr., St. Paul, Minn. 56372</td>
<td>Mar. 4, 1983</td>
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<tr>
<td>Doyle, W.B.</td>
<td>585</td>
<td>10412 - 152 St., Edmonton T6P 1Y6</td>
<td>Mar. 3, 1989</td>
</tr>
<tr>
<td>Fallett, H.G.</td>
<td>197</td>
<td>244 Ronsman Road N.W., Calgary T2K 5M5</td>
<td>Apr. 24, 1983</td>
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<tr>
<td>Hall, R.D.</td>
<td>549</td>
<td>c/o 8916 - 75 Ave., Edmonton T6E 1L2</td>
<td>Apr. 24, 1983</td>
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<tr>
<td>Karjalainen, R.S.</td>
<td>534</td>
<td>1803 Derouault Dr., Pickering, Ont. L1V 4K2</td>
<td>Sept. 16, 1982</td>
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<tr>
<td>Lockhart, J.T.</td>
<td>492</td>
<td>811 Milridge Dr., S.E., Calgary T2X 1H3</td>
<td>Mar. 13, 1979</td>
</tr>
<tr>
<td>Martin, W.A.</td>
<td>466</td>
<td>PO Box 1700, Saiton M, Calgary T2C 2W5</td>
<td>Jan. 29, 1978</td>
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<tr>
<td>McLellan, J.R.</td>
<td>586</td>
<td>72 Douglas Wood Dr. S.E., Calgary T2Z 1K2</td>
<td>Apr. 3, 1989</td>
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<tr>
<td>Moore, G.R.</td>
<td>301</td>
<td>20 Moharick Cres., Red Deer T4N 2J5</td>
<td>May 19, 1984</td>
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<tr>
<td>Moss, D.L.</td>
<td>581</td>
<td>5121 Carney Rd. N.W., Calgary T2L 1B3</td>
<td>Mar. 22, 1988</td>
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<tr>
<td>Nichols, D.A.</td>
<td>477</td>
<td>General Delivery, Ground T2G 1C0</td>
<td>July 4, 1978</td>
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<tr>
<td>Stuart, I.J.P.</td>
<td>501</td>
<td>451 Lake Simco Cresc., S.E., Calgary T2J 3L3</td>
<td>Jan. 10, 1980</td>
</tr>
</tbody>
</table>

RETIRED MEMBERS


Hedderbrecht, H. | 375 | 37, 51149 Range Rd 231, St. Paul 788 1K5 | June 11, 1973 |

Fawcett, K. | 246 | 380 Capri Cres., Calgary T2L 1B2 | July 30, 1985 |

Wilson, R.D. | 496 | 44, 10771 Drury River, N.S. B1R 1M6 | April 25, 1979 |

SURVEYOR'S CORPORATIONS AND PARTNERSHIPS

<table>
<thead>
<tr>
<th>Name and Address</th>
<th>Permit Number</th>
<th>Date of Registration</th>
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<tbody>
<tr>
<td>Clark &amp; Associates Ltd.</td>
<td>503</td>
<td>Calgary T2H 2C3</td>
</tr>
<tr>
<td>Drake Surveys Ltd.</td>
<td>500</td>
<td>480, 100 Centre TDA 170</td>
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BRANCH OFFICES

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<tr>
<th>Name and Address</th>
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<tr>
<td>Challenger Surveys &amp; Services Ltd.</td>
<td>500</td>
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<tr>
<td>G.S. Whalen &amp; Associates Ltd.</td>
<td>500</td>
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<tr>
<td>L.R. Olson &amp; Associates Ltd.</td>
<td>500</td>
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<tr>
<td>Mathis Associates Surveyors Ltd.</td>
<td>500</td>
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ARTICULATED PUPILS

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<th>Name</th>
<th>Address</th>
<th>Principal</th>
<th>Date of Articles</th>
</tr>
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<tr>
<td>Barnett, B.A.</td>
<td>c/o 2816 - 5 Ave., N., Lethbridge T1H 1P1</td>
<td>A. Martin</td>
<td>Sept. 1, 1989</td>
</tr>
<tr>
<td>Boggs, R.</td>
<td>201, 936 - 47 St., Edmonton T6H 2T7</td>
<td>J. Hagen</td>
<td>May 26, 1989</td>
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<tr>
<td>Gillmore, D.</td>
<td>17007 - 107 Ave., Edmonton T5N 1G3</td>
<td>A. Hasham</td>
<td>May 23, 1989</td>
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<tr>
<td>Hagen, D.</td>
<td>201, 936 - 47 St., Edmonton T6H 2T7</td>
<td>J. Hagen</td>
<td>Dec. 14, 1988</td>
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<tr>
<td>Hope, R.</td>
<td>330, 500 Centre St. S., Calgary T2G 1W6</td>
<td>J. Tuckson</td>
<td>May 26, 1989</td>
</tr>
<tr>
<td>Jones, R.K.</td>
<td>450, 999 - 8 St. S.W., Calgary T2H 1J5</td>
<td>B.J. McKenna</td>
<td>Mar. 17, 1989</td>
</tr>
<tr>
<td>Koper, A.</td>
<td>516, 64 Willowgate Cresc., SW, Calgary T2W 4H6</td>
<td>Jones</td>
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